

# Michigan: 2002

Issued September 2005

EC02-31A-MI (RV)

## 2002 Economic Census

*Manufacturing*

Geographic Area Series



U.S. CENSUS BUREAU

*Helping You Make Informed Decisions*

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



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**U.S. Department of Commerce**  
**Carlos M. Gutierrez,**  
Secretary

**David A. Sampson,**  
Deputy Secretary

**Economics and Statistics Administration**  
**Kathleen B. Cooper,**  
Under Secretary for  
Economic Affairs

**U.S. CENSUS BUREAU**  
**Charles Louis Kincannon,**  
Director



**Economics  
and Statistics  
Administration**

**Kathleen B. Cooper,**  
Under Secretary  
for Economic Affairs



**U.S. CENSUS BUREAU**

**Charles Louis Kincannon,**  
Director

**Hermann Habermann,**  
Deputy Director and  
Chief Operating Officer

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

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

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

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# Introduction to the Economic Census

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## 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 to 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.

## INDUSTRY CLASSIFICATIONS

Data from the 2002 Economic Census are published primarily according to the 2002 North American Industry Classification System (NAICS). NAICS was first adopted in the United States, Canada, and Mexico in 1997. The 2002 Economic Census covers 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 Food Services
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), largely covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 100 subsectors (three-digit codes), 317 industry groups (four-digit codes), and, as implemented in the United States, 1,179 industries (six-digit codes).

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## **RELATIONSHIP TO HISTORICAL INDUSTRY CLASSIFICATIONS**

Prior to the 1997 Economic Census, data were published according to the Standard Industrial Classification (SIC) system. 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 1997 Economic Census *Bridge Between NAICS and SIC* demonstrates the relationships between NAICS and SIC industries. Where changes are significant, it may not be possible to construct time series that include data for points both before and after 1997.

Most industry classifications remained unchanged between 1997 and 2002, but NAICS 2002 includes substantial revisions within the construction and wholesale trade sectors, and a number of revisions for the retail trade and information sectors. These changes are noted in industry definitions and will be demonstrated in the *Bridge Between NAICS 2002 and NAICS 1997*.

For 2002, data for enterprise support establishments (those functioning primarily to support the activities of their company's operating establishments, such as a warehouse or a research and development laboratory) are included in the industry that reflects their activities (such as warehousing). For 1997, such establishments were termed auxiliaries and were excluded from industry totals.

## **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. (For selected industries, only payroll, employment, and classification are collected for individual establishments, while other data are collected on a consolidated basis.)

## **GEOGRAPHIC AREA CODING**

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for states, metropolitan and micropolitan statistical areas, counties, and corporate municipalities (places) including cities, towns, townships, 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 administrative sources is used as a basis for coding.

## **AVAILABILITY OF ADDITIONAL DATA**

All results of the 2002 Economic Census are available on the Census Bureau Internet site ([www.census.gov](http://www.census.gov)) and on digital versatile discs (DVD-ROMs) for sale by the Census Bureau. The American FactFinder system at the Internet site allows selective retrieval and downloading of the data. For more information, including a description of reports being issued, see the Internet site, write to the U.S. Census Bureau, Washington, DC 20233-6100, or call Customer Services at 301-763-4100.

## **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

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from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some service trades in 1933. Censuses of construction, manufacturing, and the other business 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 and 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 report forms.

The range of industries covered in the economic census expanded between 1967 and 2002. 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. New for 2002 is coverage of four industries classified in the agriculture, forestry, and fishing sector under the SIC system: landscape architectural services, landscaping services, veterinary services, and pet care services.

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. Reports for 1997 were published primarily on the Internet and copies of 1992 reports are also available there. CD-ROMs issued from the 1987, 1992, and 1997 Economic Censuses contain databases that include all or 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 the 2002 Economic Census and related surveys is published in the *Guide to the 2002 Economic Census* at [www.census.gov/econ/census02/guide](http://www.census.gov/econ/census02/guide). More information on the methodology, procedures, and history of the census will be published in the *History of the 2002 Economic Census* at [www.census.gov/econ/www/history.html](http://www.census.gov/econ/www/history.html).

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# Manufacturing

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## SCOPE

The Manufacturing sector (sector 31-33) 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

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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.

**Exclusions.** There are activities that are sometimes considered manufacturing, but for NAICS are classified in another sector. These activities include logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; the beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; the construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; 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 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).

The tabulations for this sector do not include central administrative offices, warehouses, or other establishments that serve manufacturing establishments within the same organization. Data for such establishments are classified according to the nature of the service they provide. For example, separate headquarters establishments are reported in NAICS Sector 55, Management of Companies and Enterprises.

The reports described below exclude establishments of firms with no paid employees. These "nonemployers," typically self-employed individuals or partnerships operating businesses that they have not chosen to incorporate, are reported separately in Nonemployer Statistics. The contribution of nonemployers, relatively small for this sector, may be examined at [www.census.gov/nonemployerimpact](http://www.census.gov/nonemployerimpact).

The reports described below cover all manufacturing establishments with one or more paid employees.

**Definitions.** Industry categories are defined in Appendix B, NAICS Codes, Titles, and Descriptions. Other terms are defined in Appendix A, Explanation of Terms.

## REPORTS

The following reports provide statistics on this sector:

**Industry Series.** There are 473 reports, each covering a single NAICS industry (six-digit code). 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. The industry reports also include data for states with 100 employees or more in the industry. The data in industry reports are preliminary and subject to change in the following reports.

**Geographic Area Series.** There are 51 separate reports, one for each state and the District of Columbia. Each state report presents similar statistics at the "all manufacturing" level for each state and its metropolitan and micropolitan areas 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.

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### **Subject Series:**

- **Industry-Product Analysis Summary.** This report presents value of shipments, value of product shipments, percentage of product shipments of the total value of shipments, and percentage of distribution of value of product shipments on the NAICS six-digit industry level and by the six- and seven-digit product code levels. It also includes miscellaneous receipts at the six- and seven-digit product code levels by NAICS six-digit industry levels.
- **General Summary.** This 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.
- **Product Summary.** This report summarizes the products data published in the industry reports. This report also includes a table with data for products that are primary to more than one industry, which are not in the industry reports.
- **Materials Summary.** This report summarizes the materials data published in the industry reports.
- **Concentration Ratio Summary.** This report publishes data on the percentage of value of shipments and value added accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Herfindahl-Hirschmann indexes for each industry.
- **Location of Manufacturing Plants Summary.** This report contains 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.

**ZIP Code Statistics.** This report contain statistics on the number of establishments for the three-and six-digit NAICS industry by employment-size of the establishment by ZIP Code.

**Other reports.** Data for this sector are also included in reports with multisector coverage, including Nonemployer Statistics, Comparative Statistics, Bridge Between 2002 NAICS and 1997 NAICS, Business Expenses, and the Survey of Business Owners reports.

### **GEOGRAPHIC AREAS COVERED**

The level of geographic detail varies by report. Maps are available at [www.census.gov/econ2002maps](http://www.census.gov/econ2002maps). Notes specific to areas in the state are included in Appendix D, Geographic Notes.

1. The United States as a whole.
2. States and the District of Columbia.
3. Metropolitan and micropolitan statistical areas with 250 employees or more. A core based statistical areas (CBSA) contains a core area with a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. CBSAs are differentiated into metropolitan and micropolitan statistical areas based on size criteria. Both metropolitan and micropolitan areas are defined in terms of entire counties, and are listed in Appendix E, Metropolitan and Micropolitan Statistical Areas.
  - a. Metropolitan Statistical Areas (metro areas). Metro areas have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
  - b. Micropolitan Statistical Areas (micro areas). Micro areas have at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
  - c. Metropolitan Divisions (metro divisions). If specified criteria are met, a metro area containing a single core with a population of 2.5 million or more may be subdivided to form smaller groupings of counties referred to as Metropolitan Divisions.

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- d. Combined Statistical Areas (combined areas). If specified criteria are met, adjacent metro and micro areas, in various combinations, may become the components of a new set of areas called Combined Statistical Areas. The areas that combine retain their own designations as metro or micro areas within the larger combined area.
  - 4. Counties and county equivalents defined as of January 1, 2002, with 500 employees or more. Counties are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs, census areas, and city and boroughs. Maryland, Missouri, Nevada, and Virginia have one place or more that is independent of any county organization and constitutes primary divisions of their states. These places are treated as counties and as places.
  - 5. Economic places with 500 employees or more.
    - a. Municipalities of 2,500 inhabitants or more defined as of January 1, 2002. These are areas of significant population incorporated as cities, boroughs, villages, or towns according to the 2000 Census of Population. For the economic census, boroughs and census areas in Alaska and boroughs in New York are not included in this category.
    - b. Consolidated cities defined as of January 1, 2002. Consolidated cities are consolidated governments that consist of separately incorporated municipalities.
    - c. Townships in Michigan, New Jersey, and Pennsylvania, and towns in New York, Wisconsin, and the six New England states with 10,000 inhabitants or more (according to the 2000 Census of Population).
    - d. Balance of county. Areas outside the entities listed above, including incorporated municipalities with populations of fewer than 2,500, town and townships not qualifying as noted above, and the remainders of counties outside places are categorized as "Balance of county."

## DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 2002 data are expressed in 2002 dollars, and 1997 data, in 1997 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.

## COMPARABILITY OF THE 1997 AND 2002 ECONOMIC CENSUSES

Both the 2002 Economic Census and the 1997 Economic Census present data based on the North American Industry Classification System (NAICS). While there were revisions to selected industries for 2002, this sector is not affected by those revisions.

For 2002, there have been several additional data tables added, which did not exist in 1997. These tables for 2002 include products primary to more than one industry, industry-product analysis, e-commerce value of shipments, and leased and nonleased detail employment statistics by subsectors.

## RELIABILITY OF DATA

All data compiled for this sector are subject to nonsampling errors. Nonsampling errors can be attributed to many sources: inability to identify all cases in the actual universe; definition and classification difficulties; differences in the interpretation of questions; errors in recording or coding the data obtained; and other errors of collection, response, coverage, processing, and estimation for missing or misreported data. Selected data in tables titled "Detailed Statistics" are based on the Annual Survey of Manufactures and are subject to sampling errors as well as nonsampling errors.

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No direct measurement of these effects has been obtained except for estimation for missing or misreported data, as by the percentages shown in the tables. Precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors. More information on the reliability of the data is included in Appendix C, Methodology.

## **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 in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at [www.census.gov/epcd/ec02/disclosure.htm](http://www.census.gov/epcd/ec02/disclosure.htm).

The disclosure analysis for "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. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which 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 55,000 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 the Current Industrial Reports (CIR) program. The CIR program publishes selected detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. 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.

In addition, the County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county, and Statistics of U.S. Businesses provides annual statistics classified by the employment size of the enterprise, further classified by industry for the United States, and by broader categories for states and metropolitan areas.

## **CONTACTS FOR DATA USERS**

Questions about these data may be directed to the U.S. Census Bureau, Manufacturing & Construction Division, Information Services Center, 301-763-4673 or [ask.census.gov](mailto:ask.census.gov).

## **ABBREVIATIONS AND SYMBOLS**

The following abbreviations and symbols are used with these 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
- S Withheld because estimates did not meet publication standards
- X Not applicable
- Z Less than half the unit shown
  
- a 0 to 19 employees
- b 20 to 99 employees
- c 100 to 249 employees

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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
nsk	Not specified by kind
-	Represents zero (page image/print only)
(CC)	Consolidated city
(IC)	Independent city

**Table 1. Industry Statistics for the State: 2002**

[Includes data for industry groups and industries with 100 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN</b>												
31-33	Manufacturing .....	-	15 193	5 146	736 259	33 171 232	549 621	087 100	22 571 995	97 575 395	124 086 616	221 433 262	5 699 658
311	Food manufacturing .....	1	885	228	30 582	1 042 543	22 533	45 204	694 734	5 280 538	4 973 633	10 237 545	310 211
3111	Animal food manufacturing .....	2	31	6	407	13 823	263	475	7 419	30 152	135 660	165 026	1 714
31111	Animal food manufacturing .....	2	31	6	407	13 823	263	475	7 419	30 152	135 660	165 026	1 714
311119	Other animal food manufacturing .....	2	27	5	e	D	D	D	D	D	D	D	D
3112	Grain and oilseed milling .....	1	22	13	2 952	164 066	2 380	5 075	124 533	951 040	465 039	1 408 215	80 148
31121	Flour milling and malt manufacturing .....	-	12	6	543	23 255	405	805	14 044	82 503	102 922	185 205	2 684
311211	Flour milling .....	-	12	6	543	23 255	405	805	14 044	82 503	102 922	185 205	2 684
31123	Breakfast cereal manufacturing .....	2	7	6	2 354	138 460	1 931	4 182	108 848	865 105	336 898	1 193 953	77 187
311230	Breakfast cereal manufacturing .....	2	7	6	2 354	138 460	1 931	4 182	108 848	865 105	336 898	1 193 953	77 187
3113	Sugar and confectionery product manufacturing .....	-	70	9	1 857	62 048	1 515	3 060	45 273	428 441	246 773	677 006	11 866
31131	Sugar manufacturing .....	2	6	2	453	16 703	366	787	11 483	63 584	82 956	145 680	D
311313	Beet sugar manufacturing .....	2	6	2	453	16 703	366	787	11 483	63 584	82 956	145 680	D
31133	Confectionery manufacturing from purchased chocolate .....	6	48	3	269	7 237	174	337	4 710	22 504	17 579	41 936	D
311330	Confectionery manufacturing from purchased chocolate .....	6	48	3	269	7 237	174	337	4 710	22 504	17 579	41 936	D
31134	Nonchocolate confectionery manufacturing .....	-	11	4	1 125	37 794	968	1 922	28 843	341 123	145 117	487 031	2 928
311340	Nonchocolate confectionery manufacturing .....	-	11	4	1 125	37 794	968	1 922	28 843	341 123	145 117	487 031	2 928
3114	Fruit and vegetable preserving and specialty food manufacturing .....	1	65	39	3 897	118 519	3 207	6 227	81 594	477 849	465 774	946 198	46 905
31141	Frozen food manufacturing .....	1	27	16	1 392	42 636	1 160	2 359	29 540	161 437	136 056	297 498	23 656
311411	Frozen fruit, juice, and vegetable manufacturing .....	-	14	10	728	16 544	641	1 251	12 557	74 363	49 799	124 162	3 028
31142	Frozen specialty food manufacturing .....	1	13	6	664	26 092	519	1 108	16 983	87 074	86 257	173 336	20 628
31142	Fruit and vegetable canning, pickling, and drying .....	1	38	23	2 505	75 883	2 047	3 868	52 054	316 412	329 718	648 700	23 249
311421	Fruit and vegetable canning .....	-	29	16	1 498	43 908	1 202	2 441	27 984	213 185	207 229	422 736	13 286
311422	Specialty canning .....	-	6	4	720	24 912	611	1 158	18 956	88 909	66 727	155 636	D
311423	Dried and dehydrated food manufacturing .....	3	3	3	287	7 063	234	269	5 114	14 318	55 762	70 328	D
3115	Dairy product manufacturing .....	-	48	30	4 482	182 960	2 997	6 443	110 549	1 519 146	1 346 968	2 852 582	64 924
31151	Dairy product (except frozen) manufacturing .....	-	38	26	4 165	173 582	2 751	5 944	104 728	1 479 718	1 278 698	2 747 664	63 793
311511	Fluid milk manufacturing .....	-	18	13	2 346	94 137	1 452	3 128	50 506	412 150	631 395	1 046 147	34 387
311513	Cheese manufacturing .....	-	10	4	495	16 162	358	720	11 084	53 129	159 512	212 017	4 031
311514	Dry, condensed, and evaporated dairy product manufacturing .....	-	10	9	1 324	63 283	941	2 096	43 138	1 014 439	487 791	1 489 500	25 375
31152	Ice cream and frozen dessert manufacturing .....	-	10	4	317	9 378	246	499	5 821	39 428	68 270	104 918	1 131
311520	Ice cream and frozen dessert manufacturing .....	-	10	4	317	9 378	246	499	5 821	39 428	68 270	104 918	1 131
3116	Animal slaughtering and processing .....	1	103	34	6 632	184 501	5 494	11 551	136 884	474 724	1 444 868	1 938 739	59 752
31161	Animal slaughtering and processing .....	1	103	34	6 632	184 501	5 494	11 551	136 884	474 724	1 444 868	1 938 739	59 752
311611	Animal (except poultry) slaughtering .....	1	55	5	1 618	44 601	1 385	2 969	36 774	118 297	421 208	539 585	D
311612	Meat processed from carcasses .....	1	36	20	2 341	68 162	1 710	3 642	41 572	282 754	591 648	868 493	22 000
311613	Rendering and meat byproduct processing .....	-	5	3	208	8 197	131	309	4 236	24 750	16 642	41 387	D
311615	Poultry processing .....	-	7	6	2 465	63 541	2 268	4 631	54 302	48 923	415 370	489 274	25 747
3118	Bakeries and tortilla manufacturing .....	2	418	64	7 013	207 706	4 322	7 959	126 828	775 120	470 191	1 240 081	24 723
31181	Bread and bakery product manufacturing .....	2	389	56	6 097	169 295	3 590	6 439	96 752	577 799	302 374	877 082	15 550
311811	Retail bakeries .....	4	311	26	2 312	35 534	1 187	1 682	18 794	66 614	33 193	99 733	2 361
311812	Commercial bakeries .....	2	70	25	2 683	88 562	1 426	2 721	40 674	312 941	116 741	428 694	7 468
311813	Frozen cakes, pies, and other pastries manufacturing .....	-	8	5	1 102	45 199	977	2 036	37 284	198 244	152 440	348 655	5 721
31182	Cookie, cracker, and pasta manufacturing .....	-	25	7	866	37 502	694	1 444	29 531	195 378	166 820	360 059	D
311821	Cookie and cracker manufacturing .....	-	7	1	e	D	D	D	D	D	D	D	D
311822	Flour mixes and dough manufacturing from purchased flour .....	-	13	6	e	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	2	121	33	3 298	107 685	2 317	4 343	60 785	620 812	392 818	1 000 902	20 044
31191	Snack food manufacturing .....	1	18	8	1 071	35 151	736	1 418	18 699	203 696	107 442	307 331	10 403
311911	Roasted nuts and peanut butter manufacturing .....	-	4	2	193	7 510	78	174	1 889	26 024	23 474	49 338	D
311919	Other snack food manufacturing .....	1	14	6	878	27 641	658	1 244	16 810	177 672	83 968	257 993	D

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
311 3119	Food manufacturing—Con. Other food manufacturing—Con.												
31192	Coffee and tea manufacturing .	1	7	3	e	D	D	D	D	D	D	D	1 144
311920	Coffee and tea manufacturing .....	1	7	3	e	D	D	D	D	D	D	D	1 144
31194	Seasoning and dressing manufacturing .....	2	22	5	852	29 133	648	1 187	18 187	206 188	100 795	305 457	D
311941	Mayonnaise, dressing, and other prepared sauce manufacturing .....	—	11	3	554	13 971	496	933	11 014	161 124	65 698	224 935	1 746
311942	Spices and extract manufacturing .....	8	11	2	298	15 162	152	254	7 173	45 064	35 097	80 522	D
31199	All other food manufacturing .....	3	72	16	1 071	32 655	832	1 580	22 027	171 192	161 232	331 340	4 807
311991	Perishable prepared food manufacturing .....	3	16	5	284	6 449	247	427	4 592	14 416	16 648	31 044	365
311999	All other miscellaneous food manufacturing .....	3	56	11	787	26 206	585	1 153	17 435	156 776	144 584	300 296	4 442
312	Beverage and tobacco product manufacturing .....	—	81	21	4 007	148 881	1 737	3 393	62 237	886 559	968 302	1 849 989	57 865
3121	Beverage manufacturing .....	—	80	21	h	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	44	18	3 776	141 762	1 632	3 194	58 347	860 229	949 193	1 802 631	48 724
312111	Soft drink manufacturing .....	—	15	14	3 495	134 741	1 504	2 967	55 839	836 796	941 682	1 771 737	47 607
312113	Ice manufacturing .....	—	20	3	205	4 720	87	142	1 371	18 057	3 968	22 010	823
31212	Breweries .....	9	22	1	c	D	D	D	D	D	D	D	4 295
312120	Breweries .....	9	22	1	c	D	D	D	D	D	D	D	4 295
31213	Wineries .....	2	13	2	116	3 241	36	73	1 404	6 388	6 794	15 088	D
312130	Wineries .....	2	13	2	116	3 241	36	73	1 404	6 388	6 794	15 088	D
313	Textile mills .....	4	51	6	622	20 378	485	964	13 549	41 725	59 584	101 205	1 278
3132	Fabric mills .....	6	22	2	219	7 516	167	340	4 772	13 341	14 324	27 660	461
31323	Nonwoven fabric mills .....	2	2	1	c	D	D	D	D	D	D	D	D
313230	Nonwoven fabric mills .....	2	2	1	c	D	D	D	D	D	D	D	D
3133	Textile and fabric finishing and fabric coating mills .....	4	23	4	380	12 251	304	603	8 540	27 045	43 884	70 920	D
31331	Textile and fabric finishing mills .....	9	17	2	214	6 122	182	367	4 674	12 418	16 542	28 350	383
313311	Broadwoven fabric finishing mills .....	9	13	2	200	5 750	170	342	4 396	11 581	15 470	26 441	356
31332	Fabric coating mills .....	1	6	2	166	6 129	122	236	3 866	14 627	27 342	42 570	D
313320	Fabric coating mills .....	1	6	2	166	6 129	122	236	3 866	14 627	27 342	42 570	D
314	Textile product mills .....	3	200	23	2 288	61 177	1 669	3 052	35 393	124 674	126 542	248 038	4 223
3141	Textile furnishings mills .....	4	70	5	634	17 197	516	908	11 405	46 887	50 290	93 960	1 441
31411	Carpet and rug mills .....	5	8	3	269	9 663	212	474	6 610	32 048	35 857	64 745	606
314110	Carpet and rug mills .....	5	8	3	269	9 663	212	474	6 610	32 048	35 857	64 745	606
31412	Curtain and linen mills .....	2	62	2	365	7 534	304	434	4 795	14 839	14 433	29 215	835
314121	Curtain and drapery mills .....	3	55	—	190	3 831	154	263	2 157	6 915	6 065	12 943	D
314129	Other household textile product mills .....	—	7	2	175	3 703	150	171	2 638	7 924	8 368	16 272	D
3149	Other textile product mills .....	2	130	18	1 654	43 980	1 153	2 144	23 988	77 787	76 252	154 078	2 782
31491	Textile bag and canvas mills .....	4	68	9	606	15 803	487	864	10 096	27 668	32 047	59 089	349
314912	Canvas and related product mills .....	5	61	7	521	14 004	411	740	8 643	23 729	28 886	51 951	308
31499	All other textile product mills .....	1	62	9	1 048	28 177	666	1 280	13 892	50 119	44 205	94 989	2 433
314999	All other miscellaneous textile product mills .....	1	57	8	987	26 454	629	1 206	12 755	46 816	41 966	89 253	D
315	Apparel manufacturing .....	4	135	9	891	22 407	721	1 303	14 039	49 649	73 475	125 736	D
3152	Cut and sew apparel manufacturing .....	3	104	7	721	18 160	579	1 037	11 022	41 920	66 259	111 128	D
31521	Cut and sew apparel contractors .....	5	67	3	335	6 278	300	503	4 854	10 322	3 210	13 196	92
315212	Women's, girls', and infants' cut and sew apparel contractors .....	5	57	2	276	5 258	248	412	4 100	8 526	2 824	11 010	78
31522	Men's and boys' cut and sew apparel manufacturing .....	—	8	2	208	6 726	131	240	2 651	18 979	46 914	68 005	183
315223	Men's and boys' cut and sew apparel manufacturing .....	—	2	1	c	D	D	D	D	D	D	D	D
31523	Women's and girls' cut and sew apparel manufacturing .....	8	21	1	107	3 471	87	162	2 307	9 481	12 526	21 978	D
3159	Apparel accessories and other apparel manufacturing .....	7	26	2	135	3 256	112	206	2 262	6 023	5 464	11 150	67
31599	Apparel accessories and other apparel manufacturing .....	7	26	2	135	3 256	112	206	2 262	6 023	5 464	11 150	67
315999	Other apparel accessories and other apparel manufacturing .....	8	24	2	c	D	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
316	Leather and allied product manufacturing .....	-	28	10	2 019	60 631	1 679	3 109	44 375	170 911	460 904	624 639	D
3161	Leather and hide tanning and finishing.....	-	9	5	1 217	42 478	954	1 742	29 920	137 386	378 769	508 561	2 027
31611	Leather and hide tanning and finishing.....	-	9	5	1 217	42 478	954	1 742	29 920	137 386	378 769	508 561	2 027
316110	Leather and hide tanning and finishing.....	-	9	5	1 217	42 478	954	1 742	29 920	137 386	378 769	508 561	2 027
3162	Footwear manufacturing .....	-	5	3	f	D	D	D	D	D	D	D	D
31621	Footwear manufacturing .....	-	5	3	f	D	D	D	D	D	D	D	D
316213	Men's footwear (except athletic) manufacturing.....	-	4	3	f	D	D	D	D	D	D	D	D
3169	Other leather and allied product manufacturing .....	'6	'14	2	c	D	D	D	D	D	D	D	D
31699	Other leather and allied product manufacturing .....	'6	'14	2	c	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	2	579	162	12 167	367 356	9 514	18 625	247 061	821 283	1 203 004	2 014 509	56 609
3211	Sawmills and wood preservation .....	2	159	36	2 340	71 619	1 959	4 051	55 097	147 499	399 783	545 406	21 996
32111	Sawmills and wood preservation .....	2	159	36	2 340	71 619	1 959	4 051	55 097	147 499	399 783	545 406	21 996
321113	Sawmills .....	3	148	32	2 137	65 794	1 800	3 718	51 181	128 303	321 917	449 231	17 864
321114	Wood preservation .....	-	11	4	203	5 825	159	333	3 916	19 196	77 866	96 175	4 132
3212	Veneer, plywood, and engineered wood product manufacturing....	1	68	41	3 983	135 017	3 120	6 388	90 854	324 360	398 289	717 699	19 172
32121	Veneer, plywood, and engineered wood product manufacturing....	1	68	41	3 983	135 017	3 120	6 388	90 854	324 360	398 289	717 699	19 172
321211	Hardwood veneer and plywood manufacturing ....	-	15	8	1 161	33 740	1 012	2 074	25 512	65 036	104 598	167 290	4 254
321214	Truss manufacturing.....	2	35	21	1 597	50 440	1 127	2 224	28 467	105 021	93 475	198 850	3 597
321219	Reconstituted wood product manufacturing .....	-	14	11	1 154	48 652	918	1 961	35 062	144 177	187 234	328 220	10 640
3219	Other wood product manufacturing .....	2	352	85	5 844	160 720	4 435	8 186	101 110	349 424	404 932	751 404	15 441
32191	Millwork .....	1	138	38	2 662	75 444	2 039	3 650	48 516	170 081	232 366	399 452	8 586
321911	Wood window and door manufacturing .....	1	41	13	917	27 485	677	1 314	17 413	76 530	62 242	138 477	4 301
321912	Cut stock, resawing lumber, and planing .....	1	30	7	570	15 385	447	837	10 352	31 528	84 835	115 601	1 443
321918	Other millwork (including flooring).....	1	67	18	1 175	32 574	915	1 499	20 751	62 023	85 289	145 374	2 842
32192	Wood container and pallet manufacturing .....	4	107	22	1 363	31 679	1 127	2 131	22 137	57 972	71 133	129 220	2 431
321920	Wood container and pallet manufacturing .....	4	107	22	1 363	31 679	1 127	2 131	22 137	57 972	71 133	129 220	2 431
32199	All other wood product manufacturing .....	4	107	22	1 363	31 679	1 127	2 131	22 137	57 972	71 133	129 220	2 431
321992	Prefabricated wood building manufacturing .....	1	'107	25	1 819	53 597	1 269	2 405	30 457	121 371	101 433	222 732	4 424
321999	All other miscellaneous wood product manufacturing .....	-	34	13	994	32 384	654	1 241	16 408	81 605	61 340	142 905	2 560
322	Paper manufacturing .....	-	198	132	16 152	701 143	12 062	24 894	454 599	2 209 273	2 419 565	4 648 878	133 625
3221	Pulp, paper, and paperboard mills .....	-	27	26	6 428	361 347	4 791	10 314	249 932	1 265 066	1 131 817	2 420 725	89 543
32212	Paper mills .....	-	16	15	h	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	15	14	4 330	250 967	3 269	6 979	178 833	862 265	784 662	1 671 063	D
322122	Newsprint mills .....	-	1	1	c	D	D	D	D	D	D	D	28 036
322123	Paperboard mills .....	-	10	10	g	D	D	D	D	D	D	D	28 036
322130	Paperboard mills .....	-	10	10	g	D	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	1	171	106	9 724	339 796	7 271	14 580	204 667	944 207	1 287 748	2 228 153	44 082
32221	Paperboard container manufacturing .....	1	108	73	6 851	237 714	5 154	10 214	143 690	638 753	827 068	1 465 988	35 022
322211	Corrugated and solid fiber box manufacturing .....	1	80	54	4 927	175 507	3 600	7 100	101 188	404 938	610 762	1 015 855	25 505
322212	Folding paperboard box manufacturing .....	1	13	10	762	31 232	612	1 276	21 724	74 932	101 482	174 238	4 368
322213	Setup paperboard box manufacturing .....	1	3	2	c	D	D	D	D	D	D	D	D
322214	Fiber can, tube, drum, and similar products manufacturing .....	-	6	9	4	D	D	D	D	D	D	D	463
322215	Nonfolding sanitary food container manufacturing .....	-	3	3	884	21 307	737	1 409	14 710	134 047	94 775	231 277	D
32222	Paper bag and coated and treated paper manufacturing .....	-	23	14	1 331	48 583	978	2 051	29 467	164 977	258 003	420 502	5 146
322221	Coated and laminated packaging paper and plastics film manufacturing .....	-	5	2	322	10 472	245	505	5 879	34 899	46 164	80 150	1 400
322222	Coated and laminated paper manufacturing .....	-	14	9	665	27 086	451	939	15 595	104 406	167 848	270 675	2 758
322223	Plastics, foil, and coated paper bag manufacturing .....	-	1	1	c	D	D	D	D	D	D	D	D
322224	Uncoated paper and multiwall bag manufacturing .....	-	1	1	c	D	D	D	D	D	D	D	D

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	<b>MICHIGAN—Con.</b>												
322	Paper manufacturing—Con.												
32222	Converted paper product manufacturing—Con.												
32223	Stationery product manufacturing .....	2	18	6	e	D	D	D	D	D	D	D	D
322231	Die-cut paper and paperboard office supplies manufacturing .....	2	9	3	179	6 322	128	242	3 759	24 027	16 530	40 044	319
322232	Envelope manufacturing .....	2	6	3	176	6 894	111	249	3 365	16 078	20 405	36 316	327
32229	Other converted paper product manufacturing .....	2	22	13	g	D	D	D	D	D	D	D	D
322299	All other converted paper product manufacturing .....	1	19	12	1 125	37 818	848	1 717	22 597	90 486	153 963	243 638	D
323	Printing and related support activities .....	2	1 238	211	20 732	749 824	14 491	26 653	445 997	1 710 235	1 064 146	2 771 512	87 682
3231	Printing and related support activities .....	2	1 238	211	20 732	749 824	14 491	26 653	445 997	1 710 235	1 064 146	2 771 512	87 682
32311	Printing .....	2	1 121	195	19 351	1 696 025	13 552	1 248 876	1 415 539	1 578 867	1 034 397	1 610 264	1 807 32
323110	Commercial lithographic printing .....	1	510	111	10 154	383 716	7 104	12 839	229 553	916 196	630 579	1 544 962	44 877
323112	Commercial flexographic printing .....	—	29	10	1 095	48 403	697	1 498	24 172	98 124	82 563	180 544	5 406
323113	Commercial screen printing .....	1	149	13	1 745	51 546	1 286	1 986	28 792	102 088	55 063	154 825	D
323114	Quick printing .....	3	277	15	1 460	1 074	951	1 666	25 689	102 201	38 481	140 692	4 670
323115	Digital printing .....	4	17	6	e	D	D	D	D	D	D	D	1 742
323116	Manifold business forms printing .....	4	24	11	623	21 591	438	875	14 030	66 503	38 174	105 199	2 000
323117	Books printing .....	1	24	14	2 333	83 775	1 767	3 538	57 892	158 159	116 832	276 322	12 305
323118	Blankbook, looseleaf binders, and devices manufacturing .....	6	10	5	657	22 996	417	831	11 588	61 381	28 923	89 819	1 942
323119	Other commercial printing .....	3	79	9	752	23 359	494	865	13 505	43 620	26 329	69 832	3 119
32312	Support activities for printing .....	1	117	16	1 381	1 53 799	939	1 777	1 30 458	131 368	1 29 749	161 248	1 6950
323121	Tradebinding and related work .....	5	23	3	298	5 860	239	410	4 152	16 653	5 467	21 940	595
323122	Prepress services .....	1	94	13	1 083	1 47 939	700	1 367	1 26 306	114 715	1 24 282	139 308	1 6355
324	Petroleum and coal products manufacturing .....	—	73	22	1 810	92 736	984	1 943	44 174	426 102	1 169 808	1 557 549	43 809
3241	Petroleum and coal products manufacturing .....	—	73	22	1 810	92 736	984	1 943	44 174	426 102	1 169 808	1 557 549	43 809
32411	Petroleum refineries .....	—	3	2	e	D	D	D	D	D	D	D	D
324110	Petroleum refineries .....	—	3	2	e	D	D	D	D	D	D	D	D
32412	Asphalt paving, roofing, and saturated materials manufacturing .....	—	—	—	—	—	—	—	—	—	—	—	—
324121	Asphalt paving mixture and block manufacturing .....	1	41	10	712	33 266	376	776	17 593	113 646	237 919	351 446	D
32419	Other petroleum and coal products manufacturing .....	1	38	8	645	30 636	324	668	16 217	107 055	227 137	334 101	10 953
324191	Petroleum lubricating oil and grease manufacturing .....	3	29	10	f	D	D	D	D	D	D	D	D
324199	All other petroleum and coal products manufacturing .....	2	26	9	459	22 653	210	441	6 921	73 090	104 329	178 872	D
324199	All other petroleum and coal products manufacturing .....	9	3	1	e	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	1	405	176	28 258	1 402 124	17 635	35 935	776 084	6 167 748	5 414 371	11 505 635	488 156
3251	Basic chemical manufacturing ...	3	62	31	5 637	322 877	3 719	7 321	207 087	875 625	1 612 066	2 435 958	156 255
32512	Industrial gas manufacturing ...	—	6	3	c	D	D	D	D	D	D	D	D
325120	Industrial gas manufacturing ...	—	6	3	c	D	D	D	D	D	D	D	D
32513	Synthetic dye and pigment manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
325132	Synthetic organic dye and pigment manufacturing .....	—	3	3	544	27 158	303	602	13 843	119 357	122 397	243 727	D
32518	Other basic inorganic chemical manufacturing .....	2	18	9	658	34 694	474	982	22 283	148 681	123 551	268 531	D
325188	All other basic inorganic chemical manufacturing .....	1	15	7	f	D	D	D	D	D	D	D	12 527
32519	Other basic organic chemical manufacturing .....	4	33	16	4 306	253 140	2 882	5 618	167 787	564 047	1 338 819	1 852 972	D
325199	All other basic organic chemical manufacturing .....	4	30	15	4 264	250 169	2 853	5 551	165 707	559 534	1 325 024	1 834 765	130 286
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	—	40	25	2 785	158 539	1 424	2 946	71 014	479 739	931 689	1 403 147	39 334
32521	Resin and synthetic rubber manufacturing .....	—	39	24	h	D	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	—	32	23	2 594	152 710	1 325	2 779	67 301	460 043	906 738	1 358 862	38 179
325212	Synthetic rubber manufacturing .....	2	7	1	c	D	D	D	D	D	D	D	D
3253	Pesticide, fertilizer, and other agricultural chemical manufacturing .....	3	13	5	290	9 508	207	370	5 720	43 413	33 424	75 521	2 217
32531	Fertilizer manufacturing .....	1	9	5	265	7 870	193	341	4 808	29 330	27 559	55 573	1 824
325314	Fertilizer (mixing only) manufacturing .....	1	9	5	265	7 870	193	341	4 808	29 330	27 559	55 573	1 824

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
325 3254	MICHIGAN—Con.												
32541	Chemical manufacturing—Con.												
325411	Pharmaceutical and medicine manufacturing .....	—	42	23	7 125	334 278	4 187	9 318	162 183	3 231 936	881 003	4 047 605	157 709
325411	Pharmaceutical and medicine manufacturing .....	—	42	23	7 125	334 278	4 187	9 318	162 183	3 231 936	881 003	4 047 605	157 709
325412	Medicinal and botanical manufacturing .....	—	6	4	617	37 044	264	535	12 847	163 100	107 129	226 025	17 023
325412	Pharmaceutical preparation manufacturing .....	—	19	10	5 652	253 918	3 542	8 120	135 729	2 940 047	643 498	3 572 099	125 953
325413	In-vitro diagnostic substance manufacturing .....	1	9	3	241	12 930	110	186	3 616	33 500	23 997	54 887	D
325414	Biological product (except diagnostic) manufacturing ..	4	8	6	615	30 386	271	477	9 991	95 289	106 379	194 594	D
3255	Paint, coating, and adhesive manufacturing .....	2	94	39	4 058	187 041	2 301	4 539	86 450	741 565	701 909	1 462 545	46 848
32551	Paint and coating manufacturing .....	1	65	26	2 524	121 176	1 392	2 708	53 479	534 411	426 692	983 295	35 311
325510	Paint and coating manufacturing .....	1	65	26	2 524	121 176	1 392	2 708	53 479	534 411	426 692	983 295	35 311
32552	Adhesive manufacturing .....	3	29	13	1 534	65 865	909	1 831	32 971	207 154	275 217	479 250	11 537
325520	Adhesive manufacturing .....	3	29	13	1 534	65 865	909	1 831	32 971	207 154	275 217	479 250	11 537
3256	Soap, cleaning compound, and toilet preparation manufacturing.	2	56	10	4 949	233 040	3 728	7 146	168 980	220 383	639 294	886 884	36 707
32561	Soap and cleaning compound manufacturing .....	7	47	7	f	D	D	D	D	D	D	D	D
325611	Soap and other detergent manufacturing .....	6	24	2	221	11 410	168	340	7 512	64 023	61 707	126 419	D
325612	Polish and other sanitation good manufacturing .....	8	18	5	400	17 033	191	392	6 435	56 413	36 798	93 899	2 098
32562	Toilet preparation manufacturing .....	—	9	3	h	D	D	D	D	D	D	D	D
325620	Toilet preparation manufacturing .....	—	9	3	h	D	D	D	D	D	D	D	D
3259	Other chemical product and preparation manufacturing .....	2	98	43	3 414	156 841	2 069	4 295	74 650	575 087	614 986	1 193 975	49 086
32591	Printing ink manufacturing .....	2	9	4	388	19 947	185	372	7 046	67 450	35 402	102 746	2 068
325910	Printing ink manufacturing .....	2	9	4	388	19 947	185	372	7 046	67 450	35 402	102 746	2 068
32599	All other chemical product and preparation manufacturing .....	2	86	38	2 983	134 784	1 858	3 872	66 685	502 476	573 014	1 079 631	46 810
325991	Custom compounding of purchased resins .....	2	39	19	1 486	60 079	988	2 041	30 774	178 412	253 457	434 309	24 770
325998	All other miscellaneous chemical product and preparation manufacturing .....	1	37	17	1 398	70 050	832	1 753	34 407	304 673	309 384	615 722	20 649
326	Plastics and rubber products manufacturing .....	1	840	477	64 226	1'081 781	1'49 010	1'97 399	1'305 284	1'5 628 356	1'4 743 979	1'10 373 109	1'363 493
3261	Plastics product manufacturing .....	1	744	434	58 310	1'888 263	1'44 742	1'89 396	1'196 556	1'5 137 043	1'4 309 175	1'9 445 929	1'330 096
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	1	52	25	1'2 930	1'25 933	1'2 169	1'4 612	1'78 932	1'321 915	1'349 953	1'674 911	1'33 885
326111 326112	Plastics bag manufacturing .....	1	8	4	689	32 624	499	1 103	20 517	35 533	91 398	126 860	D
326113	Plastics packaging film and sheet (including laminated) manufacturing .....	1	8	7	1'823	1'31 586	1'676	1'1 527	1'21 731	1'66 132	1'65 582	1'132 200	D
32612	Unlaminated plastics film and sheet (except packaging) manufacturing .....	2	36	14	1 418	61 723	994	1 982	36 684	220 250	192 973	415 851	8 172
326121	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing .....	1	44	20	1'363	1'44 528	1'970	1'1 916	1'25 517	1'115 852	1'109 741	1'223 834	1'19 772
326122	Unlaminated plastics profile shape manufacturing .....	1	28	11	825	27 464	544	1 117	14 250	55 243	49 958	104 642	11 761
32614	Plastics pipe and pipe fitting manufacturing .....	1	16	9	1'538	1'17 064	1'426	1'799	1'11 267	1'60 609	1'59 783	1'119 192	1'8 011
326140	Polystyrene foam product manufacturing .....	—	25	15	1'2 346	1'77 356	1'1 341	1'2 679	1'36 419	1'192 720	1'119 277	1'302 000	1'5 813
32615	Urethane and other foam product (except polystyrene) manufacturing .....	—	25	15	1'2 346	1'77 356	1'1 341	1'2 679	1'36 419	1'192 720	1'119 277	1'302 000	1'5 813
326150	Urethane and other foam product (except polystyrene) manufacturing .....	1	43	25	2 360	77 031	1 870	3 740	52 518	215 981	215 099	432 007	8 702
32616	Plastics bottle manufacturing .....	1	43	25	2 360	77 031	1 870	3 740	52 518	215 981	215 099	432 007	8 702
326160	Plastics bottle manufacturing .....	—	6	4	501	18 978	416	878	15 280	67 312	58 155	122 746	4 244
32619	Other plastics product manufacturing .....	1	568	343	1'48 752	1'1 542 532	1'37 929	1'75 472	1'986 495	1'4 218 179	1'3 449 626	1'7 678 040	1'257 356
326191	Plastics plumbing fixture manufacturing .....	1	24	16	1 230	38 278	963	1 981	24 532	102 022	70 920	172 448	3 699
326199	All other plastics product manufacturing .....	1	544	327	1'47 522	1'1 504 254	1'36 966	1'73 491	1'961 963	1'4 116 157	1'3 378 706	1'7 505 592	1'253 657
3262	Rubber product manufacturing .....	—	96	43	5 916	193 518	4 268	8 003	108 728	491 313	434 804	927 180	33 397
32621	Tire manufacturing .....	2	21	4	219	6 612	134	256	3 547	10 857	17 623	28 761	1 777
326212	Tire retreading .....	2	21	4	219	6 612	134	256	3 547	10 857	17 623	28 761	1 777
32622	Rubber and plastics hoses and belting manufacturing .....	—	12	7	1 549	52 908	1 090	2 169	29 339	104 637	77 165	183 740	2 940
326220	Rubber and plastics hoses and belting manufacturing .....	—	12	7	1 549	52 908	1 090	2 169	29 339	104 637	77 165	183 740	2 940

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	<b>MICHIGAN—Con.</b>												
326	Plastics and rubber products manufacturing—Con.												
3262	Rubber product manufacturing—Con.												
32629	Other rubber product manufacturing .....	—	63	32	4 148	133 998	3 044	5 578	75 842	375 819	340 016	714 679	28 680
326291	Rubber product manufacturing for mechanical use .....	—	35	22	3 462	106 766	2 591	4 633	62 320	312 552	278 695	590 430	26 848
326299	All other rubber product manufacturing .....	3	28	10	686	27 232	453	945	13 522	63 267	61 321	124 249	1 832
327	Nonmetallic mineral product manufacturing .....	1	531	187	17 845	750 984	13 617	26 608	506 660	2 240 375	1 771 313	4 011 374	147 134
3271	Clay product and refractory manufacturing .....	2	41	10	765	28 114	561	1 101	17 255	74 645	50 097	126 544	6 125
32711	Pottery, ceramics, and plumbing fixture manufacturing .....	1	19	4	248	7 010	171	336	4 280	16 420	14 975	31 206	1 216
32712	Clay building material and refractories manufacturing .....	2	22	6	517	21 104	390	765	12 975	58 225	35 122	95 338	4 909
327121	Brick and structural clay tile manufacturing .....	9	3	1	c	D	D	D	D	D	D	D	D
327125	Nonclay refractory manufacturing .....	—	7	4	297	14 185	207	404	7 830	38 140	25 409	65 471	3 602
3272	Glass and glass product manufacturing .....	—	69	32	7 133	310 174	5 577	11 086	207 141	902 964	779 153	1 688 112	58 099
32721	Glass and glass product manufacturing .....	—	69	32	7 133	310 174	5 577	11 086	207 141	902 964	779 153	1 688 112	58 099
327211	Flat glass manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
327213	Glass container manufacturing .....	3	4	2	e	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	59	28	6 261	271 506	4 856	9 583	177 905	767 615	703 943	1 469 732	D
3273	Cement and concrete product manufacturing .....	2	321	115	7 323	309 547	5 547	10 592	214 157	902 264	707 891	1 603 369	60 283
32731	Cement manufacturing .....	4	9	7	966	53 652	742	1 618	38 357	256 469	185 921	439 644	9 455
327310	Cement manufacturing .....	4	9	7	966	53 652	742	1 618	38 357	256 469	185 921	439 644	9 455
32732	Ready-mix concrete manufacturing .....	1	193	67	3 187	142 398	2 324	4 807	98 805	376 404	334 887	713 462	29 060
327320	Ready-mix concrete manufacturing .....	1	193	67	3 187	142 398	2 324	4 807	98 805	376 404	334 887	713 462	29 060
32733	Concrete pipe, brick, and block manufacturing .....	1	51	25	1 433	56 446	1 040	2 285	35 220	170 585	110 439	280 706	15 551
327331	Concrete block and brick manufacturing .....	1	38	14	775	33 108	518	1 165	19 457	91 353	64 472	155 435	12 446
327332	Concrete pipe manufacturing .....	—	13	11	658	23 338	522	1 120	15 763	79 232	45 967	125 271	3 105
32739	Other concrete product manufacturing .....	3	68	16	1 737	57 051	1 441	1 882	41 775	98 806	76 644	169 557	6 217
327390	Other concrete product manufacturing .....	3	68	16	1 737	57 051	1 441	1 882	41 775	98 806	76 644	169 557	6 217
3279	Other nonmetallic mineral product manufacturing .....	3	93	29	2 533	99 304	1 856	3 662	65 171	343 777	223 594	565 908	22 084
32791	Abrasive product manufacturing .....	4	34	14	905	36 698	645	1 319	21 167	142 463	79 800	219 606	5 114
327910	Abrasives product manufacturing .....	4	34	14	905	36 698	645	1 319	21 167	142 463	79 800	219 606	5 114
32799	All other nonmetallic mineral product manufacturing .....	2	59	15	1 628	62 606	1 211	2 343	44 004	201 314	143 794	346 302	16 970
327991	Cut stone and stone product manufacturing .....	2	27	3	328	12 696	228	465	7 717	30 637	17 086	48 067	1 645
327992	Ground or treated mineral and earth manufacturing .....	5	11	3	398	17 580	298	659	12 221	78 582	49 625	127 408	2 371
327993	Mineral wool manufacturing .....	—	8	5	725	24 921	542	950	18 399	68 736	59 214	129 539	11 585
327999	All other miscellaneous nonmetallic mineral product manufacturing .....	1	13	4	177	7 409	143	269	5 667	23 359	17 869	41 288	1 369
331	Primary metal manufacturing .....	—	324	195	32 136	1 482 134	25 003	52 900	1 084 629	3 059 970	4 785 459	7 857 282	311 182
3311	Iron and steel mills and ferroalloy manufacturing .....	—	21	11	7 478	420 596	5 606	12 395	315 280	661 584	2 112 682	2 789 720	82 582
33111	Iron and steel mills and ferroalloy manufacturing .....	—	21	11	7 478	420 596	5 606	12 395	315 280	661 584	2 112 682	2 789 720	82 582
331111	Iron and steel mills .....	—	21	11	7 478	420 596	5 606	12 395	315 280	661 584	2 112 682	2 789 720	82 582
3312	Steel product manufacturing from purchased steel .....	—	35	26	2 544	103 113	1 920	3 963	68 668	256 749	389 546	644 937	13 523
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	—	8	6	879	34 007	641	1 358	20 956	99 664	92 889	190 755	4 871
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	—	8	6	879	34 007	641	1 358	20 956	99 664	92 889	190 755	4 871
33122	Rolling and drawing of purchased steel .....	—	27	20	1 665	69 106	1 279	2 605	47 712	157 085	296 657	454 182	8 652
331221	Rolled steel shape manufacturing .....	—	17	13	862	41 581	638	1 326	28 980	99 717	230 827	333 892	4 068
331222	Steel wire drawing .....	—	10	7	803	27 525	641	1 279	18 732	57 368	65 830	120 290	4 584

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	<b>MICHIGAN—Con.</b>												
331 3313	Primary metal manufacturing—Con. Alumina and aluminum production and processing .....	—	34	24	2 597	96 773	1 948	4 104	65 155	264 514	482 191	749 707	25 316
33131	Alumina and aluminum production and processing ...	—	34	24	2 597	96 773	1 948	4 104	65 155	264 514	482 191	749 707	25 316
331312	Primary aluminum production .....	—	1	1	c	D	D	D	D	D	D	D	D
331314	Secondary smelting and alloying of aluminum .....	—	11	8	530	22 340	400	940	14 255	90 404	292 408	383 347	D
331315	Aluminum sheet, plate, and foil manufacturing .....	—	4	2	c	D	D	D	D	D	D	D	D
331316	Aluminum extruded product manufacturing .....	—	16	13	1 650	58 098	1 224	2 494	38 696	126 397	160 719	289 138	18 498
3314	Nonferrous metal (except aluminum) production and processing .....	1	36	17	2 161	96 660	1 610	3 301	65 111	227 485	417 045	642 591	12 546
33141	Nonferrous metal (except aluminum) smelting and refining .....	—	6	1	446	27 783	261	537	16 385	65 675	83 841	152 460	2 211
331419	Primary smelting and refining of nonferrous metal (except copper and aluminum) .....	—	6	1	446	27 783	261	537	16 385	65 675	83 841	152 460	2 211
33142	Copper rolling, drawing, extruding, and alloying .....	—	6	1	446	27 783	261	537	16 385	65 675	83 841	152 460	2 211
331421	Copper rolling, drawing, and extruding .....	—	6	6	1 002	36 604	833	1 761	27 180	99 420	217 690	306 889	6 373
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying .....	—	5	5	f	D	D	D	D	D	D	D	D
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding .....	3	24	10	713	32 273	516	1 003	21 546	62 390	115 514	183 242	3 962
331492	Secondary smelting, refining, and alloying of nonferrous metal (except copper and aluminum) .....	5	16	5	421	18 440	291	572	11 838	29 558	54 852	91 034	1 422
3315	Foundries .....	—	198	117	17 356	764 992	13 919	29 137	570 415	1 649 638	1 383 995	3 030 327	177 215
33151	Ferrous metal foundries .....	—	90	56	10 627	519 268	8 765	18 177	410 310	1 060 634	890 788	1 947 199	140 077
331511	Iron foundries .....	—	51	32	7 737	417 779	6 398	12 979	335 103	744 708	716 634	1 459 432	125 071
331512	Steel investment foundries ..	—	14	11	1 584	54 125	1 327	3 080	41 530	208 348	303 734	9 226	
331513	Steel foundries (except investment) .....	2	25	13	1 306	47 364	1 040	2 118	33 677	107 578	77 552	184 033	5 780
33152	Nonferrous metal foundries .....	—	108	61	6 729	245 724	5 154	10 960	160 105	589 004	493 207	1 083 128	37 138
331521	Aluminum die-casting foundries .....	1	36	25	3 296	122 846	2 509	5 477	84 428	281 655	257 228	539 868	17 695
331522	Nonferrous (except aluminum) die-casting foundries .....	—	27	16	1 565	57 341	1 231	2 653	35 844	132 288	140 434	273 893	9 978
331524	Aluminum foundries (except die-casting) .....	1	34	15	1 270	40 597	985	2 021	25 945	103 959	66 865	169 495	7 601
331525	Copper foundries (except die-casting) .....	—	5	3	248	9 688	179	329	5 456	23 620	11 688	35 823	1 222
331528	Other nonferrous foundries (except die-casting) .....	—	6	2	350	15 252	250	480	8 432	47 482	16 992	64 049	642
332	Fabricated metal product manufacturing .....	2	3 600	1 089	91 792	1 409 215	1 68 486	137 788	1 206 475	1 7 906 386	1 5 671 716	1 13 599 697	1 480 057
3321	Forging and stamping .....	1	178	88	6 425	249 987	4 894	9 909	163 032	604 147	559 241	1 158 946	25 619
33211	Forging and stamping .....	1	178	88	6 425	249 987	4 894	9 909	163 032	604 147	559 241	1 158 946	25 619
332111	Iron and steel forging .....	—	34	22	1 898	82 576	1 409	2 899	55 964	229 665	263 070	488 614	5 774
332112	Nonferrous forging .....	2	11	8	758	31 263	641	1 380	23 597	104 831	63 191	169 241	D
332114	Custom roll forming .....	2	24	12	560	24 998	372	790	12 400	44 486	50 268	90 227	2 285
332116	Metal stamping .....	2	95	40	2 760	97 017	2 114	4 154	61 886	194 628	158 021	355 343	11 130
332117	Powder metallurgy part manufacturing .....	—	10	6	415	12 798	329	623	8 105	25 834	19 617	45 744	D
3322	Cutlery and handtool manufacturing .....	1	110	34	2 845	109 041	1 880	3 535	60 024	227 823	127 399	349 968	11 484
33221	Cutlery and handtool manufacturing .....	1	110	34	2 845	109 041	1 880	3 535	60 024	227 823	127 399	349 968	11 484
332212	Hand and edge tool manufacturing .....	1	96	32	2 490	95 647	1 610	2 977	51 217	205 335	102 662	310 171	D
332214	Kitchen utensil, pot, and pan manufacturing .....	—	4	2	e	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	2	494	127	11 190	414 777	7 654	15 492	249 076	965 983	962 612	1 936 507	51 466
33231	Plate work and fabricated structural product manufacturing .....	2	243	59	1 451	1 204 102	1 3 679	1 7 401	1 123 811	1 508 225	1 612 251	1 131 122	29 488
332311	Prefabricated metal building and component manufacturing .....	2	21	5	495	18 172	309	624	9 559	60 868	40 991	101 483	833
332312	Fabricated structural metal manufacturing .....	2	155	32	2 721	105 708	1 853	3 669	58 701	267 801	291 438	565 357	8 597
332313	Plate work manufacturing .....	2	67	22	1 235	1 80 222	1 517	1 3 108	1 55 551	1 179 556	1 279 822	1 464 282	20 058

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	<b>MICHIGAN—Con.</b>												
332	Fabricated metal product manufacturing—Con.												
3323	Architectural and structural metals manufacturing—Con.												
33232	Ornamental and architectural metal products manufacturing .....	1	'251	'68	'5 739	'210 675	'3 975	'8 091	'125 265	'457 758	'350 361	'805 385	21 978
332321	Metal window and door manufacturing .....	2	37	13	769	26 497	459	941	12 374	53 855	56 638	110 619	2 517
332322	Sheet metal work manufacturing .....	1	'162	'45	'3 698	'133 913	'2 585	'5 245	'82 160	'289 170	'215 564	'500 013	12 540
332323	Ornamental and architectural metal work manufacturing ..	-	52	10	1 272	50 265	931	1 905	30 731	114 733	78 159	194 753	6 921
3324	Boiler, tank, and shipping container manufacturing .....	3	44	18	1 107	42 149	768	1 711	24 930	111 315	106 945	220 299	3 264
33241	Power boiler and heat exchanger manufacturing ....	4	6	4	223	7 714	155	361	4 332	19 205	11 082	30 310	197
332410	Power boiler and heat exchanger manufacturing ..	4	6	4	223	7 714	155	361	4 332	19 205	11 082	30 310	197
33242	Metal tank (heavy gauge) manufacturing .....	7	14	4	174	7 442	105	223	3 885	25 479	16 538	42 271	619
332420	Metal tank (heavy gauge) manufacturing .....	7	14	4	174	7 442	105	223	3 885	25 479	16 538	42 271	619
33243	Metal can, box, and other metal container (light gauge) manufacturing .....	1	24	10	710	26 993	508	1 127	16 713	66 631	79 325	147 718	2 448
332439	Other metal container manufacturing .....	1	19	8	621	23 824	433	968	14 224	60 637	67 762	131 208	1 875
3325	Hardware manufacturing .....	1	57	28	7 059	228 062	5 680	11 036	153 679	427 324	396 913	823 728	20 734
33251	Hardware manufacturing .....	1	57	28	7 059	228 062	5 680	11 036	153 679	427 324	396 913	823 728	20 734
332510	Hardware manufacturing .....	1	57	28	7 059	228 062	5 680	11 036	153 679	427 324	396 913	823 728	20 734
3326	Spring and wire product manufacturing .....	2	122	44	3 387	112 878	2 446	4 860	69 630	244 097	173 849	418 076	13 259
33261	Spring and wire product manufacturing .....	2	122	44	3 387	112 878	2 446	4 860	69 630	244 097	173 849	418 076	13 259
332611	Spring (heavy gauge) manufacturing .....	4	10	5	219	7 667	143	230	4 218	12 854	10 384	23 218	669
332612	Spring (light gauge) manufacturing .....	-	34	20	1 597	56 501	1 211	2 477	37 601	126 173	89 556	215 391	7 981
332618	Other fabricated wire product manufacturing .....	3	78	19	1 571	48 710	1 092	2 153	27 811	105 070	73 909	179 467	4 609
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	2	'1 660	'397	'30 783	'1 208 312	'23 355	'47 467	'813 463	'2 861 847	'1 915 873	'4 780 099	'228 390
33271	Machine shops .....	2	'1 295	'210	'17 073	'656 768	'12 941	'25 405	'440 113	'1 405 456	'806 116	'2 219 081	'115 859
332710	Machine shops .....	2	'1 295	'210	'17 073	'656 768	'12 941	'25 405	'440 113	'1 405 456	'806 116	'2 219 081	'115 859
33272	Turned product and screw, nut, and bolt manufacturing .....	2	365	187	13 710	551 544	10 414	22 062	373 350	'1 456 391	'1 109 757	'2 561 018	112 531
332721	Precision turned product manufacturing .....	1	266	129	9 077	355 762	7 005	14 745	242 507	'824 015	'467 135	'1 294 460	77 478
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	3	99	58	4 633	195 782	3 409	7 317	130 843	632 376	642 622	1 266 558	35 053
3328	Coating, engraving, heat treating, and allied activities .....	1	516	208	15 100	513 329	11 629	22 940	336 576	1 171 490	485 374	1 657 458	66 399
33281	Coating, engraving, heat treating, and allied activities .....	1	516	208	15 100	513 329	11 629	22 940	336 576	1 171 490	485 374	1 657 458	66 399
332811	Metal heat treating .....	1	117	62	3 486	136 405	2 529	5 263	84 410	317 582	115 627	434 413	27 717
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	1	193	79	5 551	183 138	4 366	8 078	124 584	445 131	212 665	659 266	16 084
332813	Electroplating, plating, polishing, anodizing, and coloring .....	1	206	67	6 063	193 786	4 734	9 599	127 582	408 777	157 082	563 779	22 598
3329	Other fabricated metal product manufacturing .....	1	'419	'145	'13 896	'530 680	'10 180	'20 838	'336 065	'1 292 360	'943 510	'2 254 616	'59 442
33291	Metal valve manufacturing .....	1	80	41	5 536	211 625	3 909	8 067	128 111	598 379	373 113	975 579	26 321
332911	Industrial valve manufacturing .....	-	19	9	1 074	42 288	747	1 543	23 212	97 357	68 897	167 778	4 214
332912	Fluid power valve and hose fitting manufacturing .....	-	40	24	3 620	136 855	2 646	5 461	88 315	384 051	214 629	601 549	15 219
332913	Plumbing fixture fitting and trim manufacturing .....	-	8	3	e	D	D	D	D	D	D	D	1 438
332919	Other metal valve and pipe fitting manufacturing .....	8	13	5	e	D	D	D	D	D	D	D	5 450
33299	All other fabricated metal product manufacturing .....	1	'339	'104	'8 360	'319 055	'6 271	'12 771	'207 954	'693 981	'570 397	'1 279 037	'33 121
332991	Ball and roller bearing manufacturing .....	-	8	5	613	32 019	475	1 020	19 870	38 721	89 226	138 577	2 590
332995	Other ordnance and accessories manufacturing .....	1	4	2	103	6 705	62	140	3 880	7 580	4 819	12 116	D
332996	Fabricated pipe and pipe fitting manufacturing .....	3	52	23	1 575	46 700	1 208	2 483	27 793	98 461	85 492	183 962	4 276
332997	Industrial pattern manufacturing .....	-	'59	'17	'1 359	'69 096	'1 110	'2 319	'54 560	'119 904	'46 060	'165 959	D
332999	All other miscellaneous fabricated metal product manufacturing .....	1	'208	'55	'4 627	'161 914	'3 350	'6 684	'99 916	'425 862	'342 058	'770 213	'17 470

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
333	Machinery manufacturing .....	1	'2 601	'957	'89 690	'4 284 540	'55 332	'110 532	'2 266 921	'8 980 102	'7 402 398	'16 467 621	'460 723
3331	Agriculture, construction, and mining machinery manufacturing .....	1	71	28	2 241	87 389	1 557	3 136	50 865	227 510	257 483	487 793	11 766
33311	Agricultural implement manufacturing .....	3	32	7	774	28 362	533	1 072	15 334	59 857	79 391	138 804	7 117
333111	Farm machinery and equipment manufacturing ..	4	30	6	e	D	D	D	D	D	D	D	D
333112	Lawn and garden tractor and home lawn and garden equipment manufacturing ..	-	2	1	e	D	D	D	D	D	D	D	D
33312	Construction machinery manufacturing .....	-	27	17	1 103	44 043	783	1 560	27 363	133 982	142 996	280 475	3 896
333120	Construction machinery manufacturing .....	-	27	17	1 103	44 043	783	1 560	27 363	133 982	142 996	280 475	3 896
33313	Mining and oil and gas field machinery manufacturing .....	3	12	4	364	14 984	241	504	8 168	33 671	35 096	68 514	753
333131	Mining machinery and equipment manufacturing ..	3	9	3	310	12 200	211	449	6 748	27 607	29 810	56 920	654
3332	Industrial machinery manufacturing .....	1	'234	75	'7 091	'343 153	'3 823	'7 077	'152 083	'682 700	'735 420	'1 460 377	'25 875
33321	Sawmill and woodworking machinery manufacturing .....	-	9	3	676	25 161	362	653	10 472	61 266	57 124	116 120	D
333210	Sawmill and woodworking machinery manufacturing .....	-	9	3	676	25 161	362	653	10 472	61 266	57 124	116 120	D
33322	Plastics and rubber industry machinery manufacturing .....	1	'56	20	'1 884	'84 892	'1 111	'2 004	'44 047	'200 261	'138 655	'336 652	D
333220	Plastics and rubber industry machinery manufacturing .....	1	'56	20	'1 884	'84 892	'1 111	'2 004	'44 047	'200 261	'138 655	'336 652	D
33329	Other industrial machinery manufacturing .....	1	169	52	4 531	233 100	2 350	4 420	97 564	421 173	539 641	1 007 605	18 068
333291	Paper industry machinery manufacturing .....	1	7	2	213	11 016	88	186	3 550	20 542	13 634	34 057	434
333293	Printing machinery and equipment manufacturing ..	2	12	4	163	8 166	87	181	3 446	16 273	11 935	28 132	345
333294	Food product machinery manufacturing .....	2	18	3	229	8 195	127	248	3 799	19 868	13 838	34 190	282
333298	All other industrial machinery manufacturing .....	1	123	42	3 828	202 229	1 970	3 674	84 431	359 439	496 377	902 218	16 638
3333	Commercial and service industry machinery manufacturing .....	2	68	22	2 245	84 849	1 471	2 680	39 721	234 433	234 955	465 067	22 303
33331	Commercial and service industry machinery manufacturing .....	2	68	22	2 245	84 849	1 471	2 680	39 721	234 433	234 955	465 067	22 303
333314	Optical instrument and lens manufacturing .....	-	6	4	257	12 001	173	344	5 249	21 547	13 541	34 637	11 831
333319	Other commercial and service industry machinery manufacturing .....	3	54	18	1 946	71 483	1 268	2 287	33 869	209 422	218 407	423 959	10 334
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	1	78	39	3 967	144 551	2 787	5 351	82 673	290 555	268 806	572 518	5 906
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	1	78	39	3 967	144 551	2 787	5 351	82 673	290 555	268 806	572 518	5 906
333411	Air purification equipment manufacturing .....	1	18	11	447	16 291	282	532	8 194	30 519	23 926	57 477	634
333412	Industrial and commercial fan and blower manufacturing ..	4	9	7	500	16 970	342	678	9 352	32 405	51 674	87 632	946
333414	Heating equipment (except warm air furnaces) manufacturing .....	1	17	4	309	14 118	162	327	4 914	37 347	27 132	62 381	498
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	-	34	17	2 711	97 172	2 001	3 814	60 213	190 284	166 074	365 028	3 828
3335	Metalworking machinery manufacturing .....	2	'1 619	'572	'42 627	'2 050 492	'29 617	'60 207	'1 305 694	'3 980 441	'2 114 587	'6 161 075	'187 748
33351	Metalworking machinery manufacturing .....	2	'1 619	'572	'42 627	'2 050 492	'29 617	'60 207	'1 305 694	'3 980 441	'2 114 587	'6 161 075	'187 748
333511	Industrial mold manufacturing .....	1	'311	'103	'7 559	'387 276	'5 613	'11 680	'268 425	'719 929	'283 716	'1 002 323	'33 451
333512	Machine tool (metal cutting types) manufacturing .....	1	89	54	3 036	158 596	1 751	3 636	77 722	238 563	280 962	568 658	9 382
333513	Machine tool (metal forming types) manufacturing .....	-	26	14	1 173	57 551	710	1 484	32 168	113 407	71 457	179 137	6 487
333514	Special die and tool, die set, jig, and fixture manufacturing .....	1	745	246	18 156	882 780	13 630	27 550	614 098	1 651 657	752 468	2 417 830	93 711
333515	Cutting tool and machine tool accessory manufacturing .....	2	349	109	7 568	304 263	5 314	10 414	193 858	635 375	272 483	910 814	30 853
333518	Other metalworking machinery manufacturing .....	3	'91	'45	'5 052	'256 214	'2 555	'5 362	'117 689	'613 771	'447 138	'1 068 441	'13 630
3336	Engine, turbine, and power transmission equipment manufacturing .....	-	60	32	7 665	407 852	4 574	9 975	194 910	1 136 145	1 338 751	2 489 099	116 575

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333 3336	MICHIGAN—Con.												
33361	Machinery manufacturing—Con.												
333612	Engine, turbine, and power transmission equipment manufacturing—Con.	—	60	32	7 665	407 852	4 574	9 975	194 910	1 136 145	1 338 751	2 489 099	116 575
333613	Speed changer, industrial high-speed drive, and gear manufacturing .....	—	16	9	f	D	D	D	D	D	D	D	D
333618	Mechanical power transmission equipment manufacturing .....	—	19	8	950	44 102	741	1 563	31 131	100 090	45 414	142 343	6 066
333619	Other engine equipment manufacturing .....	—	22	14	5 959	332 655	3 330	7 413	148 357	967 792	1 249 946	2 234 826	107 454
3339	Other general purpose machinery manufacturing .....	1	471	189	23 854	1 166 254	11 503	22 106	440 975	2 428 318	2 452 396	4 831 692	90 550
33391	Pump and compressor manufacturing .....	—	33	17	1 758	84 864	862	1 414	30 459	186 576	112 667	295 770	4 462
333911	Pump and pumping equipment manufacturing ..	—	13	8	1 271	58 765	664	1 054	23 047	110 581	67 333	174 458	D
333912	Air and gas compressor manufacturing .....	1	19	8	e	D	D	D	D	D	D	D	D
33392	Material handling equipment manufacturing .....	—	140	65	9 076	424 181	4 039	7 644	153 583	916 887	937 255	1 867 680	37 135
333921	Elevator and moving stairway manufacturing .....	—	6	3	128	5 377	59	111	1 226	10 341	5 284	15 601	65
333922	Conveyor and conveying equipment manufacturing ..	—	86	38	6 841	338 639	2 630	4 901	112 965	749 031	764 575	1 528 492	28 328
333923	Overhead traveling crane, hoist, and monorail system manufacturing .....	1	24	10	880	36 122	545	1 103	15 617	64 928	77 825	142 039	1 896
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing .....	1	24	14	1 227	44 043	805	1 529	23 775	92 587	89 571	181 548	6 846
33399	All other general purpose machinery manufacturing .....	1	298	107	13 020	657 209	6 602	13 048	256 933	1 324 855	1 402 474	2 668 242	48 953
333992	Welding and soldering equipment manufacturing .....	1	33	21	3 111	183 010	1 524	3 195	77 159	412 694	441 469	794 286	10 100
333993	Packaging machinery manufacturing .....	—	25	9	625	33 489	297	596	13 380	50 844	53 788	103 020	1 670
333994	Industrial process furnace and oven manufacturing .....	2	34	13	948	41 312	591	1 198	19 583	77 721	61 688	143 157	6 192
333995	Fluid power cylinder and actuator manufacturing .....	—	16	8	845	35 461	539	1 072	18 721	92 009	63 658	157 891	5 740
333996	Fluid power pump and motor manufacturing .....	2	13	6	874	44 362	523	941	21 397	67 260	73 799	141 243	4 360
333997	Scale and balance (except laboratory) manufacturing .....	—	3	2	c	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	2	167	47	6 416	309 608	3 055	5 913	103 744	610 264	698 754	1 305 701	20 360
334	Computer and electronic product manufacturing .....	—	408	143	22 192	1 002 017	13 643	26 498	499 492	2 376 321	2 649 359	5 018 287	100 645
3341	Computer and peripheral equipment manufacturing .....	1	40	10	1 726	89 100	776	1 396	28 846	199 992	71 424	273 075	D
33411	Computer and peripheral equipment manufacturing .....	1	40	10	1 726	89 100	776	1 396	28 846	199 992	71 424	273 075	D
334111	Electronic computer manufacturing .....	—	16	7	1 458	76 052	650	1 153	25 380	169 471	50 080	221 327	4 206
334119	Other computer peripheral equipment manufacturing .....	5	21	2	211	9 806	110	212	3 045	25 183	17 748	42 834	1 019
3342	Communications equipment manufacturing .....	1	30	11	1 089	44 789	618	1 070	16 706	79 072	84 677	170 025	2 748
33421	Telephone apparatus manufacturing .....	1	8	3	e	D	D	D	D	D	D	D	736
334210	Telephone apparatus manufacturing .....	1	8	3	e	D	D	D	D	D	D	D	736
33422	Radio and television broadcasting and wireless communications equipment manufacturing .....	1	7	2	c	D	D	D	D	D	D	D	473
334220	Radio and television broadcasting and wireless communications equipment manufacturing .....	1	7	2	c	D	D	D	D	D	D	D	473
33429	Other communications equipment manufacturing .....	1	7	2	c	D	D	D	D	D	D	D	473
334290	Other communications equipment manufacturing .....	1	15	6	589	27 457	329	520	10 457	50 108	47 483	102 958	1 539
3343	Audio and video equipment manufacturing .....	—	13	4	685	21 924	392	567	9 326	69 086	89 693	158 571	634
33431	Audio and video equipment manufacturing .....	—	13	4	685	21 924	392	567	9 326	69 086	89 693	158 571	634
334310	Audio and video equipment manufacturing .....	—	13	4	685	21 924	392	567	9 326	69 086	89 693	158 571	634
3344	Semiconductor and other electronic component manufacturing .....	1	123	53	4 984	177 280	2 929	5 797	73 469	354 026	414 747	783 429	D

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	<b>MICHIGAN—Con.</b>												
334	Computer and electronic product manufacturing—Con.												
3344	Semiconductor and other electronic component manufacturing—Con.												
33441	Semiconductor and other electronic component manufacturing .....	1	123	53	4 984	177 280	2 929	5 797	73 469	354 026	414 747	783 429	D
334412	Bare printed circuit board manufacturing .....	2	23	10	1 118	34 623	823	1 730	19 116	70 218	67 933	136 792	3 377
334413	Semiconductor and related device manufacturing .....	3	16	6	e	D	D	D	D	D	D	D	1 037
334416	Electronic coil, transformer, and other inductor manufacturing .....	2	10	4	175	6 618	124	248	3 252	10 775	8 849	19 926	129
334417	Electronic connector manufacturing .....	4	7	1	c	D	D	D	D	D	D	D	129
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	18	13	1 821	60 504	987	1 915	24 498	125 643	253 645	393 544	8 883
334419	Other electronic component manufacturing .....	—	42	17	1 223	49 405	674	1 290	17 176	90 785	57 100	147 691	2 862
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	184	60	12 185	631 460	7 617	15 100	341 924	1 527 055	1 886 711	3 386 377	70 953
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	184	60	12 185	631 460	7 617	15 100	341 924	1 527 055	1 886 711	3 386 377	70 953
334510	Electromedical and electrotherapeutic apparatus manufacturing ...	8	5	2	e	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing .....	1	14	8	1 955	122 535	1 256	2 920	78 112	230 913	76 203	303 016	30 645
334512	Automatic environmental control manufacturing for residential, commercial, and appliance use .....	—	13	4	550	18 981	385	691	11 894	58 747	50 908	110 162	1 066
334513	Instrument and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	1	46	18	1 261	58 182	603	1 081	21 337	113 834	76 934	192 568	4 763
334514	Totalizing fluid meter and counting device manufacturing .....	—	12	6	h	D	D	D	D	D	D	D	19 923
334515	Instrument manufacturing for measuring and testing electricity and electrical signals .....	9	23	2	411	24 951	187	384	6 016	55 357	32 114	87 303	1 772
334516	Analytical laboratory instrument manufacturing ..	—	16	5	1 319	63 293	523	1 027	16 845	163 394	66 248	231 777	5 724
334518	Watch, clock, and part manufacturing .....	—	7	3	737	28 702	574	1 143	18 456	67 460	51 159	116 837	947
334519	Other measuring and controlling device manufacturing .....	1	47	11	997	50 782	504	968	18 148	91 786	42 504	127 791	2 598
3346	Manufacturing and reproducing magnetic and optical media .....	—	18	5	1 523	37 464	1 311	2 568	29 221	147 090	102 107	246 810	4 029
33461	Manufacturing and reproducing magnetic and optical media ...	—	18	5	1 523	37 464	1 311	2 568	29 221	147 090	102 107	246 810	4 029
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	—	12	3	g	D	D	D	D	D	D	D	3 763
335	Electrical equipment, appliance, and component manufacturing .....	1	239	83	12 509	448 868	9 096	17 462	272 888	1 097 711	1 250 760	2 348 458	60 499
3351	Electric lighting equipment manufacturing .....	1	22	8	459	14 011	295	601	6 625	46 720	37 317	83 788	2 247
33512	Lighting fixture manufacturing ...	1	22	8	459	14 011	295	601	6 625	46 720	37 317	83 788	2 247
335122	Commercial, industrial, and institutional electric lighting fixture manufacturing .....	—	7	2	107	3 977	55	107	1 285	16 604	7 432	24 044	117
335129	Other lighting equipment manufacturing .....	—	6	6	298	8 944	213	432	4 810	27 677	27 411	54 838	2 107
3352	Household appliance manufacturing .....	—	13	5	14 171	141 003	3 744	6 638	118 031	423 508	572 270	998 513	21 174
33521	Small electrical appliance manufacturing .....	9	7	2	441	12 494	353	433	8 008	39 978	46 485	87 490	D
335212	Household vacuum cleaner manufacturing .....	9	3	2	e	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing ...	9	6	3	3 730	128 509	3 391	6 205	110 023	383 530	525 785	911 023	D
335222	Household refrigerator and home freezer manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
335224	Household laundry equipment manufacturing ..	—	1	1	e	D	D	D	D	D	D	D	D
335228	Other major household appliance manufacturing ...	—	2	1	g	D	D	D	D	D	D	D	D

**Table 1. Industry Statistics for the State: 2002—Con.**

[Includes data for industry groups and industries with 100 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
335	Electrical equipment, appliance, and component manufacturing—Con.												
3353	Electrical equipment manufacturing .....	2	125	38	3 564	132 705	2 354	4 246	65 564	278 862	220 352	495 866	9 846
33531	Electrical equipment manufacturing .....	2	125	38	3 564	132 705	2 354	4 246	65 564	278 862	220 352	495 866	9 846
335311	Power, distribution, and specialty transformer manufacturing .....	3	7	4	213	8 732	112	246	3 673	20 594	9 925	30 101	817
335312	Motor and generator manufacturing .....	2	21	8	1 151	33 524	903	1 764	23 085	87 160	79 010	165 331	3 560
335313	Switchgear and switchboard apparatus manufacturing .....	2	29	8	717	27 718	475	917	13 907	51 151	41 738	90 594	1 848
335314	Relay and industrial control manufacturing .....	1	68	18	1 483	62 731	864	1 319	24 899	119 957	89 679	209 840	3 621
3359	Other electrical equipment and component manufacturing .....	-	79	32	14 315	161 149	2 703	5 977	82 668	348 621	420 821	770 291	27 232
33592	Communication and energy wire and cable manufacturing .....	-	9	4	f	D	D	D	D	D	D	D	5 889
335929	Other communication and energy wire manufacturing .....	-	8	4	963	35 219	593	1 422	16 384	86 996	88 309	174 750	D
33593	Wiring device manufacturing .....	-	22	11	2 236	86 881	1 439	3 126	48 664	178 469	249 286	430 106	12 301
335931	Current-carrying wiring device manufacturing .....	-	18	10	2 115	81 725	1 342	2 936	44 866	163 943	216 155	381 298	11 375
335932	Noncurrent-carrying wiring device manufacturing .....	-	4	1	121	5 156	97	190	3 798	14 526	33 131	48 808	926
33599	All other electrical equipment and component manufacturing .....	-	45	15	g	D	D	D	D	D	D	D	D
335991	Carbon and graphite product manufacturing .....	-	8	4	c	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment and component manufacturing .....	-	37	11	785	26 458	470	1 004	11 224	51 673	56 863	108 663	1 594
336	Transportation equipment manufacturing .....	-	1 097	666	238 731	13 226 217	198 784	389 239	10 625 013	43 208 837	74 507 766	117 556 168	2 365 217
3361	Motor vehicle manufacturing .....	-	34	22	47 219	3 317 183	42 780	88 282	2 973 835	19 106 174	39 427 378	58 532 381	555 506
33611	Automobile and light duty motor vehicle manufacturing .....	-	29	19	46 322	3 282 068	42 195	85 820	2 956 265	19 046 513	39 195 760	58 243 702	553 790
336111	Automobile manufacturing .....	-	23	14	27 680	1 894 392	24 995	48 964	1 682 662	12 545 364	21 437 559	33 974 752	478 855
336112	Light truck and utility vehicle manufacturing .....	-	6	5	18 642	1 387 676	17 200	36 856	1 273 603	6 501 149	17 758 201	24 268 950	74 935
33612	Heavy duty truck manufacturing .....	-	5	3	897	35 115	585	2 462	17 570	59 661	231 618	288 679	1 716
336120	Heavy duty truck manufacturing .....	-	5	3	897	35 115	585	2 462	17 570	59 661	231 618	288 679	1 716
3362	Motor vehicle body and trailer manufacturing .....	2	73	26	2 617	87 202	1 912	3 694	55 892	156 027	282 258	441 905	6 874
33621	Motor vehicle body and trailer manufacturing .....	2	73	26	2 617	87 202	1 912	3 694	55 892	156 027	282 258	441 905	6 874
336211	Motor vehicle body manufacturing .....	2	28	10	948	32 862	652	1 227	20 498	47 750	113 410	164 313	982
336212	Truck trailer manufacturing .....	4	10	1	c	D	D	D	D	D	D	D	403
336213	Motor home manufacturing .....	-	3	2	e	D	D	D	D	D	D	D	D
336214	Travel trailer and camper manufacturing .....	2	32	13	1 201	40 324	870	1 733	25 457	73 326	104 050	175 982	D
3363	Motor vehicle parts manufacturing .....	-	868	570	181 322	9 487 156	148 906	286 645	7 398 944	23 250 767	34 159 773	57 244 559	1 764 058
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	121	69	32 337	1 912 233	27 732	53 191	1 592 926	4 658 412	8 682 492	13 305 401	372 830
336311	Carburetor, piston, piston ring, and valve manufacturing .....	-	10	5	1 259	53 181	865	1 716	30 104	145 382	65 637	209 799	4 631
336312	Gasoline engine and engine parts manufacturing .....	-	111	64	31 078	1 859 052	26 867	51 475	1 562 822	4 513 030	8 616 855	13 095 602	368 199
33632	Motor vehicle electrical and electronic equipment manufacturing .....	-	61	33	8 777	508 518	6 926	15 039	395 989	1 234 944	1 428 596	2 626 393	73 547
336321	Vehicular lighting equipment manufacturing .....	-	9	7	1 167	47 287	1 001	1 758	28 844	128 595	142 023	269 650	20 130
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	-	52	26	7 610	461 231	5 925	13 281	367 145	1 106 349	1 286 573	2 356 743	53 417
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	29	17	9 220	617 820	6 753	13 804	399 122	1 219 162	1 249 809	2 472 291	46 451
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	29	17	9 220	617 820	6 753	13 804	399 122	1 219 162	1 249 809	2 472 291	46 451
33634	Motor vehicle brake system manufacturing .....	-	33	21	5 298	251 982	4 247	9 227	194 414	1 574 086	1 465 878	3 038 962	97 498
336340	Motor vehicle brake system manufacturing .....	-	33	21	5 298	251 982	4 247	9 227	194 414	1 574 086	1 465 878	3 038 962	97 498
33635	Motor vehicle transmission and power train parts manufacturing .....	-	69	52	28 856	1 810 745	25 249	55 483	1 571 379	4 093 724	6 262 117	10 307 751	393 179
336350	Motor vehicle transmission and power train parts manufacturing .....	-	69	52	28 856	1 810 745	25 249	55 483	1 571 379	4 093 724	6 262 117	10 307 751	393 179

**Table 1. Industry Statistics for the State: 2002—Con.**

[Includes data for industry groups and industries with 100 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
336	Transportation equipment manufacturing—Con.												
3363	Motor vehicle parts manufacturing—Con.												
33636	Motor vehicle seating and interior trim manufacturing .....	—	60	45	17 008	666 567	13 058	21 944	438 042	1 603 826	3 606 003	5 200 022	67 452
336360	Motor vehicle seating and interior trim manufacturing .....	—	60	45	17 008	666 567	13 058	21 944	438 042	1 603 826	3 606 003	5 200 022	67 452
33637	Motor vehicle metal stamping .....	1	287	197	49 693	2 435 563	41 135	74 293	1 918 779	4 953 039	5 527 689	10 455 064	384 078
336370	Motor vehicle metal stamping .....	1	287	197	49 693	2 435 563	41 135	74 293	1 918 779	4 953 039	5 527 689	10 455 064	384 078
33639	Other motor vehicle parts manufacturing .....	—	208	136	30 133	1 283 728	23 806	43 664	888 293	3 913 574	5 937 189	9 838 675	329 023
336391	Motor vehicle air-conditioning manufacturing .....	—	7	7	4 732	246 395	3 837	7 882	188 094	1 140 913	1 636 405	2 776 351	83 278
336399	All other motor vehicle parts manufacturing .....	—	201	129	25 401	1 037 333	19 969	35 782	700 199	2 772 661	4 300 784	7 062 324	245 745
3364	Aerospace product and parts manufacturing .....	—	48	24	3 540	195 912	2 128	4 304	100 448	387 019	270 514	661 117	27 192
33641	Aerospace product and parts manufacturing .....	—	48	24	3 540	195 912	2 128	4 304	100 448	387 019	270 514	661 117	27 192
336411	Aircraft manufacturing .....	1	7	3	e	D	D	D	D	D	D	D	2 044
336412	Aircraft engine and engine parts manufacturing .....	—	21	16	2 638	152 782	1 647	3 299	79 495	276 271	185 862	463 075	22 824
336413	Other aircraft parts and auxiliary equipment manufacturing .....	1	20	5	f	D	D	D	D	D	D	D	2 324
3365	Railroad rolling stock manufacturing .....	—	5	1	e	D	D	D	D	D	D	D	D
33651	Railroad rolling stock manufacturing .....	—	5	1	e	D	D	D	D	D	D	D	D
336510	Railroad rolling stock manufacturing .....	—	5	1	e	D	D	D	D	D	D	D	D
3366	Ship and boat building .....	3	33	11	1 994	65 604	1 539	3 165	47 299	157 158	221 207	378 365	D
33661	Ship and boat building .....	3	33	11	1 994	65 604	1 539	3 165	47 299	157 158	221 207	378 365	D
336612	Boat building .....	3	26	11	1 953	63 628	1 514	3 113	46 046	154 043	219 438	373 481	D
3369	Other transportation equipment manufacturing .....	—	36	12	g	D	D	D	D	D	D	D	5 306
33699	Other transportation equipment manufacturing .....	—	36	12	g	D	D	D	D	D	D	D	5 306
336992	Military armored vehicle, tank, and tank component manufacturing .....	—	11	5	522	24 946	390	922	15 329	49 134	46 798	97 041	D
336999	All other transportation equipment manufacturing .....	—	20	6	1 151	34 231	903	1 826	23 973	61 086	76 847	137 200	1 988
337	Furniture and related product manufacturing .....	2	635	171	31 280	1 201 299	22 569	43 504	662 254	3 475 169	2 382 170	5 818 310	159 722
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	412	72	8 501	261 634	6 658	13 138	174 390	615 816	496 248	1 110 330	32 476
33711	Wood kitchen cabinet and countertop manufacturing .....	1	210	17	2 480	73 780	1 982	3 829	53 027	200 319	161 506	361 956	6 151
337110	Wood kitchen cabinet and countertop manufacturing .....	1	210	17	2 480	73 780	1 982	3 829	53 027	200 319	161 506	361 956	6 151
33712	Household and institutional furniture manufacturing .....	1	202	55	6 021	187 854	4 676	9 309	121 363	415 497	334 742	748 374	26 325
337121	Upholstered household furniture manufacturing .....	3	40	9	434	10 621	362	674	8 139	26 294	26 619	52 912	911
337122	Nonupholstered wood household furniture manufacturing .....	3	100	23	2 449	62 928	2 063	4 022	46 203	128 364	100 244	225 345	9 322
337124	Metal household furniture manufacturing .....	1	12	2	323	8 898	262	486	6 166	13 866	17 833	31 833	312
337125	Household furniture (except wood and metal) manufacturing .....	—	7	2	e	D	D	D	D	D	D	D	441
337127	Institutional furniture manufacturing .....	—	39	19	2 394	92 732	1 661	3 418	52 282	215 995	171 103	388 188	15 294
3372	Office furniture (including fixtures) manufacturing .....	2	194	86	22 007	916 977	15 321	29 318	473 510	2 800 958	1 829 285	4 592 820	124 926
33721	Office furniture (including fixtures) manufacturing .....	2	194	86	22 007	916 977	15 321	29 318	473 510	2 800 958	1 829 285	4 592 820	124 926
337211	Wood office furniture manufacturing .....	—	30	13	2 115	64 375	1 694	2 740	43 612	127 282	86 651	215 389	6 800
337212	Custom architectural woodwork and millwork manufacturing .....	5	42	11	787	29 796	549	1 109	17 093	51 007	29 918	81 065	2 030
337214	Office furniture (except wood) manufacturing .....	2	28	19	14 701	681 489	9 878	19 957	330 065	2 313 012	1 407 950	3 693 216	101 371
337215	Showcase, partition, shelving, and locker manufacturing .....	3	94	43	4 404	141 317	3 200	5 512	82 740	309 657	304 766	603 150	14 725

**Table 1. Industry Statistics for the State: 2002—Con.**

[Includes data for industry groups and industries with 100 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MICHIGAN—Con.</b>												
337	Furniture and related product manufacturing—Con.												
3379	Other furniture related product manufacturing .....	5	29	13	772	22 688	590	1 048	14 354	58 395	56 637	115 160	2 320
33791	Mattress manufacturing .....	6	19	9	592	16 199	485	846	11 376	51 075	41 214	92 157	1 844
337910	Mattress manufacturing .....	6	19	9	592	16 199	485	846	11 376	51 075	41 214	92 157	1 844
33792	Blind and shade manufacturing .....	2	10	4	180	6 489	105	202	2 978	7 320	15 423	23 003	476
337920	Blind and shade manufacturing .....	2	10	4	180	6 489	105	202	2 978	7 320	15 423	23 003	476
339	Miscellaneous manufacturing .....	3	1 045	178	16 330	614 977	10 571	20 095	310 137	1 713 471	988 362	2 697 721	64 238
3391	Medical equipment and supplies manufacturing .....	3	387	69	7 613	301 696	4 799	9 388	144 300	995 038	458 309	1 446 819	32 823
33911	Medical equipment and supplies manufacturing .....	3	387	69	7 613	301 696	4 799	9 388	144 300	995 038	458 309	1 446 819	32 823
339111	Laboratory apparatus and furniture manufacturing .....	—	18	10	838	29 538	448	939	11 868	69 274	47 758	121 564	1 356
339112	Surgical and medical instrument manufacturing .....	5	32	13	1 260	49 419	792	1 609	23 532	261 833	85 413	346 039	10 550
339113	Surgical appliance and supplies manufacturing .....	4	63	23	2 972	138 748	1 768	3 639	55 884	462 908	252 123	708 501	15 550
339114	Dental equipment and supplies manufacturing .....	—	34	3	415	17 255	284	511	8 952	73 707	36 247	106 304	982
339115	Ophthalmic goods manufacturing .....	2	18	6	398	14 964	204	364	5 578	33 973	15 559	49 712	1 426
339116	Dental laboratories .....	3	222	14	1 730	51 772	1 303	2 326	38 486	93 343	21 209	114 699	2 959
3399	Other miscellaneous manufacturing .....	2	658	109	8 717	313 281	5 772	10 707	165 837	718 433	530 053	1 250 902	31 415
33991	Jewelry and silverware manufacturing .....	5	36	1	139	3 521	82	144	1 951	7 091	7 413	15 308	458
33992	Sporting and athletic goods manufacturing .....	1	80	14	948	29 134	631	1 078	13 396	142 314	119 752	267 959	5 729
339920	Sporting and athletic goods manufacturing .....	1	80	14	948	29 134	631	1 078	13 396	142 314	119 752	267 959	5 729
33993	Doll, toy, and game manufacturing .....	1	29	4	372	10 416	243	458	4 649	19 498	25 312	45 645	3 815
339932	Game, toy, and children's vehicle manufacturing .....	1	25	3	342	9 785	224	428	4 363	17 745	23 594	42 194	D
33994	Office supplies (except paper) manufacturing .....	1	24	2	276	9 653	153	302	4 029	29 327	14 623	43 229	1 413
339943	Marking device manufacturing .....	1	17	1	160	5 721	83	160	2 151	10 878	6 548	17 071	D
33995	Sign manufacturing .....	2	216	32	2 542	104 953	1 482	2 877	47 802	177 344	109 655	289 646	4 736
339950	Sign manufacturing .....	2	216	32	2 542	104 953	1 482	2 877	47 802	177 344	109 655	289 646	4 736
33999	All other miscellaneous manufacturing .....	2	273	56	4 440	155 604	3 181	5 848	94 010	342 859	253 298	589 115	15 264
339991	Gasket, packing, and sealing device manufacturing .....	4	26	15	907	34 057	607	1 270	18 153	76 227	43 975	120 358	1 468
339992	Musical instrument manufacturing .....	1	16	5	440	15 960	365	698	11 618	29 373	31 630	59 926	738
339994	Broom, brush, and mop manufacturing .....	—	8	3	340	11 949	238	411	6 290	28 226	20 727	47 672	540
339999	All other miscellaneous manufacturing .....	1	212	32	2 616	90 966	1 841	3 268	55 641	200 724	153 725	349 600	12 419

<sup>1</sup>Some 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.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Industries 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.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA</b>												
31-33	Manufacturing .....	-	7 756	12 511	368 538	18 277 966	278 949	546 635	12 979 331	51 270 118	79 947 152	131 140 654	2 892 868
311	Food manufacturing .....	2	402	83	i	D	D	D	D	D	D	D	D
3112	Grain and oilseed milling .....	1	6	2	e	D	D	D	D	D	D	D	D
31121	Flour milling and malt manufacturing .....	-	3	1	e	D	D	D	D	D	D	D	D
311211	Flour milling .....	-	3	1	e	D	D	D	D	D	D	D	D
3114	Fruit and vegetable preserving and specialty food manufacturing .....	1	14	5	670	20 831	584	1 193	15 801	78 609	90 814	169 422	D
31142	Fruit and vegetable canning, pickling, and drying .....	-	8	1	e	D	D	D	D	D	D	D	D
311421	Fruit and vegetable canning .....	-	7	1	e	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	-	16	8	g	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	-	10	6	f	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	2	37	19	h	D	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	2	37	19	h	D	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	2	21	14	g	D	D	D	D	D	D	D	D
311615	Poultry processing .....	9	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	5	245	31	h	D	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	6	230	28	g	D	D	D	D	D	D	D	D
311811	Retail bakeries .....	4	190	15	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	4	37	11	f	D	D	D	D	D	D	D	D
311813	Frozen cakes, pies, and other pastries manufacturing .....	9	3	2	e	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	2	59	14	g	D	D	D	D	D	D	D	D
31191	Snack food manufacturing .....	1	10	6	f	D	D	D	D	D	D	D	D
311919	Other snack food manufacturing .....	1	9	5	f	D	D	D	D	D	D	D	D
31199	All other food manufacturing .....	5	34	6	e	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	-	31	9	g	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	-	30	9	g	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	-	17	9	g	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	7	7	g	D	D	D	D	D	D	D	D
313	Textile mills .....	3	29	3	e	D	D	D	D	D	D	D	D
314	Textile product mills .....	5	104	9	g	D	D	D	D	D	D	D	D
3141	Textile furnishings mills .....	8	42	1	e	D	D	D	D	D	D	D	D
3149	Other textile product mills .....	3	62	8	g	D	D	D	D	D	D	D	D
31491	Textile bag and canvas mills .....	5	36	5	e	D	D	D	D	D	D	D	D
314912	Canvas and related product mills .....	5	32	5	e	D	D	D	D	D	D	D	D
31499	All other textile product mills .....	2	26	3	f	D	D	D	D	D	D	D	D
314999	All other miscellaneous textile product mills .....	2	26	3	f	D	D	D	D	D	D	D	D
315	Apparel manufacturing .....	8	81	5	e	D	D	D	D	D	D	D	D
3152	Cut and sew apparel manufacturing .....	8	58	4	e	D	D	D	D	D	D	D	D
31521	Cut and sew apparel contractors .....	5	38	3	e	D	D	D	D	D	D	D	D
316	Leather and allied product manufacturing .....	-	11	4	f	D	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing .....	-	5	3	f	D	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing .....	-	5	3	f	D	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing .....	-	5	3	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
321	Wood product manufacturing .....	2	115	24	g	D	D	D	D	D	D	D
3212	Veneer, plywood, and engineered wood product manufacturing .....	2	11	4	e	D	D	D	D	D	D	D
32121	Veneer, plywood, and engineered wood product manufacturing .....	2	11	4	e	D	D	D	D	D	D	D
321214	Truss manufacturing .....	2	8	4	e	D	D	D	D	D	D	D
3219	Other wood product manufacturing .....	2	96	20	g	D	D	D	D	D	D	D
32191	Millwork.....	3	43	9	e	D	D	D	D	D	D	D
32192	Wood container and pallet manufacturing .....	1	27	7	e	D	D	D	D	D	D	D
321920	Wood container and pallet manufacturing .....	1	27	7	e	D	D	D	D	D	D	D
32199	All other wood product manufacturing .....	2	26	4	e	D	D	D	D	D	D	D
322	Paper manufacturing .....	1	81	45	h	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100
32212	Paper mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100
322121	Paper (except newsprint) mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100
3222	Converted paper product manufacturing .....	2	76	40	h	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	2	46	27	h	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	2	35	21	g	D	D	D	D	D	D	D
32222	Paper bag and coated and treated paper manufacturing .....	—	11	4	e	D	D	D	D	D	D	D
322222	Coated and laminated paper manufacturing .....	—	8	3	e	D	D	D	D	D	D	D
32223	Stationery product manufacturing .....	2	11	6	e	D	D	D	D	D	D	D
32229	Other converted paper product manufacturing .....	9	8	3	318	10 848	253	523	6 940	22 607	19 515	42 122
322299	All other converted paper product manufacturing .....	9	7	3	e	D	D	D	D	D	D	D
323	Printing and related support activities .....	2	634	97	i	D	D	D	D	D	D	37 189
3231	Printing and related support activities .....	2	634	97	i	D	D	D	D	D	D	37 189
32311	Printing .....	2	570	91	i	D	D	D	D	D	D	35 704
323110	Commercial lithographic printing .....	1	246	52	3 973	163 694	2 696	5 104	94 983	432 719	298 208	730 999
323112	Commercial flexographic printing .....	1	18	7	f	D	D	D	D	D	D	D
323113	Commercial screen printing .....	1	61	4	f	D	D	D	D	D	D	2 443
323114	Quick printing .....	3	160	7	f	D	D	D	D	D	D	D
323116	Manifold business forms printing .....	1	11	4	e	D	D	D	D	D	D	D
323117	Books printing .....	2	17	10	1 994	70 696	1 507	2 986	50 005	130 071	95 288	226 500
32312	Support activities for printing .....	1	64	6	f	D	D	D	D	D	D	1 485
323122	Prepress services .....	1	51	6	e	D	D	D	D	D	D	D
324	Petroleum and coal products manufacturing .....	—	52	15	g	D	D	D	D	D	D	D
3241	Petroleum and coal products manufacturing .....	—	52	15	g	D	D	D	D	D	D	D
32411	Petroleum refineries .....	—	3	2	e	D	D	D	D	D	D	D
324110	Petroleum refineries .....	—	3	2	e	D	D	D	D	D	D	D
32412	Asphalt paving, roofing, and saturated materials manufacturing .....	1	24	5	e	D	D	D	D	D	D	D
324121	Asphalt paving mixture and block manufacturing .....	1	22	3	e	D	D	D	D	D	D	D
32419	Other petroleum and coal products manufacturing .....	3	25	8	f	D	D	D	D	D	D	D
324191	Petroleum lubricating oil and grease manufacturing .....	2	22	7	e	D	D	D	D	D	D	D
324199	All other petroleum and coal products manufacturing .....	9	3	1	e	D	D	D	D	D	D	D
325	Chemical manufacturing .....	1	215	92	i	D	D	D	D	D	D	D
3251	Basic chemical manufacturing .....	2	29	13	f	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	2	15	6	e	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing .....	2	14	5	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
325	Chemical manufacturing—Con.												
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	—	20	13	g	D	D	D	D	D	D	D	
32521	Resin and synthetic rubber manufacturing .....	—	20	13	g	D	D	D	D	D	D	D	
325211	Plastics material and resin manufacturing .....	—	17	13	g	D	D	D	D	D	D	D	
3254	Pharmaceutical and medicine manufacturing .....	—	21	12	g	D	D	D	D	D	D	D	
32541	Pharmaceutical and medicine manufacturing .....	—	21	12	g	D	D	D	D	D	D	D	
325412	Pharmaceutical preparation manufacturing .....	—	8	5	f	D	D	D	D	D	D	20 513	
325414	Biological product (except diagnostic) manufacturing ..	—	4	3	e	D	D	D	D	D	D	D	
3255	Paint, coating, and adhesive manufacturing .....	1	50	20	g	D	D	D	D	D	D	D	
32551	Paint and coating manufacturing .....	—	36	14	g	D	D	D	D	D	D	D	
325510	Paint and coating manufacturing .....	—	36	14	g	D	D	D	D	D	D	D	
32552	Adhesive manufacturing .....	6	14	6	f	D	D	D	D	D	D	D	
325520	Adhesive manufacturing .....	6	14	6	f	D	D	D	D	D	D	D	
3256	Soap, cleaning compound, and toilet preparation manufacturing .	6	35	7	f	D	D	D	D	D	D	D	
32561	Soap and cleaning compound manufacturing .....	7	29	6	f	D	D	D	D	D	D	D	
325612	Polish and other sanitation good manufacturing .....	8	12	4	e	D	D	D	D	D	D	D	
3259	Other chemical product and preparation manufacturing .....	1	57	26	g	D	D	D	D	D	D	D	
32591	Printing ink manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	
325910	Printing ink manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	
32599	All other chemical product and preparation manufacturing .....	1	52	24	g	D	D	D	D	D	D	D	
325991	Custom compounding of purchased resins .....	1	22	12	f	D	D	D	D	D	D	D	
325998	All other miscellaneous chemical product and preparation manufacturing ..	—	23	10	f	D	D	D	D	D	D	D	
326	Plastics and rubber products manufacturing .....	1	371	201	25 105	842 561	19 127	37 689	524 584	2 284 214	1 841 215	4 138 084	144 671
3261	Plastics product manufacturing ..	1	327	187	j	D	D	D	D	D	D	D	D
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	1	20	5	720	41 004	478	1 033	25 695	148 643	105 874	258 517	4 974
326113	Unlaminated plastics film and sheet (except packaging) manufacturing .....	1	15	3	535	31 400	352	768	20 195	126 441	85 139	214 868	3 532
32612	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing .....	—	19	7	f	D	D	D	D	D	D	D	8 844
326121	Unlaminated plastics profile shape manufacturing .....	—	13	4	442	13 787	255	493	6 015	25 261	31 372	56 256	D
326122	Plastics pipe and pipe fitting manufacturing .....	—	6	3	e	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	9	7	f	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	9	7	f	D	D	D	D	D	D	D	D
32615	Urethane and other foam product (except polystyrene) manufacturing .....	1	21	10	g	D	D	D	D	D	D	D	D
326150	Urethane and other foam product (except polystyrene) manufacturing .....	1	21	10	g	D	D	D	D	D	D	D	D
32616	Plastics bottle manufacturing ..	—	2	2	e	D	D	D	D	D	D	D	D
326160	Plastics bottle manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	1	255	156	j	D	D	D	D	D	D	D	D
326191	Plastics plumbing fixture manufacturing .....	4	11	6	e	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	1	244	150	j	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing .....	1	44	14	g	D	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	1	30	14	1 350	39 673	983	1 668	21 488	100 942	91 488	192 982	17 375
326291	Rubber product manufacturing for mechanical use .....	—	15	9	1 096	31 184	798	1 261	16 543	80 742	71 376	152 553	16 678
326299	All other rubber product manufacturing .....	7	15	5	254	8 489	185	407	4 945	20 200	20 112	40 429	697

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
327	Nonmetallic mineral product manufacturing .....	2	230	89	i	D	D	D	D	D	D	D
3271	Clay product and refractory manufacturing .....	2	25	7	e	D	D	D	D	D	D	D
3272	Glass and glass product manufacturing .....	1	30	11	g	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	1	30	11	g	D	D	D	D	D	D	D
327211	Flat glass manufacturing .....	1	1	1	f	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	25	8	g	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	1	117	56	h	D	D	D	D	D	D	D
32731	Cement manufacturing .....	2	6	4	e	D	D	D	D	D	D	D
327310	Cement manufacturing .....	2	6	4	e	D	D	D	D	D	D	D
32732	Ready-mix concrete manufacturing .....	1	65	36	g	D	D	D	D	D	D	D
327320	Ready-mix concrete manufacturing .....	1	65	36	g	D	D	D	D	D	D	D
32733	Concrete pipe, brick, and block manufacturing .....	1	65	36	g	D	D	D	D	D	D	D
327331	Concrete block and brick manufacturing .....	2	18	9	e	D	D	D	D	D	D	D
32739	Other concrete product manufacturing .....	4	12	5	e	D	D	D	D	D	D	D
327390	Other concrete product manufacturing .....	—	28	7	g	D	D	D	D	D	D	D
3279	Other nonmetallic mineral product manufacturing .....	4	55	15	g	D	D	D	D	D	D	D
32791	Abrasive product manufacturing .....	5	24	10	f	D	D	D	D	D	D	D
327910	Abrasive product manufacturing .....	5	24	10	f	D	D	D	D	D	D	D
32799	All other nonmetallic mineral product manufacturing .....	1	31	5	e	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	116	61	j	D	D	D	D	D	D	D
3311	Iron and steel mills and ferroalloy manufacturing .....	—	14	7	i	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	14	7	i	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	14	7	i	D	D	D	D	D	D	D
3312	Steel product manufacturing from purchased steel .....	—	26	20	g	D	D	D	D	D	D	D
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	—	6	5	f	D	D	D	D	D	D	D
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	—	6	5	f	D	D	D	D	D	D	D
33122	Rolling and drawing of purchased steel .....	—	20	15	f	D	D	D	D	D	D	D
331221	Rolled steel shape manufacturing .....	—	15	11	f	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production and processing .....	2	17	5	676	31 749	498	1 067	21 385	84 868	162 983	245 215
33142	Copper rolling, drawing, extruding, and alloying .....	—	1	1	e	D	D	D	D	D	D	D
331421	Copper rolling, drawing, and extruding .....	—	1	1	e	D	D	D	D	D	D	D
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying .....	5	14	4	e	D	D	D	D	D	D	D
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding .....	6	9	2	301	13 124	213	422	8 441	20 947	32 336	56 099
3315	Foundries .....	2	49	25	g	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	2	27	16	806	31 839	587	1 142	19 214	84 392	83 621	169 167
331511	Iron foundries .....	2	10	6	e	D	D	D	D	D	D	2 037
331512	Steel investment foundries ..	4	6	6	e	D	D	D	D	D	D	910
33152	Nonferrous metal foundries ..	2	22	9	f	D	D	D	D	D	D	D

See footnotes at end of table.

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
332	Fabricated metal product manufacturing .....	2	1 972	594	49 860	1 929 946	37 061	75 135	1 253 725	14 406 240	13 298 858	17 714 156	272 934
3321	Forging and stamping.....	1	103	50	h	D	D	D	D	D	D	D	D
33211	Forging and stamping.....	1	103	50	h	D	D	D	D	D	D	D	D
332111	Iron and steel forging .....	1	25	16	1 426	64 973	1 055	2 110	42 811	193 799	234 190	423 749	5 051
332112	Nonferrous forging .....	4	9	6	e	D	D	D	D	D	D	D	D
332114	Custom roll forming .....	1	14	8	e	D	D	D	D	D	D	D	D
332116	Metal stamping .....	2	50	20	g	D	D	D	D	D	D	D	D
3322	Cutlery and handtool manufacturing .....	1	73	24	g	D	D	D	D	D	D	D	D
33221	Cutlery and handtool manufacturing .....	1	73	24	g	D	D	D	D	D	D	D	D
332212	Hand and edge tool manufacturing .....	1	66	22	g	D	D	D	D	D	D	D	D
332214	Kitchen utensil, pot, and pan manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	2	259	64	i	D	D	D	D	D	D	D	D
33231	Plate work and fabricated structural product manufacturing .....	2	122	28	h	D	D	D	D	D	D	D	D
332311	Prefabricated metal building and component manufacturing .....	1	12	2	e	D	D	D	D	D	D	D	D
332312	Fabricated structural metal manufacturing .....	2	77	14	g	D	D	D	D	D	D	D	D
332313	Plate work manufacturing .....	3	33	12	g	D	D	D	D	D	D	D	D
33232	Ornamental and architectural metal products manufacturing .....	1	137	36	h	D	D	D	D	D	D	D	D
332321	Metal window and door manufacturing .....	2	23	12	f	D	D	D	D	D	D	D	D
332322	Sheet metal work manufacturing .....	1	83	22	g	D	D	D	D	D	D	D	D
3324	Boiler, tank, and shipping container manufacturing .....	6	23	6	e	D	D	D	D	D	D	D	D
3325	Hardware manufacturing .....	1	30	10	h	D	D	D	D	D	D	D	D
33251	Hardware manufacturing .....	1	30	10	h	D	D	D	D	D	D	D	D
332510	Hardware manufacturing .....	1	30	10	h	D	D	D	D	D	D	D	D
3326	Spring and wire product manufacturing .....	2	61	22	1 289	48 150	945	1 929	30 055	113 520	87 404	200 113	6 965
33261	Spring and wire product manufacturing .....	2	61	22	1 289	48 150	945	1 929	30 055	113 520	87 404	200 113	6 965
332612	Spring (light gauge) manufacturing .....	—	17	10	f	D	D	D	D	D	D	D	D
332618	Other fabricated wire product manufacturing .....	4	38	10	f	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	3	916	228	j	D	D	D	D	D	D	D	D
33271	Machine shops .....	3	703	115	9 786	407 842	7 262	14 687	267 261	863 969	509 567	1 378 473	87 666
332710	Machine shops .....	3	703	115	9 786	407 842	7 262	14 687	267 261	863 969	509 567	1 378 473	87 666
33272	Turned product and screw, nut, and bolt manufacturing .....	3	213	113	i	D	D	D	D	D	D	D	D
332721	Precision turned product manufacturing .....	2	141	69	h	D	D	D	D	D	D	D	D
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	4	72	44	h	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	1	291	125	9 091	314 129	6 989	13 721	204 907	752 307	296 076	1 049 774	39 589
33281	Coating, engraving, heat treating, and allied activities .....	1	291	125	9 091	314 129	6 989	13 721	204 907	752 307	296 076	1 049 774	39 589
332811	Metal heat treating .....	1	80	42	g	D	D	D	D	D	D	D	D
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	1	102	45	h	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	109	38	h	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	1	216	65	i	D	D	D	D	D	D	D	D
33291	Metal valve manufacturing .....	1	36	11	g	D	D	D	D	D	D	D	D
332911	Industrial valve manufacturing .....	—	7	2	e	D	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	20	7	g	D	D	D	D	D	D	D	D

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**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
332	Fabricated metal product manufacturing—Con.											
3329	Other fabricated metal product manufacturing—Con.											
33299	All other fabricated metal product manufacturing .....	1	180	54	h	D	D	D	D	D	D	D
332991	Ball and roller bearing manufacturing .....	—	3	3	446	20 754	354	798	14 502	18 814	82 922	111 803
332996	Fabricated pipe and pipe fitting manufacturing .....	4	35	14	f	D	D	D	D	D	D	D
332997	Industrial pattern manufacturing .....	—	28	11	984	51 399	810	1 700	41 633	91 051	38 205	128 661
332999	All other miscellaneous fabricated metal product manufacturing .....	2	106	24	g	D	D	D	D	D	D	3 736
333	Machinery manufacturing .....	1	'1 442	514	'45 627	'2 359 697	'27 600	'55 819	'1 229 314	'5 117 026	'4 383 478	'9 578 992
3331	Agriculture, construction, and mining machinery manufacturing .....	—	13	3	e	D	D	D	D	D	D	D
3332	Industrial machinery manufacturing .....	1	'97	34	h	D	D	D	D	D	D	D
33322	Plastics and rubber industry machinery manufacturing ....	—	'23	9	f	D	D	D	D	D	D	D
333220	Plastics and rubber industry machinery manufacturing .....	—	'23	9	f	D	D	D	D	D	D	D
33329	Other industrial machinery manufacturing .....	1	72	25	g	D	D	D	D	D	D	D
333298	All other industrial machinery manufacturing .....	1	62	24	g	D	D	D	D	D	D	D
3333	Commercial and service industry machinery manufacturing .....	2	32	10	f	D	D	D	D	D	D	D
33331	Commercial and service industry machinery manufacturing .....	2	32	10	f	D	D	D	D	D	D	D
333314	Optical instrument and lens manufacturing .....	—	6	4	e	D	D	D	D	D	D	D
333319	Other commercial and service industry machinery manufacturing .....	2	23	6	f	D	D	D	D	D	D	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	2	33	15	f	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	2	33	15	f	D	D	D	D	D	D	D
333414	Heating equipment (except warm air furnaces) manufacturing .....	—	9	3	e	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	4	15	6	e	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	2	'968	'342	'25 481	'1 274 378	'17 237	'34 976	'784 394	'2 521 977	'1 418 524	'4 027 553
33351	Metalworking machinery manufacturing .....	2	'968	'342	'25 481	'1 274 378	'17 237	'34 976	'784 394	'2 521 977	'1 418 524	'4 027 553
333511	Industrial mold manufacturing .....	2	149	49	h	D	D	D	D	D	D	D
333512	Machine tool (metal cutting types) manufacturing .....	1	60	35	g	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) manufacturing .....	1	16	9	e	D	D	D	D	D	D	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	2	452	148	11 557	577 720	8 553	17 085	396 407	1 053 332	465 970	1 564 932
333515	Cutting tool and machine tool accessory manufacturing .....	2	222	66	3 948	169 136	2 613	5 210	102 452	354 801	174 459	537 432
333518	Other metalworking machinery manufacturing .....	3	'63	'34	h	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	36	17	h	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	36	17	h	D	D	D	D	D	D	D
333612	Speed changer, industrial high-speed drive, and gear manufacturing .....	—	12	7	380	15 422	290	591	9 921	33 288	21 398	54 556
333618	Other engine equipment manufacturing .....	—	12	7	3 077	183 567	1 709	3 779	83 996	686 028	973 781	1 671 982

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
333	Machinery manufacturing—Con.												
33339	Other general purpose machinery manufacturing .....	1	1'263	1'93	j	D	D	D	D	D	D	D	
33391	Pump and compressor manufacturing .....	1	13	4	e	D	D	D	D	D	D	1 422	
333912	Air and gas compressor manufacturing .....	1	7	2	252	17 824	70	155	4 297	56 935	21 967	79 709	729
33392	Material handling equipment manufacturing .....	—	1'64	1'31	g	D	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing ..	—	1'42	1'20	g	D	D	D	D	D	D	D	D
333923	Overhead traveling crane, hoist, and monorail system manufacturing .....	—	12	6	e	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing ..	—	6	2	e	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	1	186	58	i	D	D	D	D	D	D	D	D
333992	Welding and soldering equipment manufacturing ..	1	26	15	2 663	166 244	1 286	2 682	68 428	377 455	411 392	729 222	9 570
333993	Packaging machinery manufacturing .....	—	9	3	e	D	D	D	D	D	D	D	D
333994	Industrial process furnace and oven manufacturing ..	3	23	7	489	24 378	309	619	12 548	45 256	29 001	74 069	1 057
333995	Fluid power cylinder and actuator manufacturing .....	—	11	5	e	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	1	101	24	h	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	1'270	83	j	D	D	D	D	D	D	D	D
3341	Computer and peripheral equipment manufacturing .....	1	1'30	7	g	D	D	D	D	D	D	D	D
33411	Computer and peripheral equipment manufacturing .....	1	1'30	7	g	D	D	D	D	D	D	D	D
334111	Electronic computer manufacturing .....	—	1'13	6	g	D	D	D	D	D	D	D	D
3342	Communications equipment manufacturing .....	1	16	7	f	D	D	D	D	D	D	D	D
33421	Telephone apparatus manufacturing .....	1	5	3	e	D	D	D	D	D	D	D	D
334210	Telephone apparatus manufacturing .....	1	5	3	e	D	D	D	D	D	D	D	D
33429	Other communications equipment manufacturing .....	1	9	4	e	D	D	D	D	D	D	D	D
334290	Other communications equipment manufacturing .....	1	9	4	e	D	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	1	80	29	h	D	D	D	D	D	D	D	D
33441	Semiconductor and other electronic component manufacturing .....	1	80	29	h	D	D	D	D	D	D	D	D
334412	Bare printed circuit board manufacturing .....	8	16	6	e	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	12	8	g	D	D	D	D	D	D	D	D
334419	Other electronic component manufacturing .....	—	26	8	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	120	34	i	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	120	34	i	D	D	D	D	D	D	D	D
334510	Electromedical and electrotherapeutic apparatus manufacturing ...	8	4	2	e	D	D	D	D	D	D	D	D
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	1	33	14	g	D	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	—	5	3	h	D	D	D	D	D	D	D	D
334515	Instrument manufacturing for measuring and testing electricity and electrical signals .....	9	17	1	e	D	D	D	D	D	D	D	D
334519	Other measuring and controlling device manufacturing .....	1	31	6	f	D	D	D	D	D	D	D	1 933

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
334	Computer and electronic product manufacturing—Con.											
3346	Manufacturing and reproducing magnetic and optical media.....	—	17	5	g	D	D	D	D	D	D	D
33461	Manufacturing and reproducing magnetic and optical media....	—	17	5	g	D	D	D	D	D	D	D
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	—	11	3	g	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	2	146	44	h	D	D	D	D	D	D	D
3353	Electrical equipment manufacturing .....	2	87	25	g	D	D	D	D	D	D	D
33531	Electrical equipment manufacturing .....	2	87	25	g	D	D	D	D	D	D	D
335313	Switchgear and switchboard apparatus manufacturing....	3	21	4	e	D	D	D	D	D	D	D
335314	Relay and industrial control manufacturing .....	1	49	14	g	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	1	45	16	g	D	D	D	D	D	D	D
33593	Wiring device manufacturing....	—	11	5	f	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	7	4	f	D	D	D	D	D	D	D
33599	All other electrical equipment and component manufacturing .....	1	27	8	f	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment and component manufacturing ..	1	24	7	f	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	639	395	m	D	D	D	D	D	D	1 640 583
3361	Motor vehicle manufacturing.....	—	23	17	k	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	21	16	k	D	D	D	D	D	D	D
336111	Automobile manufacturing....	—	16	11	j	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	5	5	j	D	D	D	D	D	D	D
33612	Heavy duty truck manufacturing .....	2	2	1	e	D	D	D	D	D	D	D
336120	Heavy duty truck manufacturing .....	2	2	1	e	D	D	D	D	D	D	D
3362	Motor vehicle body and trailer manufacturing .....	8	26	6	e	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	8	26	6	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	535	352	m	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	65	36	22 953	1 463 642	19 791	37 259	1 237 199	3 493 915	7 659 856	11 120 904
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	62	34	j	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	32	16	i	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	30	15	i	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	13	6	g	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	13	6	g	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	21	12	1 564	67 419	1 159	2 416	44 794	344 430	519 421	872 606
336340	Motor vehicle brake system manufacturing .....	—	21	12	1 564	67 419	1 159	2 416	44 794	344 430	519 421	872 606
33635	Motor vehicle transmission and power train parts manufacturing .....	—	47	35	j	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	47	35	j	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing....	—	42	31	j	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing..	—	42	31	j	D	D	D	D	D	D	D

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	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
336	Transportation equipment manufacturing—Con.											
3363	Motor vehicle parts manufacturing—Con.											
33637	Motor vehicle metal stamping ..	1	192	133	k	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	1	192	133	k	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	123	83	j	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	—	4	4	g	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	119	79	j	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	27	12	g	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	27	12	g	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	14	9	g	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	1	16	7	f	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	1	16	7	f	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing ..	—	7	4	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	2	266	54	h	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	184	26	g	D	D	D	D	D	D	D
33711	Wood kitchen cabinet and countertop manufacturing .....	2	112	9	g	D	D	D	D	D	D	D
337110	Wood kitchen cabinet and countertop manufacturing .....	2	112	9	g	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	2	112	9	g	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	1	72	17	g	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	4	30	6	e	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	12	4	e	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	1	69	20	g	D	D	D	D	D	D	D
337212	Custom architectural woodwork and millwork manufacturing .....	1	69	20	g	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	1	24	6	e	D	D	D	D	D	D	D
		2	35	12	g	D	D	D	D	D	D	D
3379	Other furniture related product manufacturing .....	6	13	8	583	17 167	445	760	10 977	44 856	45 416	90 767
33791	Mattress manufacturing .....	7	5	4	e	D	D	D	D	D	D	D
337910	Mattress manufacturing .....	7	5	4	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	2	549	90	i	D	D	D	D	D	D	D
3391	Medical equipment and supplies manufacturing .....	2	213	31	g	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	2	213	31	g	D	D	D	D	D	D	D
339113	Surgical appliance and supplies manufacturing .....	2	33	11	f	D	D	D	D	D	D	D
339114	Dental equipment and supplies manufacturing .....	2	20	2	e	D	D	D	D	D	D	D
339115	Ophthalmic goods manufacturing .....	3	13	4	e	D	D	D	D	D	D	D
339116	Dental laboratories .....	3	130	10	g	D	D	D	D	D	D	D
3399	Other miscellaneous manufacturing .....	2	336	59	i	D	D	D	D	D	D	D
33992	Sporting and athletic goods manufacturing .....	1	27	6	e	D	D	D	D	D	D	D
339920	Sporting and athletic goods manufacturing .....	1	27	6	e	D	D	D	D	D	D	D
33995	Sign manufacturing .....	2	119	20	g	D	D	D	D	D	D	D
339950	Sign manufacturing .....	2	119	20	g	D	D	D	D	D	D	D

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**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
339 3399	Miscellaneous manufacturing—Con. Other miscellaneous manufacturing—Con.											
33999	All other miscellaneous manufacturing .....	2	148	29	h	D	D	D	D	D	D	D
339991	Gasket, packing, and sealing device manufacturing .....	4	22	12	f	D	D	D	D	D	D	D
339994	Broom, brush, and mop manufacturing .....	—	5	3	e	D	D	D	D	D	D	D
339999	All other miscellaneous manufacturing .....	1	112	13	g	D	D	D	D	D	D	D
	<b>Ann Arbor, MI Metropolitan Statistical Area</b>											
31-33	Manufacturing .....	—	393	131	27 975	1 510 617	20 895	42 589	1 102 360	3 333 991	4 302 443	7 622 597
311	Food manufacturing .....	1	24	6	665	1 22 532	486	874	1 15 029	73 027	58 211	131 552
3112	Grain and oilseed milling .....	—	3	2	e	D	D	D	D	D	D	D
31121	Flour milling and malt manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
311211	Flour milling .....	—	2	1	e	D	D	D	D	D	D	D
323	Printing and related support activities .....	2	51	15	2 482	86 296	1 849	3 746	58 927	177 994	106 430	285 199
3231	Printing and related support activities .....	2	51	15	2 482	86 296	1 849	3 746	58 927	177 994	106 430	285 199
323111 323110	Printing .....	2	47	14	g	D	D	D	D	D	D	11 498
323117	Commercial lithographic printing .....	5	21	6	307	11 007	208	384	6 288	27 245	14 010	41 818
	Books printing .....	2	9	6	1 694	58 842	1 275	2 520	42 529	107 788	77 040	185 915
325	Chemical manufacturing .....	2	14	7	595	26 154	215	420	8 381	56 666	71 498	127 462
326	Plastics and rubber products manufacturing .....	2	14	7	1 230	44 366	860	1 767	26 117	116 403	87 984	204 673
3261	Plastics product manufacturing ..	2	13	7	9	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	2	11	5	f	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	1	10	4	867	31 380	583	1 212	17 358	62 970	71 197	134 427
332	Fabricated metal product manufacturing .....	—	85	25	2 204	97 774	1 592	3 434	59 857	210 548	219 541	439 021
3326	Spring and wire product manufacturing .....	1	4	3	295	13 449	227	476	8 563	27 664	30 055	57 852
33261	Spring and wire product manufacturing .....	1	4	3	295	13 449	227	476	8 563	27 664	30 055	57 852
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	46	10	814	34 577	641	1 372	24 299	102 610	78 152	181 653
33272	Turned product and screw, nut, and bolt manufacturing .....	—	9	6	583	25 002	471	1 025	17 773	83 020	71 372	155 706
332721	Precision turned product manufacturing .....	—	5	4	301	11 370	247	518	7 997	47 067	22 119	72 245
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	—	4	2	282	13 632	224	507	9 776	35 953	49 253	83 461
3329	Other fabricated metal product manufacturing .....	—	11	5	665	30 662	480	1 092	18 603	37 389	97 651	145 313
33299	All other fabricated metal product manufacturing .....	—	8	3	e	D	D	D	D	D	D	D
332991	Ball and roller bearing manufacturing .....	—	3	3	446	20 754	354	798	14 502	18 814	82 922	111 803
333	Machinery manufacturing .....	2	41	13	2 223	106 857	1 061	2 054	45 052	237 487	157 002	388 907
3332	Industrial machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33322	Plastics and rubber industry machinery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
333220	Plastics and rubber industry machinery manufacturing ..	—	1	1	e	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	1	21	6	544	30 489	367	817	19 141	62 041	33 165	96 768
33351	Metalworking machinery manufacturing .....	1	21	6	544	30 489	367	817	19 141	62 041	33 165	96 768
333512	Machine tool (metal cutting types) manufacturing .....	—	6	3	346	21 272	217	506	11 776	44 443	26 764	74 493

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Ann Arbor, MI Metropolitan Statistical Area—Con.</b>											
333	Machinery manufacturing—Con.											
33339	Other general purpose machinery manufacturing .....	3	10	4	g	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing ....	3	9	4	g	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	4	5	2	g	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	47	18	4 238	207 405	3 057	5 659	135 373	628 682	1 360 417	1 964 341
3341	Computer and peripheral equipment manufacturing .....	1	8	3	290	18 374	58	135	1 909	33 824	32 766	65 674
33411	Computer and peripheral equipment manufacturing ....	1	8	3	290	18 374	58	135	1 909	33 824	32 766	65 674
334111	Electronic computer manufacturing .....	—	6	3	e	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	6	14	6	e	D	D	D	D	D	D	D
33441	Semiconductor and other electronic component manufacturing .....	6	14	6	e	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	20	8	3 393	171 367	2 667	4 914	125 766	557 482	1 300 917	1 834 650
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	20	8	3 393	171 367	2 667	4 914	125 766	557 482	1 300 917	1 834 650
334510	Electromedical and electrotherapeutic apparatus manufacturing ...	—	20	8	3 393	171 367	2 667	4 914	125 766	557 482	1 300 917	1 834 650
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	9	1	1	e	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	25	19	12 946	862 890	10 886	22 913	723 763	1 704 545	2 114 469	3 825 398
3363	Motor vehicle parts manufacturing .....	—	23	18	j	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	5	5	3 557	237 705	2 840	6 045	190 481	458 232	576 735	1 042 158
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	4	4	h	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	h	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	2	2	h	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	7	5	f	D	D	D	D	D	D	4 547
33639	Other motor vehicle parts manufacturing .....	—	5	5	2 704	143 301	2 358	4 481	120 161	528 336	617 750	1 144 606
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	2	4	4	f	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	2	29	7	451	18 502	283	474	9 009	36 878	24 247	61 410
3399	Other miscellaneous manufacturing .....	—	17	3	270	10 733	159	277	5 088	22 972	17 915	41 125

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	—	6 865	'2 226	'307 667	'14 985 977	'231 576	'455 595	'10 493 719	'44 116 657	'67 014 901	'111 056 850	'2 498 481
311	Food manufacturing .....	2	348	72	8 021	229 042	5 611	10 935	136 266	826 348	1 076 579	1 893 322	39 990
3114	Fruit and vegetable preserving and specialty food manufacturing .....	1	14	5	670	20 831	584	1 193	15 801	78 609	90 814	169 422	D
31142	Fruit and vegetable canning, pickling, and drying .....	—	8	1	e	D	D	D	D	D	D	D	D
311421	Fruit and vegetable canning .....	—	7	1	e	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	12	6	688	26 704	476	930	13 583	85 173	198 360	281 923	3 828
31151	Dairy product (except frozen) manufacturing .....	—	8	5	f	D	D	D	D	D	D	D	3 672
311511	Fluid milk manufacturing .....	—	4	3	479	16 583	337	657	9 019	49 622	138 450	188 053	3 378
3116	Animal slaughtering and processing .....	2	33	17	2 649	68 248	2 069	4 290	44 357	265 551	536 816	797 219	14 467
31161	Animal slaughtering and processing .....	2	33	17	2 649	68 248	2 069	4 290	44 357	265 551	536 816	797 219	14 467
311612	Meat processed from carcasses .....	2	19	13	1 655	45 512	1 179	2 497	25 800	245 218	507 262	746 762	13 367
311615	Poultry processing .....	9	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	6	213	28	2 365	59 692	1 359	2 421	34 492	143 979	75 116	217 062	6 673
31181	Bread and bakery product manufacturing .....	6	201	26	2 239	55 901	1 264	2 238	32 123	127 181	66 731	191 883	5 677
311811	Retail bakeries .....	5	167	15	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	4	31	9	553	16 535	278	476	7 098	39 543	18 298	57 841	2 382
311813	Frozen cakes, pies, and other pastries manufacturing .....	9	3	2	e	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	2	52	13	1 454	47 805	970	1 828	23 962	234 591	143 074	375 018	7 562
31191	Snack food manufacturing .....	1	9	6	974	31 559	670	1 295	16 722	190 374	97 951	284 536	6 455
311919	Other snack food manufacturing .....	1	8	5	f	D	D	D	D	D	D	D	D
31199	All other food manufacturing .....	5	30	5	286	8 127	219	400	5 238	24 075	24 299	48 375	657
312	Beverage and tobacco product manufacturing .....	—	24	7	g	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	—	23	7	g	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	12	7	g	D	D	D	D	D	D	D	19 615
312111	Soft drink manufacturing .....	—	6	6	999	48 723	290	589	11 936	259 473	460 223	714 762	D
313	Textile mills .....	3	27	3	e	D	D	D	D	D	D	D	723
314	Textile product mills .....	5	86	9	1 197	32 633	826	1 595	17 341	62 650	76 693	137 461	1 698
3149	Other textile product mills .....	3	50	8	956	26 626	620	1 193	12 866	47 921	45 880	93 835	1 278
31491	Textile bag and canvas mills .....	5	30	5	390	10 396	311	583	6 485	17 145	23 323	39 909	130
314912	Canvas and related product mills .....	5	27	5	374	10 100	298	561	6 304	16 593	22 953	38 987	D
31499	All other textile product mills .....	2	20	3	566	16 230	309	610	6 381	30 776	22 557	53 926	1 148
314999	All other miscellaneous textile product mills .....	2	20	3	566	16 230	309	610	6 381	30 776	22 557	53 926	1 148
315	Apparel manufacturing .....	8	76	4	399	9 699	346	625	7 051	20 518	19 840	41 324	D
3152	Cut and sew apparel manufacturing .....	8	53	3	e	D	D	D	D	D	D	D	D
316	Leather and allied product manufacturing .....	—	10	4	f	D	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing .....	—	5	3	f	D	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing .....	—	5	3	f	D	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing .....	—	5	3	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
321	Wood product manufacturing .....	3	95	23	1 443	47 114	1 042	2 065	28 120	98 747	97 834	197 783	3 304
3212	Veneer, plywood, and engineered wood product manufacturing .....	2	9	4	372	14 727	236	494	7 428	33 240	29 066	62 212	860
32121	Veneer, plywood, and engineered wood product manufacturing .....	2	9	4	372	14 727	236	494	7 428	33 240	29 066	62 212	860
321214	Truss manufacturing .....	2	8	4	e	14 727	D	D	D	33 240	D	62 212	D
3219	Other wood product manufacturing .....	3	78	19	1 038	31 457	779	1 520	19 965	63 469	64 389	129 366	2 263
32191	Millwork .....	5	34	9	388	12 892	297	599	8 921	21 220	27 358	48 511	1 081
32192	Wood container and pallet manufacturing .....	1	23	6	303	7 291	241	439	4 764	13 443	17 121	30 641	530
321920	Wood container and pallet manufacturing .....	1	23	6	303	7 291	241	439	4 764	13 443	17 121	30 641	530
32199	All other wood product manufacturing .....	2	21	4	347	11 274	241	482	6 280	28 806	19 910	50 214	652
322	Paper manufacturing .....	1	64	34	3 185	132 863	2 279	4 882	78 120	330 080	443 936	776 471	13 043
3221	Pulp, paper, and paperboard mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100	6 656
32212	Paper mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100	6 656
322121	Paper (except newsprint) mills .....	—	5	5	896	51 276	602	1 410	32 125	116 558	173 082	292 100	6 656
3222	Converted paper product manufacturing .....	2	59	29	2 289	81 587	1 677	3 472	45 995	213 522	270 854	484 371	6 387
32221	Paperboard container manufacturing .....	1	31	16	1 171	40 968	896	1 879	23 233	93 382	162 664	256 179	3 718
322211	Corrugated and solid fiber box manufacturing .....	1	22	12	849	32 480	630	1 306	18 636	79 529	122 703	202 952	3 466
32222	Paper bag and coated and treated paper manufacturing .....	—	10	4	468	17 377	307	615	9 326	59 255	54 025	113 822	805
322222	Coated and laminated paper manufacturing .....	—	7	3	e	D	D	D	D	D	D	D	D
32223	Stationery product manufacturing .....	2	10	6	332	12 394	221	455	6 496	38 278	34 650	72 248	569
32229	Other converted paper product manufacturing .....	9	8	3	318	10 848	253	523	6 940	22 607	19 515	42 122	1 295
322299	All other converted paper product manufacturing .....	9	7	3	e	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	1	529	75	6 509	260 142	4 386	8 450	148 378	631 501	403 478	1 033 094	23 683
3231	Printing and related support activities .....	1	529	75	6 509	260 142	4 386	8 450	148 378	631 501	403 478	1 033 094	23 683
32311	Printing .....	1	473	70	6 166	244 190	4 178	8 082	139 429	596 870	397 868	993 071	22 276
323110	Commercial lithographic printing .....	1	204	40	3 327	143 291	2 265	4 355	83 186	385 128	276 661	661 370	13 946
323112	Commercial flexographic printing .....	2	16	5	350	14 539	222	468	6 986	28 982	22 973	52 119	1 051
323113	Commercial screen printing .....	—	51	4	674	25 432	465	915	13 477	50 475	24 708	73 057	2 395
323114	Quick printing .....	3	132	6	665	20 280	429	765	11 811	47 774	19 340	67 133	1 983
323116	Manifold business forms printing .....	1	10	4	291	10 042	192	406	6 264	22 606	16 844	40 022	880
323117	Books printing .....	1	8	4	300	11 854	232	466	7 476	22 283	18 248	40 585	614
32312	Support activities for printing .....	2	56	5	343	15 952	208	368	8 949	34 631	5 610	40 023	1 407
323122	Prepress services .....	2	44	5	281	14 062	158	279	7 499	31 045	4 457	35 440	D
324	Petroleum and coal products manufacturing .....	—	42	13	1 363	69 725	700	1 325	31 056	338 146	1 001 733	1 299 896	35 393
3241	Petroleum and coal products manufacturing .....	—	42	13	1 363	69 725	700	1 325	31 056	338 146	1 001 733	1 299 896	35 393
32411	Petroleum refineries .....	—	2	2	e	D	D	D	D	D	D	D	D
324110	Petroleum refineries .....	—	2	2	e	D	D	D	D	D	D	D	D
32412	Asphalt paving, roofing, and saturated materials manufacturing .....	1	21	5	e	D	D	D	D	D	D	D	D
324121	Asphalt paving mixture and block manufacturing .....	1	19	3	e	D	D	D	D	D	D	D	D
32419	Other petroleum and coal products manufacturing .....	4	19	6	f	D	D	D	D	D	D	D	D
324191	Petroleum lubricating oil and grease manufacturing .....	2	17	5	e	D	D	D	D	D	D	D	D
324199	All other petroleum and coal products manufacturing .....	9	2	1	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
325	Chemical manufacturing .....	1	190	82	8 054	412 350	4 485	9 152	183 973	1 462 247	1 522 796	3 002 868	142 975
3251	Basic chemical manufacturing ...	2	25	10	618	37 140	365	769	20 302	155 115	127 271	272 991	30 395
32519	Other basic organic chemical manufacturing .....	1	12	4	e	D	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing .....	2	11	3	e	D	D	D	D	D	D	D	D
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	—	15	11	1 258	81 956	476	973	24 994	156 776	373 984	536 563	16 938
32521	Resin and synthetic rubber manufacturing .....	—	15	11	1 258	81 956	476	973	24 994	156 776	373 984	536 563	16 938
325211	Plastics material and resin manufacturing .....	—	13	11	g	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	—	19	11	1 395	63 232	788	1 542	29 627	180 120	132 493	312 626	38 339
32541	Pharmaceutical and medicine manufacturing .....	—	19	11	1 395	63 232	788	1 542	29 627	180 120	132 493	312 626	38 339
325412	Pharmaceutical preparation manufacturing .....	—	8	5	f	D	D	D	D	D	D	D	20 513
325414	Biological product (except diagnostic) manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	1	46	19	2 375	119 286	1 324	2 691	55 306	572 571	421 000	1 012 235	35 930
32551	Paint and coating manufacturing .....	—	33	13	1 569	87 637	814	1 711	38 805	447 556	319 513	788 091	32 269
325510	Paint and coating manufacturing .....	—	33	13	1 569	87 637	814	1 711	38 805	447 556	319 513	788 091	32 269
32552	Adhesive manufacturing .....	6	13	6	806	31 649	510	980	16 501	125 015	101 487	224 144	3 661
325520	Adhesive manufacturing .....	6	13	6	806	31 649	510	980	16 501	125 015	101 487	224 144	3 661
3256	Soap, cleaning compound, and toilet preparation manufacturing .....	6	33	6	e	D	D	D	D	D	D	D	D
32561	Soap and cleaning compound manufacturing .....	6	27	5	e	D	D	D	D	D	D	D	3 368
3259	Other chemical product and preparation manufacturing .....	1	49	24	1 865	86 801	1 116	2 336	38 937	275 055	360 820	637 368	15 674
32591	Printing ink manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	D
325910	Printing ink manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	D
32599	All other chemical product and preparation manufacturing .....	1	44	22	1 567	70 677	979	2 050	33 745	228 836	336 137	566 204	D
325991	Custom compounding of purchased resins .....	1	19	11	756	30 238	492	1 015	14 114	96 844	150 622	246 628	5 350
325998	All other miscellaneous chemical product and preparation manufacturing .....	—	21	10	780	38 725	472	1 002	18 946	126 002	180 073	308 144	8 670
326	Plastics and rubber products manufacturing .....	1	335	182	22 049	735 337	16 857	33 017	460 740	2 007 299	1 595 771	3 605 690	128 354
3261	Plastics product manufacturing ..	1	292	168	20 629	693 432	15 818	31 241	437 574	1 903 068	1 501 246	3 405 716	110 443
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	1	20	5	720	41 004	478	1 033	25 695	148 643	105 874	258 517	4 974
326113	Unlaminated plastics film and sheet (except packaging) manufacturing .....	1	15	3	535	31 400	352	768	20 195	126 441	85 139	214 868	3 532
32612	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing .....	—	19	7	f	D	D	D	D	D	D	D	8 844
326121	Unlaminated plastics profile shape manufacturing .....	—	13	4	442	13 787	255	493	6 015	25 261	31 372	56 256	D
326122	Plastics pipe and pipe fitting manufacturing .....	—	6	3	e	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	7	6	f	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	7	6	f	D	D	D	D	D	D	D	D
32615	Urethane and other foam product (except polystyrene) manufacturing .....	1	18	7	778	25 356	624	1 200	16 618	76 466	84 406	160 959	2 657
326150	Urethane and other foam product (except polystyrene) manufacturing .....	—	18	7	778	25 356	624	1 200	16 618	76 466	84 406	160 959	2 657
32616	Plastics bottle manufacturing .....	1	18	7	778	25 356	624	1 200	16 618	76 466	84 406	160 959	2 657
326160	Plastics bottle	—	1	1	e	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
326191	Plastics plumbing fixture manufacturing .....	1	226	142	17 387	567 095	13 487	26 495	358 872	1 555 475	1 164 451	2 718 109	90 870
326199	All other plastics product manufacturing .....	1	217	138	17 098	557 518	13 274	26 051	353 120	1 536 690	1 151 994	2 687 219	90 323

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
326	Plastics and rubber products manufacturing—Con.											
3262	Rubber product manufacturing ...	1	43	14	1 420	41 905	1 039	1 776	23 166	104 231	94 525	199 974
32629	Other rubber product manufacturing .....	1	30	14	1 350	39 673	983	1 668	21 488	100 942	91 488	192 982
326291	Rubber product manufacturing for mechanical use .....	—	15	9	1 096	31 184	798	1 261	16 543	80 742	71 376	152 553
326299	All other rubber product manufacturing .....	7	15	5	254	8 489	185	407	4 945	20 200	20 112	40 429
327	Nonmetallic mineral product manufacturing .....	2	187	73	5 762	267 736	4 478	8 086	192 775	640 554	533 471	1 166 798
3271	Clay product and refractory manufacturing .....	1	19	5	292	10 145	180	350	5 055	23 688	18 615	42 121
3272	Glass and glass product manufacturing .....	1	26	8	1 627	96 103	1 402	2 805	79 596	199 214	141 746	342 507
32721	Glass and glass product manufacturing .....	1	26	8	1 627	96 103	1 402	2 805	79 596	199 214	141 746	342 507
327215	Glass product manufacturing made of purchased glass ..	—	22	6	9	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	2	91	46	2 785	120 409	2 140	3 389	84 140	263 417	281 884	539 267
32731	Cement manufacturing .....	4	4	2	265	13 535	211	489	10 012	26 233	63 542	89 830
327310	Cement manufacturing .....	4	4	2	265	13 535	211	489	10 012	26 233	63 542	89 830
32732	Ready-mix concrete manufacturing .....	1	55	32	1 245	63 805	852	1 778	42 275	167 073	159 299	326 733
327320	Ready-mix concrete manufacturing .....	1	55	32	1 245	63 805	852	1 778	42 275	167 073	159 299	326 733
32733	Concrete pipe, brick, and block manufacturing .....	3	11	5	275	11 279	190	415	6 274	30 163	20 873	50 545
32739	Other concrete product manufacturing .....	—	21	7	1 000	31 790	887	707	25 579	39 948	38 170	72 159
327390	Other concrete product manufacturing .....	—	21	7	1 000	31 790	887	707	25 579	39 948	38 170	72 159
3279	Other nonmetallic mineral product manufacturing .....	4	48	14	1 047	40 686	746	1 522	23 647	153 237	90 638	241 317
32791	Abrasive product manufacturing .....	5	22	10	644	25 403	463	934	14 079	117 621	61 267	176 256
327910	Abrasive product manufacturing .....	5	22	10	644	25 403	463	934	14 079	117 621	61 267	176 256
32799	All other nonmetallic mineral product manufacturing .....	1	26	4	403	15 283	283	588	9 568	35 616	29 371	65 061
331	Primary metal manufacturing .....	—	111	56	10 415	531 816	7 897	17 126	388 425	948 943	2 547 876	3 527 301
3311	Iron and steel mills and ferroalloy manufacturing .....	—	12	5	6 464	364 804	4 933	10 941	279 307	499 068	1 835 643	2 363 825
33111	Iron and steel mills and ferroalloy manufacturing .....	—	12	5	6 464	364 804	4 933	10 941	279 307	499 068	1 835 643	2 363 825
331111	Iron and steel mills .....	—	12	5	6 464	364 804	4 933	10 941	279 307	499 068	1 835 643	2 363 825
3312	Steel product manufacturing from purchased steel .....	—	24	18	1 679	71 168	1 257	2 611	47 425	191 356	295 638	488 586
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	—	6	5	f	D	D	D	D	D	D	D
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	—	6	5	f	D	D	D	D	D	D	D
33122	Rolling and drawing of purchased steel .....	—	18	13	f	D	D	D	D	D	D	D
331221	Rolled steel shape manufacturing .....	—	15	11	f	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production and processing .....	2	17	5	676	31 749	498	1 067	21 385	84 868	162 983	245 215
33142	Copper rolling, drawing, extruding, and alloying .....	—	1	1	e	D	D	D	D	D	D	D
331421	Copper rolling, drawing, and extruding .....	—	1	1	e	D	D	D	D	D	D	D
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying .....	5	14	4	e	D	D	D	D	D	D	D
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding .....	6	9	2	301	13 124	213	422	8 441	20 947	32 336	56 099

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
331	Primary metal manufacturing—Con.												
3315	Foundries .....	2	48	24	1 347	51 828	1 041	2 124	33 262	132 517	113 425	247 270	6 181
33151	Ferrous metal foundries .....	2	27	16	806	31 839	587	1 142	19 214	84 392	83 621	169 167	4 392
331511	Iron foundries .....	2	10	6	e	D	D	D	D	D	D	D	2 037
331512	Steel investment foundries .....	4	6	6	e	D	D	D	D	D	D	D	910
33152	Nonferrous metal foundries .....	2	21	8	541	19 989	454	982	14 048	48 125	29 804	78 103	1 789
332	Fabricated metal product manufacturing .....	2	1 773	532	44 589	1 715 092	33 156	67 172	1 117 914	'3 917 510	'2 832 066	'6 754 338	248 079
3321	Forging and stamping .....	1	93	44	3 164	135 857	2 392	4 853	88 564	346 234	357 511	701 351	11 853
33211	Forging and stamping .....	1	93	44	3 164	135 857	2 392	4 853	88 564	346 234	357 511	701 351	11 853
332111	Iron and steel forging .....	1	25	16	1 426	64 973	1 055	2 110	42 811	193 799	234 190	423 749	5 051
332112	Nonferrous forging .....	4	9	6	e	D	D	D	D	D	D	D	D
332114	Custom roll forming .....	2	12	6	263	11 602	197	438	7 317	17 654	17 848	35 746	D
332116	Metal stamping .....	2	43	16	1 054	41 021	804	1 593	25 910	91 455	54 445	147 200	3 400
3322	Cutlery and handtool manufacturing .....	1	65	21	1 843	70 167	1 220	2 219	41 108	141 619	81 342	216 071	D
33221	Cutlery and handtool manufacturing .....	1	65	21	1 843	70 167	1 220	2 219	41 108	141 619	81 342	216 071	D
332212	Hand and edge tool manufacturing .....	1	58	19	g	D	D	D	D	D	D	D	D
332214	Kitchen utensil, pot, and pan manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	3	230	59	5 161	195 631	3 277	6 747	111 560	387 765	452 199	859 010	28 596
33231	Plate work and fabricated structural product manufacturing .....	3	104	25	2 792	107 218	1 775	3 656	64 581	219 969	323 131	560 586	20 548
332311	Prefabricated metal building and component manufacturing .....	1	10	2	290	11 658	167	325	5 608	28 143	25 409	53 156	339
332312	Fabricated structural metal manufacturing .....	3	65	12	1 316	55 872	872	1 746	30 026	133 260	154 434	301 070	4 518
332313	Plate work manufacturing .....	5	29	11	1 186	39 688	736	1 585	28 947	58 566	143 288	206 360	15 691
33232	Ornamental and architectural metal products manufacturing .....	1	126	34	2 369	88 413	1 502	3 091	46 979	167 796	129 068	298 424	8 048
332321	Metal window and door manufacturing .....	2	21	11	487	17 058	261	553	7 275	33 335	34 689	68 175	1 508
332322	Sheet metal work manufacturing .....	1	77	21	1 671	62 740	1 097	2 250	34 978	113 674	84 168	199 239	4 552
3324	Boiler, tank, and shipping container manufacturing .....	5	18	6	264	9 930	195	420	6 429	26 699	26 074	53 005	D
3325	Hardware manufacturing .....	1	27	9	3 974	118 363	3 328	6 440	87 361	165 413	124 716	289 678	7 043
33251	Hardware manufacturing .....	1	27	9	3 974	118 363	3 328	6 440	87 361	165 413	124 716	289 678	7 043
332510	Hardware manufacturing .....	1	27	9	3 974	118 363	3 328	6 440	87 361	165 413	124 716	289 678	7 043
3326	Spring and wire product manufacturing .....	3	57	19	994	34 701	718	1 453	21 492	85 856	57 349	142 261	5 049
33261	Spring and wire product manufacturing .....	3	57	19	994	34 701	718	1 453	21 492	85 856	57 349	142 261	5 049
332612	Spring (light gauge) manufacturing .....	—	15	8	436	15 828	309	632	9 585	39 252	26 447	64 972	4 035
332618	Other fabricated wire product manufacturing .....	4	36	9	445	14 753	337	696	9 681	39 284	24 356	63 361	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	3	827	205	16 433	678 514	12 230	25 296	445 079	'1 647 289	'1 200 649	'2 847 435	137 425
33271	Machine shops .....	3	635	104	8 986	372 743	6 649	13 406	242 718	796 073	484 521	1 285 244	84 343
332710	Machine shops .....	3	635	104	8 986	372 743	6 649	13 406	242 718	796 073	484 521	1 285 244	84 343
33272	Turned product and screw, nut, and bolt manufacturing .....	3	192	101	7 447	305 771	5 581	11 890	202 361	'851 216	'716 128	'1 562 191	53 082
332721	Precision turned product manufacturing .....	2	128	61	4 301	165 887	3 324	7 118	110 180	'365 119	'211 044	'578 183	27 668
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	4	64	40	3 146	139 884	2 257	4 772	92 181	486 097	505 084	984 008	25 414
3328	Coating, engraving, heat treating, and allied activities .....	1	262	110	7 994	278 579	6 104	12 221	179 856	656 483	251 189	908 240	36 671
33281	Coating, engraving, heat treating, and allied activities .....	1	262	110	7 994	278 579	6 104	12 221	179 856	656 483	251 189	908 240	36 671
332811	Metal heat treating .....	1	75	40	2 144	85 549	1 569	3 273	52 950	196 082	80 056	277 305	16 041
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	2	91	38	2 566	84 948	2 018	3 758	56 843	225 568	94 678	319 038	9 200
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	96	32	3 284	108 082	2 517	5 190	70 063	234 833	76 455	311 897	11 430

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
332	Fabricated metal product manufacturing—Con.												
3329	Other fabricated metal product manufacturing .....	1	194	59	4 762	193 350	3 692	7 523	136 465	460 152	281 037	737 287	13 911
33291	Metal valve manufacturing ....	1	30	9	1 546	56 150	1 224	2 466	40 716	152 616	117 626	272 341	5 434
332912	Fluid power valve and hose fitting manufacturing .....	-	17	6	1 103	38 737	861	1 641	27 644	86 159	50 661	136 322	4 116
33299	All other fabricated metal product manufacturing .....	1	164	50	3 216	137 200	2 468	5 057	95 749	307 536	163 411	464 946	8 477
332996	Fabricated pipe and pipe fitting manufacturing .....	2	32	13	603	20 563	437	907	11 977	45 927	38 291	84 243	D
332997	Industrial pattern manufacturing .....	-	28	11	984	51 399	810	1 700	41 633	91 051	38 205	128 661	3 736
332999	All other miscellaneous fabricated metal product manufacturing .....	1	96	24	1 513	58 052	1 145	2 286	37 884	161 470	81 341	237 663	3 330
333	Machinery manufacturing .....	1	'1 343	478	'42 001	'2 180 186	'25 608	'51 796	'1 137 415	'4 733 386	'4 111 827	'8 931 464	'251 406
3331	Agriculture, construction, and mining machinery manufacturing .....	-	11	3	254	13 806	126	258	5 342	31 403	35 236	68 403	D
3332	Industrial machinery manufacturing .....	1	'94	32	'2 726	'150 246	'1 355	'2 553	'57 785	'263 317	'382 306	'685 471	'7 781
33322	Plastics and rubber industry machinery manufacturing ....	1	'22	8	e	D	D	D	D	D	D	'1 581	
333220	Plastics and rubber industry machinery manufacturing ..	1	'22	8	e	D	D	D	D	D	D	'1 581	
33329	Other industrial machinery manufacturing .....	1	70	24	2 284	130 013	1 094	2 038	48 543	210 706	346 922	597 854	D
333298	All other industrial machinery manufacturing .....	1	60	23	2 207	126 971	1 046	1 944	47 044	203 496	342 434	586 088	6 131
3333	Commercial and service industry machinery manufacturing .....	2	24	9	728	34 785	425	853	13 462	68 153	60 305	127 829	14 118
33331	Commercial and service industry machinery manufacturing .....	2	24	9	728	34 785	425	853	13 462	68 153	60 305	127 829	14 118
333319	Other commercial and service industry machinery manufacturing .....	2	18	6	489	23 562	258	539	8 438	48 083	47 795	95 813	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	28	12	721	27 238	515	1 013	14 847	56 989	54 242	111 474	1 131
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	28	12	721	27 238	515	1 013	14 847	56 989	54 242	111 474	1 131
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	4	14	6	371	15 331	264	542	9 244	30 938	33 589	64 633	584
3335	Metalworking machinery manufacturing .....	2	'910	'320	'24 136	'1 203 068	'16 308	'32 949	'737 823	'2 379 314	'1 336 856	'3 805 053	'110 036
33351	Metalworking machinery manufacturing .....	2	'910	'320	'24 136	'1 203 068	'16 308	'32 949	'737 823	'2 379 314	'1 336 856	'3 805 053	'110 036
333511	Industrial mold manufacturing .....	1	141	47	3 456	178 970	2 486	5 180	119 569	335 442	135 581	467 499	12 984
333512	Machine tool (metal cutting types) manufacturing .....	1	51	30	1 615	86 575	947	1 916	43 233	126 011	176 414	335 811	5 696
333513	Machine tool (metal forming types) manufacturing .....	2	14	8	e	D	D	D	D	D	D	D	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	2	427	140	11 154	555 253	8 239	16 378	379 725	1 005 359	445 623	1 498 799	60 652
333515	Cutting tool and machine tool accessory manufacturing...	2	210	60	3 716	161 027	2 452	4 916	96 905	340 898	169 824	519 282	18 712
333518	Other metalworking machinery manufacturing ..	3	'61	'34	'3 785	'203 837	'1 939	'4 078	'89 983	'533 157	'386 751	'923 730	'10 244
3336	Engine, turbine, and power transmission equipment manufacturing .....	-	35	17	3 695	209 634	2 161	4 667	100 205	749 576	1 008 571	1 766 980	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	-	35	17	3 695	209 634	2 161	4 667	100 205	749 576	1 008 571	1 766 980	D
333612	Speed changer, industrial high-speed drive, and gear manufacturing .....	-	12	7	380	15 422	290	591	9 921	33 288	21 398	54 556	D
333618	Other engine equipment manufacturing .....	-	12	7	3 077	183 567	1 709	3 779	83 996	686 028	973 781	1 671 982	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
333 3339	Machinery manufacturing—Con. Other general purpose machinery manufacturing .....	—	241	85	9 741	541 409	4 718	9 503	207 951	1 184 634	1 234 311	2 366 254	36 479
33391	Pump and compressor manufacturing .....	1	12	4	407	25 392	119	255	5 905	72 074	35 581	108 900	1 422
333912	Air and gas compressor manufacturing .....	1	7	2	252	17 824	70	155	4 297	56 935	21 967	79 709	729
33392	Material handling equipment manufacturing .....	—	59	29	2 140	109 999	1 279	2 664	56 279	281 871	210 024	493 968	10 729
333922	Conveyor and conveying equipment manufacturing ..	—	39	19	1 436	81 971	878	1 855	43 459	225 448	153 136	381 120	7 245
333923	Overhead traveling crane, hoist, and monorail system manufacturing .....	—	11	6	e	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing .....	—	5	1	333	12 211	221	451	7 157	28 549	29 932	58 231	3 066
33399	All other general purpose machinery manufacturing .....	1	170	52	7 194	406 018	3 320	6 584	145 767	830 689	988 706	1 763 386	24 328
333992	Welding and soldering equipment manufacturing .....	1	26	15	2 663	166 244	1 286	2 682	68 428	377 455	411 392	729 222	9 570
333993	Packaging machinery manufacturing .....	—	7	2	256	17 697	101	170	6 312	22 533	37 051	58 333	D
333994	Industrial process furnace and oven manufacturing .....	3	23	7	489	24 378	309	619	12 548	45 256	29 001	74 069	1 057
333995	Fluid power cylinder and actuator manufacturing .....	—	10	5	413	18 301	245	492	9 394	54 034	28 301	81 235	4 908
333999	All other miscellaneous general purpose machinery manufacturing .....	—	92	21	3 182	169 863	1 301	2 479	45 930	317 333	474 665	798 715	7 920
334	Computer and electronic product manufacturing .....	1	210	64	7 675	326 501	4 217	8 194	126 673	700 271	602 654	1 324 393	27 483
3341	Computer and peripheral equipment manufacturing .....	—	19	4	1 113	58 096	519	829	21 049	90 470	22 605	115 492	3 843
33411	Computer and peripheral equipment manufacturing .....	—	19	4	1 113	58 096	519	829	21 049	90 470	22 605	115 492	3 843
334111	Electronic computer manufacturing .....	—	6	3	1 028	53 463	489	778	20 273	82 168	14 823	99 420	3 005
3342	Communications equipment manufacturing .....	1	12	6	e	D	D	D	D	D	D	D	D
33429	Other communications equipment manufacturing .....	1	7	4	269	13 103	95	180	2 952	31 671	29 761	61 780	989
334290	Other communications equipment manufacturing .....	1	7	4	269	13 103	95	180	2 952	31 671	29 761	61 780	989
3344	Semiconductor and other electronic component manufacturing .....	—	63	23	2 449	96 536	1 247	2 489	35 332	196 202	292 279	504 037	11 103
33441	Semiconductor and other electronic component manufacturing .....	—	63	23	2 449	96 536	1 247	2 489	35 332	196 202	292 279	504 037	11 103
334412	Bare printed circuit board manufacturing .....	7	11	4	311	9 486	231	478	5 329	16 901	12 616	29 454	598
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	10	8	1 388	49 004	642	1 219	17 742	102 251	227 430	344 332	8 024
334419	Other electronic component manufacturing .....	—	23	8	516	26 431	239	506	7 666	57 001	36 539	93 662	1 875
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	3	95	25	2 067	111 824	926	1 888	35 221	216 377	106 221	327 370	7 409
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	3	95	25	2 067	111 824	926	1 888	35 221	216 377	106 221	327 370	7 409
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	2	26	12	721	39 617	295	613	11 782	77 992	38 347	118 337	2 199
334515	Instrument manufacturing for measuring and testing electricity and electrical signals .....	9	14	1	320	20 926	139	287	4 849	46 544	25 958	72 502	1 513
334519	Other measuring and controlling device manufacturing .....	1	28	5	552	28 712	280	548	11 425	55 120	20 397	72 163	1 810

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
334	Computer and electronic product manufacturing—Con.											
3346	Manufacturing and reproducing magnetic and optical media .....	—	15	5	g	D	D	D	D	D	D	D
33461	Manufacturing and reproducing magnetic and optical media .....	—	15	5	g	D	D	D	D	D	D	D
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	—	11	3	g	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	2	126	40	3 333	137 446	1 984	3 793	60 009	305 060	246 229	543 880
3353	Electrical equipment manufacturing .....	2	74	21	1 661	70 430	1 015	1 689	32 675	135 295	101 253	233 432
33531	Electrical equipment manufacturing .....	2	74	21	1 661	70 430	1 015	1 689	32 675	135 295	101 253	233 432
335313	Switchgear and switchboard apparatus manufacturing .....	2	17	4	326	14 796	191	347	7 105	27 697	23 214	48 185
335314	Relay and industrial control manufacturing .....	1	41	11	985	43 117	610	898	19 255	74 333	59 021	133 320
3359	Other electrical equipment and component manufacturing .....	1	39	16	1 462	60 295	842	1 840	24 492	141 118	124 849	261 739
33593	Wiring device manufacturing ...	—	9	5	745	32 888	435	969	13 535	66 326	57 578	126 459
335931	Current-carrying wiring device manufacturing .....	—	6	4	f	D	D	D	D	D	D	D
33599	All other electrical equipment and component manufacturing .....	1	23	8	f	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment and component manufacturing .....	1	20	7	553	20 263	330	714	8 388	56 245	50 828	101 518
336	Transportation equipment manufacturing .....	—	573	352	128 901	7 436 251	109 339	212 117	6 131 117	25 950 348	48 835 345	74 622 230
3361	Motor vehicle manufacturing .....	—	22	16	k	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	20	15	k	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	16	11	j	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	4	4	j	D	D	D	D	D	D	D
33612	Heavy duty truck manufacturing .....	2	2	1	e	D	D	D	D	D	D	D
336120	Heavy duty truck manufacturing .....	2	2	1	e	D	D	D	D	D	D	D
3362	Motor vehicle body and trailer manufacturing .....	9	22	4	e	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	9	22	4	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	480	312	l	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	52	25	14 995	956 943	12 910	24 807	804 105	2 093 657	5 547 257	7 603 901
336312	Gasoline engine and engine parts manufacturing .....	—	50	24	j	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	28	14	h	D	D	D	D	D	D	25 636
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	26	13	h	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	12	6	g	D	D	D	D	D	D	6 710
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	12	6	g	D	D	D	D	D	D	6 710
33634	Motor vehicle brake system manufacturing .....	—	21	12	1 564	67 419	1 159	2 416	44 794	344 430	519 421	872 606
336340	Motor vehicle brake system manufacturing .....	—	21	12	1 564	67 419	1 159	2 416	44 794	344 430	519 421	872 606
33635	Motor vehicle transmission and power train parts manufacturing .....	—	44	32	17 396	1 104 336	15 423	34 494	969 679	3 030 779	4 528 856	7 518 312
336350	Motor vehicle transmission and power train parts manufacturing .....	—	44	32	17 396	1 104 336	15 423	34 494	969 679	3 030 779	4 528 856	7 518 312
33636	Motor vehicle seating and interior trim manufacturing .....	—	38	29	11 447	463 258	9 066	14 581	320 156	1 113 215	2 440 608	3 544 261
336360	Motor vehicle seating and interior trim manufacturing .....	—	38	29	11 447	463 258	9 066	14 581	320 156	1 113 215	2 440 608	3 544 261

See footnotes at end of table.

### Manufacturing—Geo. Area Series

U.S. Census Bureau, 2002 Economic Census

Michigan 33

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
336	Transportation equipment manufacturing—Con.											
3363	Motor vehicle parts manufacturing—Con.											
33637	Motor vehicle metal stamping ..	1	177	124	29 145	1 397 520	24 324	41 351	1 102 167	2 888 051	3 243 672	6 107 105
336370	Motor vehicle metal stamping .....	1	177	124	29 145	1 397 520	24 324	41 351	1 102 167	2 888 051	3 243 672	6 107 105
33639	Other motor vehicle parts manufacturing .....	1	108	70	9 923	389 295	7 452	13 874	237 718	1 105 412	1 348 223	2 443 703
336391	Motor vehicle air-conditioning manufacturing .....	—	3	3	338	20 809	241	497	13 099	72 184	242 968	315 636
336399	All other motor vehicle parts manufacturing .....	1	105	67	9 585	368 486	7 211	13 377	224 619	1 033 228	1 105 255	2 128 067
3364	Aerospace product and parts manufacturing .....	—	25	12	g	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	25	12	g	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	14	9	g	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	—	15	7	f	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	—	15	7	f	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing ..	—	6	4	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	3	238	49	4 161	131 520	3 031	4 998	81 353	269 991	224 250	491 852
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	2	165	23	1 758	51 238	1 352	2 648	34 419	96 180	76 160	173 663
33711	Wood kitchen cabinet and countertop manufacturing .....	2	100	8	944	29 024	665	1 323	17 518	51 644	39 855	92 917
337110	Wood kitchen cabinet and countertop manufacturing .....	2	100	8	944	29 024	665	1 323	17 518	51 644	39 855	92 917
33712	Household and institutional furniture manufacturing .....	2	65	15	814	22 214	687	1 325	16 901	44 536	36 305	80 746
337122	Nonupholstered wood household furniture manufacturing .....	4	28	6	346	8 283	306	583	6 664	17 057	14 027	31 174
3372	Office furniture (including fixtures) manufacturing .....	1	60	18	1 820	63 115	1 234	1 590	35 957	128 955	102 674	227 422
33721	Office furniture (including fixtures) manufacturing .....	1	60	18	1 820	63 115	1 234	1 590	35 957	128 955	102 674	227 422
337212	Custom architectural woodwork and millwork manufacturing .....	—	22	5	271	11 242	174	359	6 311	21 434	8 540	29 952
337215	Showcase, partition, shelving, and locker manufacturing .....	2	30	11	1 432	48 007	980	1 110	26 993	99 589	89 762	185 602
3379	Other furniture related product manufacturing .....	6	13	8	583	17 167	445	760	10 977	44 856	45 416	90 767
33791	Mattress manufacturing .....	7	5	4	e	D	D	D	D	D	D	D
337910	Mattress manufacturing .....	7	5	4	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	2	478	74	6 453	246 542	4 138	7 885	129 966	543 008	306 710	844 486
3391	Medical equipment and supplies manufacturing .....	2	181	23	1 980	70 122	1 312	2 448	40 641	193 506	74 680	264 394
33911	Medical equipment and supplies manufacturing .....	2	181	23	1 980	70 122	1 312	2 448	40 641	193 506	74 680	264 394
339113	Surgical appliance and supplies manufacturing .....	2	26	8	419	16 398	253	524	7 234	51 235	19 831	70 931
339114	Dental equipment and supplies manufacturing .....	—	17	2	298	12 522	209	397	7 064	64 827	31 723	93 089
339115	Ophthalmic goods manufacturing .....	3	12	4	274	10 225	120	209	3 064	19 850	8 891	28 733
339116	Dental laboratories .....	3	113	8	908	27 890	679	1 208	21 801	49 541	10 527	60 186
3399	Other miscellaneous manufacturing .....	2	297	51	4 473	176 420	2 826	5 437	89 325	349 502	232 030	580 092
33995	Sign manufacturing .....	2	106	17	1 689	77 408	943	1 933	34 793	127 315	78 651	209 688
339950	Sign manufacturing .....	2	106	17	1 689	77 408	943	1 933	34 793	127 315	78 651	209 688
33999	All other miscellaneous manufacturing .....	2	134	26	2 175	79 248	1 534	2 856	46 698	184 564	112 832	291 754
339991	Gasket, packing, and sealing device manufacturing .....	5	21	11	762	28 856	499	1 023	14 875	66 354	35 605	102 108
339999	All other miscellaneous manufacturing .....	1	102	12	1 162	44 413	836	1 516	28 266	101 823	66 805	163 339

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division</b>												
31-33	Manufacturing .....	—	2 059	645	118 362	6 164 828	92 972	179 378	4 620 418	18 890 667	33 596 911	52 401 486	1 275 878
311	Food manufacturing .....	2	180	43	5 652	163 917	4 224	8 281	103 498	638 612	871 609	1 501 478	30 551
3115	Dairy product manufacturing .....	—	7	5	575	22 240	425	831	12 593	76 230	186 823	261 503	D
31151	Dairy product (except frozen) manufacturing .....	—	4	4	e	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing ....	—	2	2	e	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	2	22	14	2 450	63 026	1 910	3 943	40 772	255 280	512 837	762 866	14 005
31161	Animal slaughtering and processing .....	2	22	14	2 450	63 026	1 910	3 943	40 772	255 280	512 837	762 866	14 005
311612	Meat processed from carcasses .....	2	13	10	1 484	41 010	1 044	2 206	22 806	236 003	490 549	720 731	13 060
311615	Poultry processing .....	9	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	7	114	14	1 380	40 968	925	1 718	26 535	98 436	53 660	150 055	5 667
31181	Bread and bakery product manufacturing .....	7	107	13	g	D	D	D	D	D	D	D	D
311811	Retail bakeries .....	5	84	6	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	5	21	6	e	D	D	D	D	D	D	D	2 229
311813	Frozen cakes, pies, and other pastries manufacturing .....	9	2	1	e	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	1	21	7	1 010	30 971	759	1 411	18 418	182 207	95 030	277 335	6 229
31191	Snack food manufacturing .....	1	6	4	f	D	D	D	D	D	D	D	D
311919	Other snack food manufacturing .....	1	6	4	f	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	—	12	4	f	D	D	D	D	D	D	D	11 939
3121	Beverage manufacturing .....	—	11	4	f	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
314	Textile product mills .....	2	25	4	293	7 669	233	456	4 580	10 669	10 379	20 614	77
3149	Other textile product mills .....	2	14	4	253	6 830	203	402	4 134	9 356	9 292	18 213	60
322	Paper manufacturing .....	2	35	18	1 481	51 191	1 147	2 470	31 580	109 972	180 415	292 190	6 334
3222	Converted paper product manufacturing .....	3	34	17	g	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	1	19	9	688	22 684	526	1 134	12 587	48 671	95 526	144 372	D
322211	Corrugated and solid fiber box manufacturing .....	1	12	6	e	D	D	D	D	D	D	D	1 230
32229	Other converted paper product manufacturing .....	9	6	2	e	D	D	D	D	D	D	D	D
322299	All other converted paper product manufacturing .....	9	5	2	e	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	1	179	27	2 210	89 530	1 515	2 874	55 455	285 809	199 530	486 541	6 534
3231	Printing and related support activities .....	1	179	27	2 210	89 530	1 515	2 874	55 455	285 809	199 530	486 541	6 534
32311	Printing .....	1	155	24	2 004	80 058	1 389	2 642	49 855	268 821	196 471	466 543	6 067
323110	Commercial lithographic printing .....	1	84	16	1 376	59 713	960	1 825	37 619	222 007	170 117	392 771	4 483
324	Petroleum and coal products manufacturing .....	—	23	9	1 130	57 106	579	1 064	25 327	290 628	919 245	1 169 831	33 078
3241	Petroleum and coal products manufacturing .....	—	23	9	1 130	57 106	579	1 064	25 327	290 628	919 245	1 169 831	33 078
32411	Petroleum refineries .....	—	2	2	e	D	D	D	D	D	D	D	D
324110	Petroleum refineries .....	—	2	2	e	D	D	D	D	D	D	D	D
32412	Asphalt paving, roofing, and saturated materials manufacturing .....	—	9	4	e	D	D	D	D	D	D	D	D
324121	Asphalt paving mixture and block manufacturing .....	—	7	2	e	D	D	D	D	D	D	D	D
32419	Other petroleum and coal products manufacturing .....	7	12	3	e	D	D	D	D	D	D	D	D
324199	All other petroleum and coal products manufacturing .....	9	1	1	e	D	D	D	D	D	D	D	D

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	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division—Con.</b>												
325	Chemical manufacturing .....	2	80	29	2 595	145 236	1 317	2 621	59 729	425 387	564 112	987 979	66 951
3251	Basic chemical manufacturing ...	2	15	8	f	D	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	—	7	3	318	19 841	174	361	10 671	71 699	58 802	120 946	D
325199	All other basic organic chemical manufacturing .....	—	6	2	e	D	D	D	D	D	D	D	D
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
32521	Resin and synthetic rubber manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	1	9	7	377	14 801	232	451	8 332	44 464	17 937	64 696	20 967
32541	Pharmaceutical and medicine manufacturing .....	1	9	7	377	14 801	232	451	8 332	44 464	17 937	64 696	20 967
3259	Other chemical product and preparation manufacturing .....	2	14	6	428	17 281	311	607	9 931	41 219	66 951	109 249	2 365
32599	All other chemical product and preparation manufacturing ...	2	12	6	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	83	39	4 670	164 760	3 662	6 970	113 196	466 138	443 439	911 424	20 935
3261	Plastics product manufacturing ..	1	68	36	4 541	160 365	3 582	6 800	110 949	457 546	437 601	896 467	19 757
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	—	7	3	414	27 212	262	591	17 544	114 199	67 724	185 080	2 955
326113	Unlaminated plastics film and sheet (except packaging) manufacturing .....	—	4	2	e	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
32616	Plastics bottle manufacturing ..	—	1	1	e	D	D	D	D	D	D	D	D
326160	Plastics bottle manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	1	45	26	3 235	97 898	2 619	4 715	67 455	260 449	271 581	530 444	13 541
326199	All other plastics product manufacturing .....	2	44	25	h	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	2	60	29	2 928	155 861	2 368	4 820	119 948	400 281	315 211	713 083	15 955
3272	Glass and glass product manufacturing .....	1	7	3	1 327	86 934	1 156	2 300	73 332	179 618	116 907	298 027	3 397
32721	Glass and glass product manufacturing .....	1	7	3	1 327	86 934	1 156	2 300	73 332	179 618	116 907	298 027	3 397
327215	Glass product manufacturing made of purchased glass ..	—	6	2	g	D	D	D	D	D	D	D	3 397
3273	Cement and concrete product manufacturing .....	2	27	16	828	41 608	633	1 376	29 173	97 606	127 799	224 742	5 656
32731	Cement manufacturing .....	3	3	2	e	D	D	D	D	D	D	D	D
327310	Cement manufacturing .....	3	3	2	e	D	D	D	D	D	D	D	D
32732	Ready-mix concrete manufacturing .....	1	15	11	381	21 763	276	563	14 857	52 936	55 528	108 519	2 860
327320	Ready-mix concrete manufacturing .....	1	15	11	381	21 763	276	563	14 857	52 936	55 528	108 519	2 860
3279	Other nonmetallic mineral product manufacturing .....	5	18	8	691	25 297	537	1 071	16 202	116 799	67 270	180 827	D
32791	Abrasive product manufacturing .....	6	8	6	442	16 104	349	682	9 976	97 010	49 022	142 746	3 491
327910	Abrasive product manufacturing .....	6	8	6	442	16 104	349	682	9 976	97 010	49 022	142 746	3 491
331	Primary metal manufacturing .....	—	44	27	8 019	437 969	5 945	12 996	319 040	688 726	2 242 471	2 963 218	52 967
3311	Iron and steel mills and ferroalloy manufacturing .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D
331111	Iron and steel mills .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division—Con.</b>											
331	Primary metal manufacturing—Con.											
3312	Steel product manufacturing from purchased steel .....	—	15	11	1 010	45 051	670	1 338	25 516	111 757	215 967	330 214
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	—	3	3	443	17 012	262	497	6 707	40 970	52 785	93 007
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	—	3	3	443	17 012	262	497	6 707	40 970	52 785	93 007
33122	Rolling and drawing of purchased steel .....	—	12	8	567	28 039	408	841	18 809	70 787	163 182	237 207
331221	Rolled steel shape manufacturing .....	—	11	8	f	D	D	D	D	D	D	D
3315	Foundries .....	1	17	8	518	22 442	367	742	13 023	49 697	80 061	131 111
33151	Ferrous metal foundries .....	—	10	7	e	D	D	D	D	D	D	2 310
332	Fabricated metal product manufacturing .....	4	544	162	12 679	501 437	9 316	18 855	322 630	1 237 425	967 510	2 197 503
3321	Forging and stamping .....	3	32	18	1 222	51 493	950	1 792	35 060	98 332	106 310	201 192
33211	Forging and stamping .....	3	32	18	1 222	51 493	950	1 792	35 060	98 332	106 310	201 192
332111	Iron and steel forging .....	3	10	8	529	21 951	426	743	16 697	34 621	51 274	83 169
332116	Metal stamping .....	—	14	7	446	18 629	328	637	11 225	39 312	30 532	69 368
3322	Cutlery and handtool manufacturing .....	1	18	8	722	31 459	472	940	19 658	53 430	35 173	80 618
33221	Cutlery and handtool manufacturing .....	1	18	8	722	31 459	472	940	19 658	53 430	35 173	80 618
332212	Hand and edge tool manufacturing .....	2	15	7	e	D	D	D	D	D	D	D
332214	Kitchen utensil, pot, and pan manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	4	79	19	1 915	78 055	1 202	2 440	41 288	135 802	244 199	391 837
33231	Plate work and fabricated structural product manufacturing .....	6	33	7	1 060	44 800	720	1 454	24 610	73 095	191 851	276 485
332312	Fabricated structural metal manufacturing .....	4	24	5	736	31 571	475	940	15 852	62 121	97 926	168 648
332313	Plate work manufacturing .....	9	6	2	e	D	D	D	D	D	D	D
33232	Ornamental and architectural metal products manufacturing .....	1	46	12	855	33 255	482	986	16 678	62 707	52 348	115 352
332322	Sheet metal work manufacturing .....	1	26	6	530	21 452	319	645	11 620	36 256	27 816	64 430
3325	Hardware manufacturing .....	8	9	3	299	10 147	232	429	6 432	26 854	18 809	45 646
33251	Hardware manufacturing .....	8	9	3	299	10 147	232	429	6 432	26 854	18 809	45 646
332510	Hardware manufacturing .....	8	9	3	299	10 147	232	429	6 432	26 854	18 809	45 646
3326	Spring and wire product manufacturing .....	3	19	4	286	9 074	201	433	5 718	21 397	13 630	34 896
33261	Spring and wire product manufacturing .....	3	19	4	286	9 074	201	433	5 718	21 397	13 630	34 896
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	5	222	55	4 314	175 921	3 306	6 919	120 023	516 373	362 613	872 973
33271	Machine shops .....	5	151	19	1 756	74 880	1 367	2 809	52 800	157 928	81 475	239 938
332710	Machine shops .....	5	151	19	1 756	74 880	1 367	2 809	52 800	157 928	81 475	239 938
33272	Turned product and screw, nut, and bolt manufacturing .....	5	71	36	2 558	101 041	1 939	4 110	67 223	358 445	281 138	633 035
332721	Precision turned product manufacturing .....	3	39	18	1 146	43 609	942	1 993	31 252	93 593	47 746	141 313
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	6	32	18	1 412	57 432	997	2 117	35 971	264 852	233 392	491 722
3328	Coating, engraving, heat treating, and allied activities .....	1	104	40	3 025	107 747	2 281	4 452	68 735	257 899	98 292	355 525
33281	Coating, engraving, heat treating, and allied activities .....	1	104	40	3 025	107 747	2 281	4 452	68 735	257 899	98 292	355 525
332811	Metal heat treating .....	1	30	17	865	33 607	608	1 219	19 543	88 191	22 284	110 492
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	3	27	10	846	28 430	687	1 215	19 994	79 405	46 729	124 872
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	47	13	1 314	45 710	986	2 018	29 198	90 303	29 279	120 161
	See footnotes at end of table.											

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division—Con.</b>												
332	Fabricated metal product manufacturing—Con.												
3329	Other fabricated metal product manufacturing .....	2	56	12	774	32 924	578	1 235	22 725	115 917	78 478	193 244	1 625
33299	All other fabricated metal product manufacturing .....	2	49	11	568	23 560	426	882	15 932	66 321	31 734	95 565	1 087
332999	All other miscellaneous fabricated metal product manufacturing .....	2	27	5	289	11 848	214	436	7 500	46 041	20 580	64 478	773
333	Machinery manufacturing .....	1	298	90	10 170	517 581	6 756	12 772	290 593	1 201 826	1 344 880	2 585 121	124 324
3332	Industrial machinery manufacturing .....	1	25	8	828	44 556	449	686	18 263	56 898	156 012	253 234	D
33329	Other industrial machinery manufacturing .....	1	22	7	783	42 346	421	650	17 343	54 379	153 000	247 557	D
333298	All other industrial machinery manufacturing .....	1	18	6	744	40 567	395	603	16 379	51 492	151 144	242 822	D
3335	Metalworking machinery manufacturing .....	2	184	62	1'5 069	1'240 320	1'3 819	1'6 789	1'162 503	1'483 591	1'185 763	1'661 722	1'32 614
33351	Metalworking machinery manufacturing .....	2	184	62	1'5 069	1'240 320	1'3 819	1'6 789	1'162 503	1'483 591	1'185 763	1'661 722	1'32 614
333511	Industrial mold manufacturing .....	1	14	4	437	19 595	295	511	11 638	34 152	13 785	47 842	1 140
333514	Special die and tool, die set, jig, and fixture manufacturing .....	2	98	31	3 289	155 504	2 652	4 498	115 321	315 224	101 769	413 135	27 288
333515	Cutting tool and machine tool accessory manufacturing...	2	47	14	712	33 341	501	1 054	20 335	67 675	31 693	98 996	2 484
333518	Other metalworking machinery manufacturing ..	1'3	12	7	1'341	1'18 141	1'207	1'384	1'8 495	1'39 314	1'22 263	1'59 148	1'943
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	9	5	h	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	9	5	h	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	4	4	h	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	2	1'65	1'10	1'0 076	1'43 607	1'687	1'1 400	1'23 007	1'118 138	1'94 475	1'210 928	D
33392	Material handling equipment manufacturing .....	1	1'20	5	f	D	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing ..	—	3	1	e	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing ....	2	43	5	490	20 490	302	578	9 818	63 383	31 881	93 636	6 103
334	Computer and electronic product manufacturing .....	1	45	16	3 565	147 064	2 311	4 384	66 559	341 957	205 606	554 323	10 170
3341	Computer and peripheral equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
33411	Computer and peripheral equipment manufacturing ....	—	4	2	f	D	D	D	D	D	D	D	D
334111	Electronic computer manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	5	14	3	297	10 107	233	458	5 162	18 266	16 163	34 335	705
33441	Semiconductor and other electronic component manufacturing .....	5	14	3	297	10 107	233	458	5 162	18 266	16 163	34 335	705
3345	Navigational, measuring, electromedical, and control instruments manufacturing ....	5	21	7	819	51 807	316	655	13 449	100 123	49 782	156 447	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	5	21	7	819	51 807	316	655	13 449	100 123	49 782	156 447	D
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	5	21	7	819	51 807	316	655	13 449	100 123	49 782	156 447	D
334515	Instrument manufacturing for measuring and testing electricity and electrical signals.....	1	5	3	258	17 231	72	163	3 513	35 546	14 469	50 181	408
		9	3	1	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division—Con.</b>											
334	Computer and electronic product manufacturing—Con.											
3346	Manufacturing and reproducing magnetic and optical media.....	—	4	3	g	D	D	D	D	D	D	D
33461	Manufacturing and reproducing magnetic and optical media....	—	4	3	g	D	D	D	D	D	D	D
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	—	4	3	g	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing.....	1	28	8	768	36 294	384	864	12 891	89 228	56 739	142 960
3359	Other electrical equipment and component manufacturing.....	—	10	3	483	25 268	219	520	8 093	57 671	34 478	89 156
33593	Wiring device manufacturing....	—	1	1	e	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing.....	—	1	1	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	164	95	57 497	3 516 396	50 220	94 717	3 006 955	12 261 799	24 749 254	36 916 434
3361	Motor vehicle manufacturing.....	—	9	9	j	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	8	8	j	D	D	D	D	D	D	D
336111	Automobile manufacturing....	—	6	6	j	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	2	2	i	D	D	D	D	D	D	D
33612	Heavy duty truck manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336120	Heavy duty truck manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	132	79	k	D	D	D	D	D	D	425 226
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	25	11	12 082	767 861	10 566	19 464	655 383	1 613 210	4 352 650	5 938 437
336312	Gasoline engine and engine parts manufacturing .....	—	24	11	j	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	6	3	h	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	6	3	h	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	7	8	4	e	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	7	8	4	e	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	15	9	7 392	517 489	6 538	14 604	458 392	1 360 003	1 588 360	2 934 377
336350	Motor vehicle transmission and power train parts manufacturing .....	—	15	9	7 392	517 489	6 538	14 604	458 392	1 360 003	1 588 360	2 934 377
33636	Motor vehicle seating and interior trim manufacturing....	—	12	10	2 872	130 008	2 070	4 309	81 473	305 384	1 022 710	1 331 193
336360	Motor vehicle seating and interior trim manufacturing..	—	12	10	2 872	130 008	2 070	4 309	81 473	305 384	1 022 710	1 331 193
33637	Motor vehicle metal stamping .....	—	42	28	11 907	439 182	10 580	13 144	363 142	738 082	1 023 945	1 751 439
336370	Motor vehicle metal stamping.....	—	42	28	11 907	439 182	10 580	13 144	363 142	738 082	1 023 945	1 751 439
33639	Other motor vehicle parts manufacturing .....	3	22	14	1 426	52 656	1 069	2 100	32 342	166 092	176 330	344 772
336399	All other motor vehicle parts manufacturing .....	3	22	14	1 426	52 656	1 069	2 100	32 342	166 092	176 330	344 772
3364	Aerospace product and parts manufacturing .....	1	9	5	e	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	1	9	5	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	4	65	18	1 745	53 652	1 286	1 801	33 436	122 599	106 265	227 409
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	3	34	3	e	D	D	D	D	D	D	D

See footnotes at end of table.

### Manufacturing—Geo. Area Series

U.S. Census Bureau, 2002 Economic Census

Michigan 39

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
	<b>Detroit-Livonia-Dearborn, MI Metropolitan Division—Con.</b>											
337	Furniture and related product manufacturing—Con.											
3372	Office furniture (including fixtures) manufacturing .....	2	25	11	1 064	35 854	726	837	20 118	76 221	70 565	145 441
33721	Office furniture (including fixtures) manufacturing .....	2	25	11	1 064	35 854	726	837	20 118	76 221	70 565	145 441
337215	Showcase, partition, shelving, and locker manufacturing .....	2	12	7	882	28 234	607	625	15 444	61 304	64 902	124 875
3379	Other furniture related product manufacturing .....	9	6	4	e	D	D	D	D	D	D	D
33791	Mattress manufacturing .....	9	4	3	e	D	D	D	D	D	D	D
337910	Mattress manufacturing .....	9	4	3	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	2	146	21	1 770	70 497	1 100	2 165	37 390	193 526	107 974	294 963
3391	Medical equipment and supplies manufacturing .....	1	56	8	757	28 820	453	890	14 623	96 746	43 879	137 437
33911	Medical equipment and supplies manufacturing .....	1	56	8	757	28 820	453	890	14 623	96 746	43 879	137 437
339114	Dental equipment and supplies manufacturing ....	-	7	2	e	D	D	D	D	D	D	515
3399	Other miscellaneous manufacturing .....	3	90	13	1 013	41 677	647	1 275	22 767	96 780	64 095	157 526
33995	Sign manufacturing .....	6	40	4	340	12 354	218	441	6 144	24 364	16 110	40 431
339950	Sign manufacturing .....	6	40	4	340	12 354	218	441	6 144	24 364	16 110	40 431
33999	All other miscellaneous manufacturing .....	3	34	6	505	24 352	327	660	14 656	60 706	37 756	95 536
339999	All other miscellaneous manufacturing .....	2	24	3	332	17 188	261	553	13 023	40 426	28 318	66 173
	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division</b>											
31-33	Manufacturing .....	-	4 806	'1 581	'189 305	'8 821 149	'138 604	'276 217	'5 873 301	'25 225 990	'33 417 990	'58 655 364
311	Food manufacturing .....	2	168	29	2 369	65 125	1 387	2 654	32 768	187 736	204 970	391 844
3114	Fruit and vegetable preserving and specialty food manufacturing .....	-	8	3	518	16 539	447	916	12 212	60 446	79 372	139 816
31142	Fruit and vegetable canning, pickling, and drying.....	-	6	1	e	D	D	D	D	D	D	D
311421	Fruit and vegetable canning .....	-	5	1	e	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	3	99	14	985	18 724	434	703	7 957	45 543	21 456	67 007
31181	Bread and bakery product manufacturing .....	3	94	13	f	D	D	D	D	D	D	D
311811	Retail bakeries.....	4	83	9	727	10 461	337	502	5 149	19 511	10 392	29 904
3119	Other food manufacturing .....	2	31	6	444	16 834	211	417	5 544	52 384	48 044	97 683
312	Beverage and tobacco product manufacturing .....	-	12	3	e	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	-	12	3	e	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	-	6	3	e	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	2	2	e	D	D	D	D	D	D	D
313	Textile mills .....	2	23	3	251	8 189	200	410	5 823	19 089	31 436	51 160
314	Textile product mills .....	5	61	5	904	24 964	593	1 139	12 761	51 981	66 314	116 847
3149	Other textile product mills .....	3	36	4	703	19 796	417	791	8 732	38 565	36 588	75 622
31499	All other textile product mills .....	1	16	2	f	D	D	D	D	D	D	D
314999	All other miscellaneous textile product mills .....	1	16	2	f	D	D	D	D	D	D	D
315	Apparel manufacturing.....	7	56	3	285	6 959	244	427	5 193	14 585	12 751	27 104
316	Leather and allied product manufacturing .....	1	8	2	f	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing.....	-	3	1	f	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing .....	-	3	1	f	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing .....	-	3	1	f	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>												
321	Wood product manufacturing .....	3	73	20	1 248	42 501	886	1 771	24 849	88 064	83 761	173 212	2 986
3212	Veneer, plywood, and engineered wood product manufacturing.....	2	9	4	372	14 727	236	494	7 428	33 240	29 066	62 212	860
32121	Veneer, plywood, and engineered wood product manufacturing .....	2	9	4	372	14 727	236	494	7 428	33 240	29 066	62 212	860
321214	Truss manufacturing.....	2	8	4	e	D	D	D	D	D	D	D	D
3219	Other wood product manufacturing .....	3	58	16	f	D	D	D	D	D	D	D	D
32191	Millwork.....	5	30	9	367	12 403	282	574	8 607	20 044	25 433	45 410	1 033
32199	All other wood product manufacturing .....	2	18	4	338	11 064	234	470	6 117	28 466	19 606	49 570	D
322	Paper manufacturing .....	1	29	16	1 704	81 672	1 132	2 412	46 540	220 108	263 521	484 281	6 709
3221	Pulp, paper, and paperboard mills .....	1	4	4	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	1	4	4	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	1	4	4	f	D	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	—	25	12	f	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	12	7	483	18 284	370	745	10 646	44 711	67 138	111 807	D
322211	Corrugated and solid fiber box manufacturing .....	—	10	6	e	D	D	D	D	D	D	D	2 236
32222	Paper bag and coated and treated paper manufacturing .....	—	7	2	e	D	D	D	D	D	D	D	D
322222	Coated and laminated paper manufacturing .....	—	6	2	e	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	2	350	48	4 299	170 612	2 871	5 576	92 923	345 692	203 948	546 553	17 149
3231	Printing and related support activities .....	2	350	48	4 299	170 612	2 871	5 576	92 923	345 692	203 948	546 553	17 149
32311	Printing .....	2	318	46	4 162	164 132	2 789	5 440	89 574	328 049	201 397	526 528	16 209
323110	Commercial lithographic printing .....	2	120	24	1 951	83 578	1 305	2 530	45 567	163 121	106 544	268 599	9 463
323112	Commercial flexographic printing .....	2	12	5	327	13 706	206	436	6 553	26 884	20 912	47 960	980
323113	Commercial screen printing.....	—	38	4	577	22 324	393	788	11 491	44 845	22 138	64 866	2 196
323114	Quick printing.....	3	97	4	514	15 897	326	591	9 192	34 419	13 496	47 934	1 589
323117	Books printing .....	1	7	4	e	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	1	110	53	5 459	267 114	3 168	6 531	124 244	1 036 860	958 684	2 014 889	76 024
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing.....	2	10	8	e	D	D	D	D	D	D	D	D
32521	Resin and synthetic rubber manufacturing .....	2	10	8	e	D	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	2	10	8	e	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	—	10	4	1 018	48 431	556	1 091	21 295	135 656	114 556	247 930	17 372
32541	Pharmaceutical and medicine manufacturing .....	—	10	4	1 018	48 431	556	1 091	21 295	135 656	114 556	247 930	17 372
325412	Pharmaceutical preparation manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	1	29	15	2 142	108 750	1 197	2 440	50 740	531 855	376 510	927 106	D
32551	Paint and coating manufacturing .....	—	20	10	1 400	80 034	727	1 544	35 811	418 766	287 486	727 309	D
325510	Paint and coating manufacturing .....	—	20	10	1 400	80 034	727	1 544	35 811	418 766	287 486	727 309	D
32552	Adhesive manufacturing .....	5	9	5	742	28 716	470	896	14 929	113 089	89 024	199 797	3 357
325520	Adhesive manufacturing .....	5	9	5	742	28 716	470	896	14 929	113 089	89 024	199 797	3 357
3256	Soap, cleaning compound, and toilet preparation manufacturing.	5	15	5	e	D	D	D	D	D	D	D	D
32561	Soap and cleaning compound manufacturing .....	6	12	4	e	D	D	D	D	D	D	D	D

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**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>												
325 3259	Chemical manufacturing—Con.												
	Other chemical product and preparation manufacturing .....	-	35	18	1 437	69 520	805	1 729	29 006	233 836	293 869	528 119	13 309
32591	Printing ink manufacturing .....	-	2	1	e	D	D	D	D	D	D	D	D
325910	Printing ink manufacturing .....	-	2	1	e	D	D	D	D	D	D	D	D
32599	All other chemical product and preparation manufacturing .....	1	32	16	g	D	D	D	D	D	D	D	D
325991	Custom compounding of purchased resins.....	1	17	10	f	D	D	D	D	D	D	D	D
325998	All other miscellaneous chemical product and preparation manufacturing ..	-	12	6	532	28 266	294	651	12 717	103 855	134 539	239 219	7 580
326	Plastics and rubber products manufacturing .....	1	252	r143	r17 379	r570 577	r13 195	r26 047	347 544	r1 541 161	r1 152 332	r2 694 266	r107 419
3261	Plastics product manufacturing ..	1	224	r132	r16 088	r533 067	r12 236	r24 441	326 625	r1 445 522	r1 063 645	r2 509 249	r90 686
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	5	13	2	306	13 792	216	442	8 151	34 444	38 150	73 437	2 019
32612	Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing .....	-	14	5	613	20 067	406	811	10 512	42 579	49 457	91 457	D
326121	Unlaminated plastics profile shape manufacturing .....	1	9	3	e	D	D	D	D	D	D	D	D
326122	Plastics pipe and pipe fitting manufacturing .....	-	5	2	e	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	-	r5	r4	r457	r13 297	r292	r545	r5 892	r23 619	r29 992	r53 767	D
326140	Polystyrene foam product manufacturing .....	-	r5	r4	r457	r13 297	r292	r545	r5 892	r23 619	r29 992	r53 767	D
32615	Urethane and other foam product (except polystyrene) manufacturing .....	2	11	5	560	16 714	454	863	10 653	49 854	53 176	102 923	1 844
326150	Urethane and other foam product (except polystyrene) manufacturing .....	2	11	5	560	16 714	454	863	10 653	49 854	53 176	102 923	1 844
32619	Other plastics product manufacturing .....	1	r181	116	r14 152	r469 197	r10 868	r21 780	r291 417	r1 295 026	r892 870	r2 187 665	r77 329
326199	All other plastics product manufacturing .....	1	r173	113	j	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing ..	1	28	11	1 291	37 510	959	1 606	20 919	95 639	88 687	185 017	16 733
32629	Other rubber product manufacturing .....	1	24	11	g	D	D	D	D	D	D	D	D
326291	Rubber product manufacturing for mechanical use .....	-	12	7	1 039	29 310	772	1 211	16 035	78 268	70 119	148 740	D
327	Nonmetallic mineral product manufacturing .....	2	127	44	2 834	111 875	2 110	3 266	72 827	240 273	218 260	453 715	14 369
3272	Glass and glass product manufacturing .....	3	19	5	300	9 169	246	505	6 264	19 596	24 839	44 480	1 257
32721	Glass and glass product manufacturing .....	3	19	5	300	9 169	246	505	6 264	19 596	24 839	44 480	1 257
3273	Cement and concrete product manufacturing .....	1	64	30	1 957	78 801	1 507	2 013	54 967	165 811	154 085	314 525	10 011
32732	Ready-mix concrete manufacturing .....	1	40	21	864	42 042	576	1 215	27 418	114 137	103 771	218 214	7 672
327320	Ready-mix concrete manufacturing .....	1	40	21	864	42 042	576	1 215	27 418	114 137	103 771	218 214	7 672
32739	Other concrete product manufacturing .....	-	14	5	873	27 074	794	509	22 758	31 507	34 424	59 931	575
327390	Other concrete product manufacturing .....	-	14	5	873	27 074	794	509	22 758	31 507	34 424	59 931	575
3279	Other nonmetallic mineral product manufacturing .....	2	30	6	356	15 389	209	451	7 445	36 438	23 368	60 490	D
331	Primary metal manufacturing .....	2	67	29	2 396	93 847	1 952	4 130	69 385	260 217	305 405	564 083	9 007
3312	Steel product manufacturing from purchased steel .....	1	9	7	669	26 117	587	1 273	21 909	79 599	79 671	158 372	2 985
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	1	3	2	e	D	D	D	D	D	D	D	D
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	1	3	2	e	D	D	D	D	D	D	D	D
33122	Rolling and drawing of purchased steel .....	1	6	5	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>											
331 3314	Primary metal manufacturing—Con. Nonferrous metal (except aluminum) production and processing .....	2	12	3	f	D	D	D	D	D	D	2 298
33142	Copper rolling, drawing, extruding, and alloying .....	—	1	1	e	D	D	D	D	D	D	D
331421	Copper rolling, drawing, and extruding .....	—	1	1	e	D	D	D	D	D	D	D
33149	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding, and alloying .....	8	9	2	e	D	D	D	D	D	D	D
331491	Nonferrous metal (except copper and aluminum) rolling, drawing, and extruding .....	8	7	1	e	D	D	D	D	D	D	D
3315	Foundries .....	3	31	16	829	29 386	674	1 382	20 239	82 820	33 364	116 159
33151 33152	Ferrous metal foundries .....	6	17	9	e	D	D	D	D	D	D	2 082
	Nonferrous metal foundries .....	—	14	7	e	D	D	D	D	D	D	777
332	Fabricated metal product manufacturing .....	1	1 229	370	31 910	1 213 655	23 840	48 317	795 284	1'2 680 085	1'1 864 556	1'4 556 835
3321	Forging and stamping .....	1	61	26	1 942	84 364	1 442	3 061	53 504	247 902	251 201	500 159
33211 332111 332116	Forging and stamping .....	1	61	26	1 942	84 364	1 442	3 061	53 504	247 902	251 201	500 159
	Iron and steel forging .....	—	15	8	897	43 022	629	1 367	26 114	159 178	182 916	340 580
	Metal stamping .....	4	29	9	608	22 392	476	956	14 685	52 143	23 913	77 832
3322	Cutlery and handtool manufacturing .....	1	47	13	1 121	38 708	748	1 279	21 450	88 189	46 169	135 453
33221	Cutlery and handtool manufacturing .....	1	47	13	1 121	38 708	748	1 279	21 450	88 189	46 169	135 453
332212	Hand and edge tool manufacturing .....	1	43	12	g	D	D	D	D	D	D	3 487
3323	Architectural and structural metals manufacturing .....	1	151	40	3 246	117 576	2 075	4 307	70 272	251 963	208 000	467 173
33231	Plate work and fabricated structural product manufacturing .....	—	71	18	1 732	62 418	1 055	2 202	39 971	146 874	131 280	284 101
332311	Prefabricated metal building and component manufacturing .....	1	7	2	e	D	D	D	D	D	D	308
332312	Fabricated structural metal manufacturing .....	1	41	7	580	24 301	397	806	14 174	71 139	56 508	132 422
332313 33232	Plate work manufacturing .....	—	23	9	f	D	D	D	D	D	D	D
	Ornamental and architectural metal products manufacturing .....	2	80	22	1 514	55 158	1 020	2 105	30 301	105 089	76 720	183 072
332321	Metal window and door manufacturing .....	2	12	6	258	8 863	168	361	4 596	17 572	15 954	33 773
332322	Sheet metal work manufacturing .....	1	51	15	1 141	41 288	778	1 605	23 358	77 418	56 352	134 809
3325	Hardware manufacturing .....	—	18	6	3 675	108 216	3 096	6 011	80 929	138 559	105 907	244 032
33251 332510	Hardware manufacturing .....	—	18	6	3 675	108 216	3 096	6 011	80 929	138 559	105 907	244 032
3326	Spring and wire product manufacturing .....	3	38	15	708	25 627	517	1 020	15 774	64 459	43 719	107 365
33261	Spring and wire product manufacturing .....	3	38	15	708	25 627	517	1 020	15 774	64 459	43 719	107 365
332612	Spring (light gauge) manufacturing .....	—	9	7	305	10 855	222	447	6 469	28 139	21 972	49 728
332618	Other fabricated wire product manufacturing .....	4	24	6	e	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	2	605	150	12 119	502 593	8 924	18 377	325 056	1'1 130 916	1'838 036	1'1 974 462
33271 332710	Machine shops .....	2	484	85	7 230	297 863	5 282	10 597	189 918	638 145	403 046	1 045 306
33272	Turned product and screw, nut, and bolt manufacturing .....	2	484	85	7 230	297 863	5 282	10 597	189 918	638 145	403 046	1 045 306
332721	Precision turned product manufacturing .....	2	121	65	4 889	204 730	3 642	7 780	135 138	1'492 771	1'434 990	1'929 156
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	2	89	43	3 155	122 278	2 382	5 125	78 928	1'271 526	1'163 298	1'436 870
		2	32	22	1 734	82 452	1 260	2 655	56 210	221 245	271 692	492 286

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**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>												
332	Fabricated metal product manufacturing—Con.												
3328	Coating, engraving, heat treating, and allied activities .....	1	158	70	4 969	170 832	3 823	7 769	111 121	398 584	152 897	552 715	18 630
33281	Coating, engraving, heat treating, and allied activities ..	1	158	70	4 969	170 832	3 823	7 769	111 121	398 584	152 897	552 715	18 630
332811	Metal heat treating .....	1	45	23	1 279	51 942	961	2 054	33 407	107 891	57 772	166 813	7 706
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers ..	1	64	28	1 720	56 518	1 331	2 543	36 849	146 163	47 949	194 166	6 556
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	49	19	1 970	62 372	1 531	3 172	40 865	144 530	47 176	191 736	4 368
3329	Other fabricated metal product manufacturing .....	1	138	47	3 988	160 426	3 114	6 288	113 740	344 235	202 559	544 043	12 286
33291	Metal valve manufacturing .....	—	23	8	1 340	46 786	1 072	2 113	33 923	103 020	70 882	174 662	4 896
332912	Fluid power valve and hose fitting manufacturing .....	—	15	6	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	1	115	39	2 648	113 640	2 042	4 175	79 817	241 215	131 677	369 381	7 390
332996	Fabricated pipe and pipe fitting manufacturing .....	2	22	10	e	D	D	D	D	D	D	D	D
332997	Industrial pattern manufacturing .....	—	20	8	854	44 603	707	1 470	36 394	80 937	35 672	116 208	3 650
332999	All other miscellaneous fabricated metal product manufacturing .....	1	69	19	1 224	46 204	931	1 850	30 384	115 429	60 761	173 185	2 557
333	Machinery manufacturing .....	1	'1 045	388	'31 831	'1 662 605	'18 852	'39 024	'846 822	'3 531 560	'2 766 947	'6 346 343	'127 082
3332	Industrial machinery manufacturing .....	1	'69	24	'1 898	'105 690	'906	'1 867	'39 522	'206 419	'226 294	'432 237	D
33322	Plastics and rubber industry machinery manufacturing .....	—	'19	7	e	D	D	D	D	D	D	D	D
333220	Plastics and rubber industry machinery manufacturing .....	—	'19	7	e	D	D	D	D	D	D	D	D
33329	Other industrial machinery manufacturing .....	—	'19	7	e	D	D	D	D	D	D	D	D
333298	All other industrial machinery manufacturing .....	1	48	17	1 501	87 667	673	1 388	31 200	156 327	193 922	350 297	D
3333	Commercial and service industry machinery manufacturing .....	1	42	17	1 463	86 404	651	1 341	30 665	152 004	191 290	343 266	D
33331	Commercial and service industry machinery manufacturing .....	2	17	8	f	D	D	D	D	D	D	D	D
333319	Other commercial and service industry machinery manufacturing .....	2	17	8	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	13	5	e	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	2	23	8	e	D	D	D	D	D	D	D	751
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	2	23	8	e	D	D	D	D	D	D	D	751
3335	Metalworking machinery manufacturing .....	4	11	4	e	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	2	726	258	19 067	962 748	12 489	26 160	575 320	1 895 723	1 151 093	3 143 331	77 422
333511	Industrial mold manufacturing .....	2	726	258	19 067	962 748	12 489	26 160	575 320	1 895 723	1 151 093	3 143 331	77 422
333512	Machine tool (metal cutting types) manufacturing .....	2	127	43	3 019	159 375	2 191	4 669	107 931	301 290	121 796	419 657	11 844
333514	Special die and tool, die set, jig, and fixture manufacturing .....	1	42	26	1 446	78 041	851	1 712	38 955	112 831	165 911	312 214	5 340
333515	Cutting tool and machine tool accessory manufacturing....	2	329	109	7 865	399 749	5 587	11 880	264 404	690 135	343 854	1 085 664	33 364
333518	Other metalworking machinery manufacturing ..	1	163	46	3 004	127 686	1 951	3 862	76 570	273 223	138 131	420 286	16 228
		3	49	27	3 444	185 696	1 732	3 694	81 488	493 843	364 488	864 582	9 301

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>											
	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>											
333 3336	Machinery manufacturing—Con. Engine, turbine, and power transmission equipment manufacturing .....	—	26	12	f	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	26	12	f	D	D	D	D	D	D	D
333612	Speed changer, industrial high-speed drive, and gear manufacturing .....	—	10	6	e	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	8	3	e	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	—	176	75	8 665	497 802	4 031	8 103	184 944	1 066 496	1 139 836	2 155 326
33391	Pump and compressor manufacturing .....	—	10	4	e	D	D	D	D	D	D	D
33392	Material handling equipment manufacturing .....	—	39	24	g	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing .....	—	26	16	1 222	72 500	744	1 551	38 620	201 336	124 793	328 547
33399	All other general purpose machinery manufacturing ....	—	127	47	6 704	385 528	3 018	6 006	135 949	767 306	956 825	1 669 750
333992	Welding and soldering equipment manufacturing .....	—	21	15	2 615	164 403	1 253	2 614	67 361	367 101	405 215	712 546
333994	Industrial process furnace and oven manufacturing .....	3	19	7	472	23 603	298	609	12 402	44 000	27 583	71 416
333999	All other miscellaneous general purpose machinery manufacturing .....	—	67	19	3 004	163 869	1 190	2 292	43 130	306 360	467 356	780 393
334	Computer and electronic product manufacturing .....	1	165	48	14 110	179 437	1906	3 810	60 114	358 314	397 048	770 070
3342	Communications equipment manufacturing .....	1	11	6	e	D	D	D	D	D	D	D
33429	Other communications equipment manufacturing ....	1	6	4	e	D	D	D	D	D	D	D
334290	Other communications equipment manufacturing .....	1	6	4	e	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	—	49	20	2 152	86 429	1 014	2 031	30 170	177 936	276 116	469 702
33441	Semiconductor and other electronic component manufacturing .....	—	49	20	2 152	86 429	1 014	2 031	30 170	177 936	276 116	469 702
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	8	7	g	D	D	D	D	D	D	D
334419	Other electronic component manufacturing .....	—	18	8	482	25 217	216	458	7 109	54 833	35 207	90 169
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	2	74	18	1 248	60 017	610	1 233	21 772	116 254	56 439	170 923
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	2	74	18	1 248	60 017	610	1 233	21 772	116 254	56 439	170 923
334513	Instruments and related products manufacturing for measuring, displaying, and controlling industrial process variables .....	2	21	9	463	22 386	223	450	8 269	42 446	23 878	68 156
334519	Other measuring and controlling device manufacturing .....	2	22	4	395	19 761	193	386	7 440	37 013	15 767	49 533
335	Electrical equipment, appliance, and component manufacturing .....	2	98	32	2 565	101 152	1 600	2 929	47 118	215 832	189 490	400 920
3353	Electrical equipment manufacturing .....	2	61	17	1 443	61 697	873	1 399	28 342	116 321	85 046	198 276
33531	Electrical equipment manufacturing .....	2	61	17	1 443	61 697	873	1 399	28 342	116 321	85 046	198 276
335314	Relay and industrial control manufacturing .....	1	37	11	964	41 992	599	875	19 046	72 961	56 184	129 111

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>												
335	Electrical equipment, appliance, and component manufacturing—Con.												
3359	Other electrical equipment and component manufacturing .....	1	29	13	979	35 027	623	1 320	16 399	83 447	90 371	172 583	9 078
33593	Wiring device manufacturing...	—	8	4	e	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	5	3	e	D	D	D	D	D	D	D	D
33599	All other electrical equipment and component manufacturing .....	1	17	6	e	D	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment and component manufacturing ..	—	15	5	e	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	409	257	71 404	3 919 855	59 119	117 400	3 124 162	13 688 549	24 086 091	37 705 796	608 959
3361	Motor vehicle manufacturing .....	—	13	7	j	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	12	7	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing...	—	10	5	i	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	348	233	51 159	2 568 187	41 122	80 932	1 936 672	6 658 310	9 723 762	16 313 845	508 826
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	27	14	2 913	189 082	2 344	5 343	148 722	480 447	1 194 607	1 665 464	104 249
336312	Gasoline engine and engine parts manufacturing .....	—	26	13	h	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	3	22	11	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	3	20	10	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	10	6	g	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	10	6	g	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	13	8	g	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	13	8	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	29	23	10 004	586 847	8 885	19 890	511 287	1 670 776	2 940 496	4 583 935	145 075
336350	Motor vehicle transmission and power train parts manufacturing .....	—	29	23	10 004	586 847	8 885	19 890	511 287	1 670 776	2 940 496	4 583 935	145 075
33636	Motor vehicle seating and interior trim manufacturing .....	—	26	19	8 575	333 250	6 996	10 272	238 683	807 831	1 417 898	2 213 068	34 112
336360	Motor vehicle seating and interior trim manufacturing .....	—	26	19	8 575	333 250	6 996	10 272	238 683	807 831	1 417 898	2 213 068	34 112
336367	Motor vehicle metal stamping .....	1	135	96	17 238	958 338	13 744	28 207	739 025	2 149 969	2 219 727	4 355 666	128 835
336370	Motor vehicle metal stamping .....	1	135	96	17 238	958 338	13 744	28 207	739 025	2 149 969	2 219 727	4 355 666	128 835
336389	Other motor vehicle parts manufacturing .....	—	86	56	8 497	336 639	6 383	11 774	205 376	939 320	1 171 893	2 098 931	53 984
336391	Motor vehicle air-conditioning manufacturing .....	—	3	3	338	20 809	241	497	13 099	72 184	242 968	315 636	9 522
336399	All other motor vehicle parts manufacturing .....	1	83	53	8 159	315 830	6 142	11 277	192 277	867 136	928 925	1 783 295	44 462
3364	Aerospace product and parts manufacturing .....	—	16	7	g	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	16	7	g	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	9	6	g	D	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	1	12	6	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	1	12	6	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing ..	—	5	4	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Detroit-Warren-Livonia, MI Metropolitan Statistical Area—Con.</b>												
	<b>Warren-Farmington Hills-Troy, MI Metropolitan Division—Con.</b>												
337	Furniture and related product manufacturing .....	1	173	31	2 416	77 868	1 745	3 197	47 917	147 392	117 985	264 443	4 557
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	2	131	20	g	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet and countertop manufacturing ....	1	77	7	795	25 473	555	1 094	14 967	44 286	34 222	80 024	1 223
337110	Wood kitchen cabinet and countertop manufacturing .....	1	77	7	795	25 473	555	1 094	14 967	44 286	34 222	80 024	1 223
33712	Household and institutional furniture manufacturing .....	3	54	13	f	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	4	25	6	330	7 938	292	556	6 377	16 346	13 424	29 860	470
3372	Office furniture (including fixtures) manufacturing .....	—	35	7	756	27 261	508	753	15 839	52 734	32 109	81 981	1 393
33721	Office furniture (including fixtures) manufacturing .....	—	35	7	756	27 261	508	753	15 839	52 734	32 109	81 981	1 393
337215	Showcase, partition, shelving, and locker manufacturing .....	—	18	4	550	19 773	373	485	11 549	38 285	24 860	60 727	1 054
339	Miscellaneous manufacturing .....	2	332	53	4 683	176 045	3 038	5 720	92 576	349 482	198 736	549 523	16 190
3391	Medical equipment and supplies manufacturing .....	2	125	15	1 223	41 302	859	1 558	26 018	96 760	30 801	126 957	4 753
33911	Medical equipment and supplies manufacturing .....	2	125	15	1 223	41 302	859	1 558	26 018	96 760	30 801	126 957	4 753
339113	Surgical appliance and supplies manufacturing .....	—	18	6	321	12 790	194	413	5 859	41 121	14 495	55 432	2 470
339116	Dental laboratories .....	2	79	5	661	20 073	491	853	15 851	36 382	7 592	43 840	1 297
3399	Other miscellaneous manufacturing .....	2	207	38	3 460	134 743	2 179	4 162	66 558	252 722	167 935	422 566	11 437
33995	Sign manufacturing .....	2	66	13	1 349	65 054	725	1 492	28 649	102 951	62 541	169 257	1 860
339950	Sign manufacturing .....	2	66	13	1 349	65 054	725	1 492	28 649	102 951	62 541	169 257	1 860
33999	All other miscellaneous manufacturing .....	2	100	20	1 670	54 896	1 207	2 196	32 042	123 858	75 076	196 218	6 214
339991	Gasket, packing, and sealing device manufacturing .....	4	16	9	661	24 073	466	961	13 915	53 985	31 849	85 903	1 087
339999	All other miscellaneous manufacturing .....	1	78	9	830	27 225	575	963	15 243	61 397	38 487	97 166	4 954
	<b>Flint, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	—	347	98	23 871	1 350 015	19 399	36 700	1 077 780	2 677 385	6 573 440	9 269 929	140 474
311	Food manufacturing .....	1	19	3	462	16 972	304	566	10 677	42 612	82 792	125 341	8 786
3115	Dairy product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	6	4	612	15 393	444	864	7 853	26 752	32 701	59 548	1 790
3222	Converted paper product manufacturing .....	—	6	4	612	15 393	444	864	7 853	26 752	32 701	59 548	1 790
32221	Paperboard container manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	1	50	7	493	14 483	327	565	8 136	31 910	20 438	52 001	1 939
3231	Printing and related support activities .....	1	50	7	493	14 483	327	565	8 136	31 910	20 438	52 001	1 939
32311	Printing .....	1	46	7	482	13 982	319	550	7 827	30 971	20 230	50 854	1 913
323110	Commercial lithographic printing .....	—	21	6	339	9 396	223	365	5 509	20 346	7 537	27 811	999

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Flint, MI Metropolitan Statistical Area—Con.</b>												
326	Plastics and rubber products manufacturing .....	1	16	9	1 548	52 401	1 218	2 514	33 673	131 085	117 223	258 296	5 599
3261	Plastics product manufacturing .....	1	16	9	1 548	52 401	1 218	2 514	33 673	131 085	117 223	258 296	5 599
32615	Urethane and other foam product (except polystyrene) manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
326150	Urethane and other foam product (except polystyrene) manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	2	12	6	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	2	12	6	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	1	15	6	368	15 696	291	683	11 945	38 535	29 126	67 763	1 480
332	Fabricated metal product manufacturing .....	4	72	21	1 475	50 271	1 103	2 247	32 104	111 595	81 247	192 159	3 753
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	4	29	10	573	23 528	443	929	16 160	53 860	34 101	86 870	1 797
33272	Turned product and screw, nut, and bolt manufacturing .....	2	11	6	324	13 794	259	567	9 911	34 008	25 928	58 944	1 018
3328	Coating, engraving, heat treating, and allied activities .....	2	12	6	251	7 296	187	349	4 629	16 830	8 270	25 076	595
33281	Coating, engraving, heat treating, and allied activities .....	2	12	6	251	7 296	187	349	4 629	16 830	8 270	25 076	595
3329	Other fabricated metal product manufacturing .....	8	9	1	312	8 331	253	598	5 783	18 324	14 543	32 942	609
33299	All other fabricated metal product manufacturing .....	9	6	1	276	6 598	230	546	4 803	14 516	12 994	27 510	D
332996	Fabricated pipe and pipe fitting manufacturing .....	9	2	1	e	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	37	16	933	47 116	650	1 348	33 253	98 369	90 981	186 887	3 801
3335	Metalworking machinery manufacturing .....	2	27	13	630	31 117	431	901	20 715	63 273	43 262	104 008	1 464
33351	Metalworking machinery manufacturing .....	2	27	13	630	31 117	431	901	20 715	63 273	43 262	104 008	1 464
3339	Other general purpose machinery manufacturing .....	—	7	3	e	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	12	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	5	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	5	1	g	D	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	29	16	j	D	D	D	D	D	D	D	99 273
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	22	14	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	8	6	4 401	268 994	4 041	6 407	242 613	942 026	1 535 864	2 474 845	D
336312	Gasoline engine and engine parts manufacturing .....	—	8	6	4 401	268 994	4 041	6 407	242 613	942 026	1 535 864	2 474 845	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Flint, MI Metropolitan Statistical Area—Con.</b>											
336	Transportation equipment manufacturing—Con.											
3363	Motor vehicle parts manufacturing—Con.											
33637	Motor vehicle metal stamping ..	—	6	4	h	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	6	4	h	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	14	2	304	7 466	239	459	4 935	14 007	7 072	21 120
339	Miscellaneous manufacturing .....	1	36	9	556	16 692	372	692	9 274	35 201	18 955	54 433
3391	Medical equipment and supplies manufacturing .....	—	18	4	270	7 027	207	396	4 471	16 385	4 934	21 242
33911	Medical equipment and supplies manufacturing .....	—	18	4	270	7 027	207	396	4 471	16 385	4 934	21 242
3399	Other miscellaneous manufacturing .....	1	18	5	286	9 665	165	296	4 803	18 816	14 021	33 191
	<b>Monroe, MI Metropolitan Statistical Area</b>											
31-33	Manufacturing .....	—	151	56	9 025	431 357	7 079	11 751	305 472	1 142 085	2 056 368	3 191 278
322	Paper manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942
3222	Converted paper product manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942
32221	Paperboard container manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942
322211	Corrugated and solid fiber box manufacturing .....	5	7	5	f	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	4	6	3	278	10 457	192	391	4 054	29 427	40 237	69 425
3261	Plastics product manufacturing ..	4	6	3	278	10 457	192	391	4 054	29 427	40 237	69 425
32619	Other plastics product manufacturing .....	4	6	3	278	10 457	192	391	4 054	29 427	40 237	69 425
327	Nonmetallic mineral product manufacturing .....	—	14	6	845	39 143	632	1 279	24 826	124 951	69 747	203 466
3272	Glass and glass product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
327211	Flat glass manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	—	8	3	265	14 730	168	333	7 640	48 460	28 453	80 136
331	Primary metal manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
3311	Iron and steel mills and ferroalloy manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	2	2	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	42	16	1 592	66 809	1 210	2 282	43 850	166 587	166 004	328 638
3323	Architectural and structural metals manufacturing .....	—	8	3	407	18 477	265	569	11 240	51 097	103 836	154 807
33231	Plate work and fabricated structural product manufacturing .....	—	6	1	e	D	D	D	D	D	D	D
332313	Plate work manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	5	14	3	e	D	D	D	D	D	D	D
33271	Machine shops .....	5	13	3	320	15 790	259	572	11 768	28 454	10 093	39 356
332710	Machine shops .....	5	13	3	320	15 790	259	572	11 768	28 454	10 093	39 356
3328	Coating, engraving, heat treating, and allied activities .....	—	8	6	674	23 154	558	878	16 148	66 764	32 830	100 392
33281	Coating, engraving, heat treating, and allied activities .....	—	8	6	674	23 154	558	878	16 148	66 764	32 830	100 392
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers ..	—	4	3	452	16 833	362	478	11 312	52 399	30 024	83 243
333	Machinery manufacturing .....	—	21	7	470	25 538	281	621	13 594	47 784	23 668	71 734

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSA, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Monroe, MI Metropolitan Statistical Area—Con.</b>											
336	Transportation equipment manufacturing .....	—	12	8	h	D	D	D	D	D	D	66 047
3363	Motor vehicle parts manufacturing .....	—	10	8	h	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing....	—	1	1	e	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing..	—	1	1	e	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	6	6	h	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	6	6	h	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA</b>											
31-33	Manufacturing .....	1	2 529	991	151 494	6 112 273	108 226	215 959	3 664 463	16 452 347	14 892 803	31 266 761
311	Food manufacturing .....	1	133	60	10 992	382 934	8 505	17 316	265 074	2 107 332	1 993 318	4 125 003
3112	Grain and oilseed milling .....	7	5	4	f	D	D	D	D	D	D	D
31123	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423
311230	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423
3113	Sugar and confectionery product manufacturing .....	—	7	2	f	D	D	D	D	D	D	D
31134	Nonchocolate confectionery manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
311340	Nonchocolate confectionery manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
3114	Fruit and vegetable preserving and specialty food manufacturing .....	—	11	7	g	D	D	D	D	D	D	D
31141	Frozen food manufacturing ....	—	6	3	f	D	D	D	D	D	D	D
311412	Frozen specialty food manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
31142	Fruit and vegetable canning, pickling, and drying.....	1	5	4	f	D	D	D	D	D	D	D
311422	Specialty canning .....	—	1	1	e	D	D	D	D	D	D	D
3115	Dairy product manufacturing.....	—	11	9	g	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	9	8	g	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	—	3	3	f	D	D	D	D	D	D	D
311513	Cheese manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
311514	Dry, condensed, and evaporated dairy product manufacturing .....	—	3	3	f	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	19	10	h	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	—	19	10	h	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	—	9	2	g	D	D	D	D	D	D	D
311612	Meat processed from carcasses .....	—	5	4	e	D	D	D	D	D	D	D
311615	Poultry processing .....	—	4	3	g	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	2	47	12	g	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	4	42	11	g	D	D	D	D	D	D	D
311811	Retail bakeries .....	3	28	3	g	D	D	D	D	D	D	D
311812	Commercial bakeries .....	4	11	6	g	D	D	D	D	D	D	D
31182	Cookie, cracker, and pasta manufacturing .....	—	4	1	e	D	D	D	D	D	D	D
311821	Cookie and cracker manufacturing .....	—	3	1	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
311	Food manufacturing—Con.											
3119	Other food manufacturing .....	1	23	12	g	D	D	D	D	D	D	D
31194	Seasoning and dressing manufacturing .....	—	4	3	f	D	D	D	D	D	D	D
311941	Mayonnaise, dressing, and other prepared sauce manufacturing .....	—	4	3	f	D	D	D	D	D	D	D
31199	All other food manufacturing .....	3	12	6	e	D	D	D	D	D	D	D
311999	All other miscellaneous food manufacturing .....	3	8	4	e	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	—	10	4	g	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	—	10	4	g	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	6	4	g	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	4	4	g	D	D	D	D	D	D	D
313	Textile mills .....	6	11	3	e	D	D	D	D	D	D	D
314	Textile product mills .....	1	29	6	e	D	D	D	D	D	D	D
316	Leather and allied product manufacturing .....	—	6	4	f	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing.....	—	2	2	e	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing.....	—	2	2	e	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing.....	—	2	2	e	D	D	D	D	D	D	D
321	Wood product manufacturing .....	2	96	38	g	D	D	D	D	D	D	D
3211	Sawmills and wood preservation .....	4	20	5	e	D	D	D	D	D	D	D
32111	Sawmills and wood preservation .....	4	20	5	e	D	D	D	D	D	D	D
3212	Veneer, plywood, and engineered wood product manufacturing....	3	15	10	f	D	D	D	D	D	D	D
32121	Veneer, plywood, and engineered wood product manufacturing .....	3	15	10	f	D	D	D	D	D	D	D
321214	Truss manufacturing.....	—	5	5	e	D	D	D	D	D	D	D
3219	Other wood product manufacturing .....	1	61	23	g	D	D	D	D	D	D	D
32191	Millwork.....	1	31	11	f	D	D	D	D	D	D	D
321911	Wood window and door manufacturing .....	—	14	3	f	D	D	D	D	D	D	D
321918	Other millwork (including flooring).....	—	13	5	e	D	D	D	D	D	D	D
32192	Wood container and pallet manufacturing .....	6	15	6	e	D	D	D	D	D	D	D
321920	Wood container and pallet manufacturing .....	6	15	6	e	D	D	D	D	D	D	D
32199	All other wood product manufacturing .....	2	15	6	e	D	D	D	D	D	D	D
322	Paper manufacturing .....	1	38	28	h	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	1	5	4	g	D	D	D	D	D	D	D
32212	Paper mills .....	1	3	2	f	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	1	3	2	f	D	D	D	D	D	D	D
32213	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
322130	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	—	33	24	g	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	1	21	17	g	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	1	16	12	f	D	D	D	D	D	D	D
322212	Folding paperboard box manufacturing .....	—	4	4	e	D	D	D	D	D	D	D
32229	Other converted paper product manufacturing .....	—	3	3	e	D	D	D	D	D	D	D
322299	All other converted paper product manufacturing .....	—	3	3	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
323	Printing and related support activities .....	—	208	48	3 997	141 690	2 662	4 888	75 585	307 646	194 155	502 205	
3231	Printing and related support activities .....	—	208	48	3 997	141 690	2 662	4 888	75 585	307 646	194 155	502 205	
32311	Printing .....	—	184	44	h	D	D	D	D	D	D	D	
323110	Commercial lithographic printing .....	—	80	23	g	D	D	D	D	D	D	D	
323112	Commercial flexographic printing .....	—	8	3	e	D	D	D	D	D	D	D	
323113	Commercial screen printing..	1	35	6	e	D	D	D	D	D	D	D	
323119	Other commercial printing ..	4	14	2	e	D	D	D	D	D	D	D	
32312	Support activities for printing...	3	24	4	e	D	D	D	D	D	D	D	
325	Chemical manufacturing .....	1	65	30	i	D	D	D	D	D	D	84 806	
3251	Basic chemical manufacturing ...	—	6	5	f	D	D	D	D	D	D	D	
32513	Synthetic dye and pigment manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	
325132	Synthetic organic dye and pigment manufacturing ....	—	3	3	f	D	D	D	D	D	D	D	
3254	Pharmaceutical and medicine manufacturing .....	—	8	5	h	D	D	D	D	D	D	D	
32541	Pharmaceutical and medicine manufacturing .....	—	8	5	h	D	D	D	D	D	D	D	
325411	Medicinal and botanical manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	
325412	Pharmaceutical preparation manufacturing .....	—	7	4	h	D	D	D	D	D	D	D	
3255	Paint, coating, and adhesive manufacturing .....	6	21	9	f	D	D	D	D	D	D	D	
32551	Paint and coating manufacturing .....	7	14	7	f	D	D	D	D	D	D	D	
325510	Paint and coating manufacturing .....	7	14	7	f	D	D	D	D	D	D	D	
3256	Soap, cleaning compound, and toilet preparation manufacturing ..	—	13	3	h	D	D	D	D	D	D	D	
32562	Toilet preparation manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	
325620	Toilet preparation manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	
3259	Other chemical product and preparation manufacturing .....	7	11	7	f	D	D	D	D	D	D	D	
32599	All other chemical product and preparation manufacturing .....	7	9	6	f	D	D	D	D	D	D	D	
325991	Custom compounding of purchased resins .....	7	5	4	e	D	D	D	D	D	D	D	
326	Plastics and rubber products manufacturing .....	—	163	103	j	D	D	D	D	D	D	172 120	
3261	Plastics product manufacturing ..	—	148	92	j	D	D	D	D	D	D	D	
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	'3	13	8	g	D	D	D	D	D	D	D	
326112	Plastics packaging film and sheet (including laminated) manufacturing .....	'7	'2	'2	e	D	D	D	D	D	D	D	
326113	Unlaminated plastics film and sheet (except packaging) manufacturing .....	2	10	5	e	D	D	D	D	D	D	D	
32614	Polystyrene foam product manufacturing .....	—	5	3	e	D	D	D	D	D	D	D	
326140	Polystyrene foam product manufacturing .....	—	5	3	e	D	D	D	D	D	D	D	
32615	Urethane and other foam product (except polystyrene) manufacturing .....	5	9	6	405	11 326	327	689	8 463	24 530	33 733	58 607	
326150	Urethane and other foam product (except polystyrene) manufacturing .....	5	9	6	405	11 326	327	689	8 463	24 530	33 733	58 607	
32619	Other plastics product manufacturing .....	—	109	68	'11 616	'384 408	'8 892	'17 972	'226 896	'985 572	'851 314	'1 838 881	D
326191	Plastics plumbing fixture manufacturing .....	—	5	5	e	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	104	63	j	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing ..	—	15	11	g	D	D	D	D	D	D	D	D
32622	Rubber and plastics hoses and belting manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
326220	Rubber and plastics hoses and belting manufacturing ..	—	5	3	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
326	Plastics and rubber products manufacturing—Con.											
3262	Rubber product manufacturing—Con.											
32629	Other rubber product manufacturing .....	—	5	5	687	27 642	391	656	9 923	61 513	60 029	120 289
326291	Rubber product manufacturing for mechanical use .....	—	2	2	e	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	81	34	h	D	D	D	D	D	D	D
3272	Glass and glass product manufacturing .....	—	17	12	h	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	17	12	h	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	15	12	h	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	1	46	17	g	D	D	D	D	D	D	D
32732	Ready-mix concrete manufacturing .....	—	31	12	f	D	D	D	D	D	D	D
327320	Ready-mix concrete manufacturing .....	—	31	12	f	D	D	D	D	D	D	D
32739	Other concrete product manufacturing .....	—	8	6	e	D	D	D	D	D	D	D
327390	Other concrete product manufacturing .....	—	8	6	e	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	80	54	7 326	272 559	5 690	12 452	187 168	746 683	620 968	1 363 093
3311	Iron and steel mills and ferroalloy manufacturing .....	—	6	3	e	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	6	3	e	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	6	3	e	D	D	D	D	D	D	D
3313	Alumina and aluminum production and processing .....	—	6	4	e	D	D	D	D	D	D	D
33131	Alumina and aluminum production and processing ...	—	6	4	e	D	D	D	D	D	D	D
331316	Aluminum extruded product manufacturing .....	—	3	3	e	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production and processing .....	1	6	4	e	D	D	D	D	D	D	D
3315	Foundries .....	—	58	41	i	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	19	15	h	D	D	D	D	D	D	D
331511	Iron foundries .....	—	11	8	1 161	D	51 561	964	2 091	39 071	122 115	58 711
331512	Steel investment foundries ..	—	4	4	g	D	D	D	D	D	D	D
331513	Steel foundries (except investment) .....	—	5	4	3	e	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	1	39	26	h	D	D	D	D	D	D	D
331521	Aluminum die-casting foundries .....	—	1	12	10	g	D	D	D	D	D	D
331522	Nonferrous (except aluminum) die-casting foundries .....	—	10	8	f	D	D	D	D	D	D	D
331524	Aluminum foundries (except die-casting) .....	—	2	12	5	e	D	D	D	D	D	D
331528	Other nonferrous foundries (except die-casting) .....	—	3	2	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	580	177	15 482	559 190	11 777	23 288	362 831	1 252 992	836 012	2 091 128
3321	Forging and stamping .....	2	28	13	g	D	D	D	D	D	D	D
33211	Forging and stamping .....	2	28	13	g	D	D	D	D	D	D	D
332116	Metal stamping .....	3	19	9	f	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	1	78	21	g	D	D	D	D	D	D	D
33231	Plate work and fabricated structural product manufacturing .....	3	32	8	f	D	D	D	D	D	D	D
332312	Fabricated structural metal manufacturing .....	2	21	4	e	D	D	D	D	D	D	D
33232	Ornamental and architectural metal products manufacturing .....	—	46	13	g	D	D	D	D	D	D	D
332322	Sheet metal work manufacturing .....	—	36	10	f	D	D	D	D	D	D	D
332323	Ornamental and architectural metal work manufacturing ..	—	9	3	f	D	D	D	D	D	D	D

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NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
332	Fabricated metal product manufacturing—Con.											
3325	Hardware manufacturing .....	—	15	11	g	D	D	D	D	D	D	D
33251	Hardware manufacturing .....	—	15	11	g	D	D	D	D	D	D	D
332510	Hardware manufacturing .....	—	15	11	g	D	D	D	D	D	D	D
3326	Spring and wire product manufacturing .....	1	24	11	754	24 075	559	1 124	15 775	52 392	31 143	83 549
33261	Spring and wire product manufacturing .....	1	24	11	754	24 075	559	1 124	15 775	52 392	31 143	83 549
332612	Spring (light gauge) manufacturing .....	—	11	7	f	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	241	46	h	D	D	D	D	D	D	D
33271	Machine shops .....	2	201	25	2 205	79 291	1 722	3 253	53 863	172 607	76 887	249 380
332710	Machine shops .....	2	201	25	2 205	79 291	1 722	3 253	53 863	172 607	76 887	249 380
33272	Turned product and screw, nut, and bolt manufacturing .....	1	40	21	g	D	D	D	D	D	D	D
332721	Precision turned product manufacturing .....	—	35	18	g	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	—	104	46	3 411	111 433	2 634	5 301	73 874	233 670	122 958	355 846
33281	Coating, engraving, heat treating, and allied activities ..	—	104	46	3 411	111 433	2 634	5 301	73 874	233 670	122 958	355 846
332811	Metal heat treating .....	1	12	8	e	D	D	D	D	D	D	D
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	—	42	20	g	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	50	18	g	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	1	70	24	2 022	82 506	1 454	2 851	49 620	184 983	92 907	281 773
33291	Metal valve manufacturing .....	—	6	3	f	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	3	3	f	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	1	64	21	g	D	D	D	D	D	D	D
332997	Industrial pattern manufacturing .....	1	18	4	e	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product manufacturing .....	1	38	12	f	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	1'436	1'69	1'20 083	1'943 840	1'11 828	1'23 574	1'478 466	1'181 261	1'520 992	1'3 352 456
3331	Agriculture, construction, and mining machinery manufacturing .....	6	14	7	e	D	D	D	D	D	D	D
3332	Industrial machinery manufacturing .....	1	59	13	g	D	D	D	D	D	D	D
33322	Plastics and rubber industry machinery manufacturing .....	—	14	4	e	D	D	D	D	D	D	D
333220	Plastics and rubber industry machinery manufacturing .....	—	14	4	e	D	D	D	D	D	D	D
33329	Other industrial machinery manufacturing .....	1	40	7	f	D	D	D	D	D	D	D
333298	All other industrial machinery manufacturing .....	1	24	4	e	D	D	D	D	D	D	D
3333	Commercial and service industry machinery manufacturing .....	6	23	8	f	D	D	D	D	D	D	D
33331	Commercial and service industry machinery manufacturing .....	6	23	8	f	D	D	D	D	D	D	D
333319	Other commercial and service industry machinery manufacturing .....	6	20	8	f	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	—	1'243	1'91	i	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	—	1'243	1'91	i	D	D	D	D	D	D	D
333511	Industrial mold manufacturing .....	—	1'57	1'21	g	D	D	D	D	D	D	D
333513	Machine tool (metal forming types) manufacturing .....	—	4	1	e	D	D	D	D	D	D	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	135	57	4 199	203 486	3 259	6 851	147 133	406 504	204 608	575 943
333515	Cutting tool and machine tool accessory manufacturing...	1	30	6	f	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
333 3336	Machinery manufacturing—Con. Engine, turbine, and power transmission equipment manufacturing .....	—	6	4	g	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	6	4	g	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	4	3	g	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	1	82	43	7 996	364 379	3 498	6 430	126 010	733 860	762 032	1 500 359
33391	Pump and compressor manufacturing .....	—	5	4	e	D	D	D	D	D	D	D
333911	Pump and pumping equipment manufacturing ..	—	2	2	e	D	D	D	D	D	D	D
33392	Material handling equipment manufacturing .....	—	30	15	i	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing ..	—	18	9	h	D	D	D	D	D	D	D
333923	Overhead traveling crane, hoist, and monorail system manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
333924	Industrial truck, tractor, trailer, and stacker machinery manufacturing ..	—	8	5	e	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing ....	3	47	24	g	D	D	D	D	D	D	D
333996	Fluid power pump and motor manufacturing .....	4	5	4	e	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	6	28	12	g	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	64	27	i	D	D	D	D	D	D	D
3343	Audio and video equipment manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
33431	Audio and video equipment manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
334310	Audio and video equipment manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	—	19	10	f	D	D	D	D	D	D	D
33441	Semiconductor and other electronic component manufacturing .....	—	19	10	f	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	33	12	h	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	33	12	h	D	D	D	D	D	D	D
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing .....	—	5	4	g	D	D	D	D	D	D	D
334512	Automatic environmental control manufacturing for residential, commercial, and appliance use .....	—	3	1	e	D	D	D	D	D	D	D
334516	Analytical laboratory instrument manufacturing ..	—	3	1	e	D	D	D	D	D	D	D
334518	Watch, clock, and part manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	32	12	g	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	—	4	2	g	D	D	D	D	D	D	D
33522	Major appliance manufacturing. Other major household appliance manufacturing ...	—	1	1	g	D	D	D	D	D	D	D
3353	Electrical equipment manufacturing .....	—	10	2	e	D	D	D	D	D	D	D
33531	Electrical equipment manufacturing .....	—	10	2	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
335	Electrical equipment, appliance, and component manufacturing—Con.											
3359	Other electrical equipment and component manufacturing .....	-	12	6	f	D	D	D	D	D	D	D
33592	Communication and energy wire and cable manufacturing .....	-	2	1	e	D	D	D	D	D	D	D
335929	Other communication and energy wire manufacturing .....	-	2	1	e	D	D	D	D	D	D	D
33599	All other electrical equipment and component manufacturing .....	-	6	4	e	D	D	D	D	D	D	D
335999	All other miscellaneous electrical equipment and component manufacturing .....	-	6	4	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	149	88	24 787	1 052 674	19 315	37 495	733 858	2 652 154	2 996 667	5 631 355
3362	Motor vehicle body and trailer manufacturing .....	-	11	2	e	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	-	11	2	e	D	D	D	D	D	D	D
336211	Motor vehicle body manufacturing .....	-	3	2	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	111	74	j	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	21	14	h	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, and valve manufacturing .....	-	3	1	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	18	13	h	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	-	9	5	e	D	D	D	D	D	D	D
336321	Vehicular lighting equipment manufacturing .....	-	4	4	e	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	4	3	f	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	4	3	f	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	-	4	2	f	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	-	4	2	f	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	-	7	6	h	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	-	7	6	h	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	1	40	28	i	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	1	40	28	i	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	1	25	15	h	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	1	24	14	h	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	-	8	5	g	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	-	8	5	g	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	-	3	3	f	D	D	D	D	D	D	D
336413	Other aircraft parts and auxiliary equipment manufacturing .....	-	5	2	e	D	D	D	D	D	D	D
3366	Ship and boat building .....	7	7	5	f	D	D	D	D	D	D	D
33661	Ship and boat building .....	7	7	5	f	D	D	D	D	D	D	D
336612	Boat building .....	7	7	5	f	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	-	8	1	f	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	-	8	1	f	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing .....	-	6	1	f	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	2	153	65	j	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
337	Furniture and related product manufacturing—Con.											
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	68	19	9	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	—	45	17	9	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	1	25	10	f	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	—	12	6	f	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	2	76	43	j	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	2	76	43	j	D	D	D	D	D	D	D
337211	Wood office furniture manufacturing .....	—	14	8	g	D	D	D	D	D	D	D
337212	Custom architectural woodwork and millwork manufacturing .....	9	5	3	e	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	3	23	16	j	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	—	34	16	f	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	177	36	h	D	D	D	D	D	D	D
3391	Medical equipment and supplies manufacturing .....	—	61	18	g	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	—	61	18	g	D	D	D	D	D	D	D
339111	Laboratory apparatus and furniture manufacturing .....	—	11	8	f	D	D	D	D	D	D	D
339112	Surgical and medical instrument manufacturing .....	—	7	3	403	16 419	234	497	6 895	88 819	20 911	109 687
339113	Surgical appliance and supplies manufacturing .....	—	5	3	e	D	D	D	D	D	D	3 039
3399	Other miscellaneous manufacturing .....	—	116	18	g	D	D	D	D	D	D	D
33995	Sign manufacturing .....	1	36	7	e	D	D	D	D	D	D	D
339950	Sign manufacturing .....	1	36	7	e	D	D	D	D	D	D	D
33999	All other miscellaneous manufacturing .....	—	50	9	f	D	D	D	D	D	D	D
339999	All other miscellaneous manufacturing .....	1	41	6	e	D	D	D	D	D	D	D
	<b>Allegan, MI Micropolitan Statistical Area</b>											
31-33	Manufacturing .....	—	208	90	16 614	609 067	11 936	24 747	384 517	2 101 598	2 221 353	4 322 906
311	Food manufacturing .....	—	18	9	2 118	62 367	1 755	3 599	48 054	412 732	514 984	928 245
3113	Sugar and confectionery product manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
31134	Nonchocolate confectionery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
311340	Nonchocolate confectionery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	3	2	g	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	—	3	2	g	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	—	1	1	g	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	—	3	1	f	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	—	3	1	f	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
322	Paper manufacturing .....	3	5	3	511	29 468	362	774	19 138	103 772	77 142	180 492
3221	Pulp, paper, and paperboard mills .....	3	3	3	e	D	D	D	D	D	D	D
32213	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
322130	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
323	Printing and related support activities .....	—	11	3	255	8 183	175	358	4 929	16 130	6 529	22 375
3231	Printing and related support activities .....	—	11	3	255	8 183	175	358	4 929	16 130	6 529	3 389

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	<b>Allegan, MI Micropolitan Statistical Area—Con.</b>											
325	Chemical manufacturing .....	—	5	4	h	D	D	D	D	D	D	19 502
3254	Pharmaceutical and medicine manufacturing .....	—	1	1	h	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	—	1	1	h	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	—	1	1	h	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	—	3	2	315	11 270	201	282	4 574	11 891	15 492	27 408
3259	Other chemical product and preparation manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
32599	All other chemical product and preparation manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
325991	Custom compounding of purchased resins .....	9	1	1	e	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	13	11	1689	16 234	1461	1 029	12 506	18 223	16 483	142 863
3261	Plastics product manufacturing ..	—	12	10	f	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	8	7	144	16 439	1298	651	7 909	12 554	12 344	54 832
327	Nonmetallic mineral product manufacturing .....	—	11	4	564	21 314	414	728	12 364	96 453	113 771	209 961
3272	Glass and glass product manufacturing .....	—	4	4	493	18 427	359	609	10 092	89 911	107 259	196 806
32721	Glass and glass product manufacturing .....	—	4	4	493	18 427	359	609	10 092	89 911	107 259	196 806
327215	Glass product manufacturing made of purchased glass ..	—	4	4	493	18 427	359	609	10 092	89 911	107 259	196 806
332	Fabricated metal product manufacturing .....	—	53	18	1 816	63 774	1 406	2 717	42 417	156 703	68 657	228 154
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	21	4	e	D	D	D	D	D	D	D
332710	Machine shops .....	1	19	3	252	8 725	196	375	6 062	20 079	9 483	29 777
	Machine shops .....	1	19	3	252	8 725	196	375	6 062	20 079	9 483	29 777
3328	Coating, engraving, heat treating, and allied activities .....	—	6	2	282	8 171	235	501	5 265	14 036	7 064	21 086
33281	Coating, engraving, heat treating, and allied activities ..	—	6	2	282	8 171	235	501	5 265	14 036	7 064	21 086
3329	Other fabricated metal product manufacturing .....	—	8	4	695	28 124	524	1 002	18 910	65 806	23 909	92 782
33291	Metal valve manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
333	Machinery manufacturing .....	3	39	11	1724	129 475	1488	1952	16 691	165 152	145 001	107 674
336	Transportation equipment manufacturing .....	1	14	9	3 561	122 031	2 703	5 511	83 546	304 007	580 593	881 912
3363	Motor vehicle parts manufacturing .....	—	9	7	h	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	3	3	g	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing ..	—	3	3	g	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	3	3	f	D	D	D	D	D	D	3 751
336370	Motor vehicle metal stamping .....	—	3	3	f	D	D	D	D	D	D	3 751
3366	Ship and boat building .....	9	2	2	f	D	D	D	D	D	D	D
33661	Ship and boat building .....	9	2	2	f	D	D	D	D	D	D	D
336612	Boat building .....	9	2	2	f	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	11	6	g	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	7	5	g	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	7	5	g	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	—	3	3	g	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	1	1 373	561	85 015	3 588 857	59 490	116 771	2 120 908	8 123 478	7 336 456	15 437 747	501 414
311	Food manufacturing .....	3	71	32	4 728	176 984	3 440	7 164	116 682	804 263	609 454	1 412 015	48 564
3112	Grain and oilseed milling .....	7	5	4	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423	D
311230	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423	D
3113	Sugar and confectionery product manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	D
31134	Nonchocolate confectionery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
311340	Nonchocolate confectionery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
3114	Fruit and vegetable preserving and specialty food manufacturing .....	2	5	3	251	8 644	196	434	5 922	85 946	55 378	141 359	3 616
3115	Dairy product manufacturing .....	—	4	2	e	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	9	4	646	19 067	533	1 204	14 363	41 074	85 685	126 318	D
31161	Animal slaughtering and processing .....	—	9	4	646	19 067	533	1 204	14 363	41 074	85 685	126 318	D
311612	Meat processed from carcasses .....	—	3	3	e	D	D	D	D	D	D	D	D
311615	Poultry processing .....	—	2	1	e	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	2	28	9	1 612	59 924	965	1 898	36 772	232 934	128 007	360 749	8 901
31181	Bread and bakery product manufacturing .....	6	24	8	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	5	7	4	842	30 212	342	677	13 232	87 625	42 739	130 449	1 991
31182	Cookie, cracker, and pasta manufacturing .....	—	3	1	e	D	D	D	D	D	D	D	D
311821	Cookie and cracker manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	3	15	8	573	18 692	461	878	12 953	113 528	114 377	227 888	6 877
31199	All other food manufacturing .....	4	6	4	e	D	D	D	D	D	D	D	2 612
311999	All other miscellaneous food manufacturing .....	4	4	3	327	11 350	267	556	7 970	73 760	88 971	162 727	D
312	Beverage and tobacco product manufacturing .....	2	5	2	e	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	2	5	2	e	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	2	3	2	e	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	2	2	2	e	D	D	D	D	D	D	D	D
313	Textile mills .....	6	7	3	269	9 092	206	416	5 782	16 110	20 064	35 557	D
316	Leather and allied product manufacturing .....	—	3	3	e	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	2	52	19	1 524	45 525	1 164	2 247	29 874	115 892	127 474	241 479	6 993
3212	Veneer, plywood, and engineered wood product manufacturing....	1	7	5	367	12 628	288	608	8 701	34 224	27 053	61 407	1 611
32121	Veneer, plywood, and engineered wood product manufacturing .....	1	7	5	367	12 628	288	608	8 701	34 224	27 053	61 407	1 611
3219	Other wood product manufacturing .....	1	31	11	981	26 998	723	1 321	16 500	71 519	59 760	130 981	4 031
32191	Millwork.....	—	21	9	803	22 525	577	1 042	13 492	63 606	51 078	114 361	3 661
321911	Wood window and door manufacturing .....	—	10	3	531	15 226	371	744	8 626	49 959	35 042	84 638	3 200
322	Paper manufacturing .....	—	25	18	1 293	52 782	967	1 982	30 521	141 093	195 120	332 671	8 392
3222	Converted paper product manufacturing .....	—	24	18	g	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	15	13	1 031	42 443	779	1 558	24 686	85 950	113 151	198 314	6 470
322211	Corrugated and solid fiber box manufacturing .....	—	12	10	751	30 668	542	1 070	15 729	61 910	88 744	150 297	6 037
322212	Folding paperboard box manufacturing .....	—	3	3	280	11 775	237	488	8 957	24 040	24 407	48 017	433

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
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	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area—Con.</b>												
323	Printing and related support activities .....	—	145	36	3 162	114 267	2 123	3 827	60 882	257 445	165 842	423 247	15 866
3231	Printing and related support activities .....	—	145	36	3 162	114 267	2 123	3 827	60 882	257 445	165 842	423 247	15 866
32311	Printing .....	—	125	32	2 850	105 936	1 897	3 433	55 984	235 421	155 092	390 152	12 942
323110	Commercial lithographic printing .....	—	54	16	1 517	50 200	1 071	1 865	28 396	120 056	73 609	193 671	6 797
323112	Commercial flexographic printing .....	—	6	2	305	18 203	146	301	7 641	29 280	32 907	62 504	1 871
323113	Commercial screen printing .....	—	24	5	270	8 344	191	331	4 943	17 997	12 702	30 344	1 476
32312	Support activities for printing .....	3	20	4	312	8 331	226	394	4 898	22 024	10 750	33 095	2 924
325	Chemical manufacturing .....	1	34	13	4 854	229 362	3 625	6 948	165 590	190 675	683 252	900 680	41 617
3255	Paint, coating, and adhesive manufacturing .....	7	8	4	268	11 439	135	281	5 054	37 076	45 098	83 214	D
3256	Soap, cleaning compound, and toilet preparation manufacturing .....	—	10	2	h	D	D	D	D	D	D	D	D
32562	Toilet preparation manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
325620	Toilet preparation manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
3259	Other chemical product and preparation manufacturing .....	6	10	6	294	13 819	152	311	5 094	43 060	81 010	124 343	9 421
32599	All other chemical product and preparation manufacturing ...	6	8	5	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	112	71	10 013	331 504	7 556	14 998	193 439	795 201	724 257	1 528 264	45 515
3261	Plastics product manufacturing ..	—	100	61	8 548	278 622	6 637	13 289	168 457	672 295	619 544	1 301 032	41 029
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	7	7	5	779	23 215	656	1 380	17 032	56 803	60 734	119 079	4 131
326112	Plastics packaging film and sheet (including laminated) manufacturing .....	7	1	1	e	D	D	D	D	D	D	D	D
326113	Unlaminated plastics film and sheet (except packaging) manufacturing .....	9	1	1	e	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	3	5	3	e	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	4	3	330	11 158	259	524	6 651	29 465	31 581	63 540	D
32615	Urethane and other foam product (except polystyrene) manufacturing .....	—	4	3	330	11 158	259	524	6 651	29 465	31 581	63 540	D
326150	Urethane and other foam product (except polystyrene) manufacturing .....	5	9	6	405	11 326	327	689	8 463	24 530	33 733	58 607	1 539
32619	Other plastics product manufacturing .....	5	9	6	405	11 326	327	689	8 463	24 530	33 733	58 607	1 539
326199	All other plastics product manufacturing .....	74	44	6 889	228 464	5 280	10 480	133 472	550 341	485 415	1 040 564	31 509	D
3262	Rubber product manufacturing ...	—	12	10	1 465	52 882	919	1 709	24 982	122 906	104 713	227 232	4 486
32622	Rubber and plastics hoses and belting manufacturing .....	—	4	3	708	23 091	488	971	14 064	58 155	36 814	95 901	1 577
326220	Rubber and plastics hoses and belting manufacturing .....	—	4	3	708	23 091	488	971	14 064	58 155	36 814	95 901	1 577
32629	Other rubber product manufacturing .....	—	5	5	687	27 642	391	656	9 923	61 513	60 029	120 289	D
326291	Rubber product manufacturing for mechanical use .....	—	2	2	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	41	16	811	30 833	637	1 271	21 560	111 601	73 548	187 384	7 890
3273	Cement and concrete product manufacturing .....	—	25	11	531	20 756	407	835	14 212	67 914	46 783	115 385	6 765
32732	Ready-mix concrete manufacturing .....	—	17	8	342	13 323	267	544	9 858	38 684	29 777	68 719	5 894
327320	Ready-mix concrete manufacturing .....	—	17	8	342	13 323	267	544	9 858	38 684	29 777	68 719	5 894

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area—Con.</b>												
331	Primary metal manufacturing .....	—	32	22	3 011	113 149	2 270	4 856	74 157	267 435	285 073	546 142	18 682
3315	Foundries .....	—	22	17	2 475	90 491	1 882	4 037	60 463	213 724	178 042	393 367	14 727
33151	Ferrous metal foundries .....	—	7	4	454	17 850	385	780	14 073	48 878	21 980	70 578	3 279
331511	Iron foundries .....	—	7	4	454	17 850	385	780	14 073	48 878	21 980	70 578	3 279
33152	Nonferrous metal foundries .....	—	15	13	2 021	72 641	1 497	3 257	46 390	164 846	156 062	322 789	11 448
331521	Aluminum die-casting foundries .....	1	6	6	1 150	41 244	840	1 914	27 055	92 555	97 787	190 918	D
331522	Nonferrous (except aluminum) die-casting foundries .....	—	6	6	677	23 948	523	1 077	15 324	55 282	48 113	104 039	1 667
332	Fabricated metal product manufacturing .....	1	277	92	7 895	280 459	6 142	12 149	184 105	641 275	446 509	1 087 136	40 061
3321	Forging and stamping .....	3	12	6	535	19 622	405	829	12 454	38 028	35 692	76 220	3 412
33211	Forging and stamping .....	3	12	6	535	19 622	405	829	12 454	38 028	35 692	76 220	3 412
332116	Metal stamping .....	4	9	5	424	16 329	316	619	10 422	23 576	27 351	53 379	D
3323	Architectural and structural metals manufacturing .....	2	38	10	608	24 070	434	870	13 606	60 782	72 561	131 808	2 829
33232	Ornamental and architectural metal products manufacturing .....	—	23	6	376	14 728	278	544	8 635	38 286	44 563	81 497	2 161
332322	Sheet metal work manufacturing .....	—	17	4	272	10 662	204	404	6 546	29 101	39 113	66 802	1 932
3325	Hardware manufacturing .....	—	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
33251	Hardware manufacturing .....	—	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
332510	Hardware manufacturing .....	—	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	110	23	1 884	70 965	1 429	2 914	48 131	179 497	86 880	266 282	13 150
33271	Machine shops .....	2	89	10	1 036	36 881	827	1 587	25 598	82 231	31 633	114 037	4 079
332710	Machine shops .....	2	89	10	1 036	36 881	827	1 587	25 598	82 231	31 633	114 037	4 079
33272	Turned product and screw, nut, and bolt manufacturing .....	1	21	13	848	34 084	602	1 327	22 533	97 266	55 247	152 245	9 071
332721	Precision turned product manufacturing .....	—	17	10	627	25 253	445	973	16 872	74 066	42 190	116 108	D
3328	Coating, engraving, heat treating, and allied activities .....	—	61	30	2 167	67 538	1 745	3 468	46 252	135 459	56 113	191 246	6 920
33281	Coating, engraving, heat treating, and allied activities .....	—	61	30	2 167	67 538	1 745	3 468	46 252	135 459	56 113	191 246	6 920
332811	Metal heat treating .....	3	7	5	311	10 938	248	505	7 167	22 088	4 687	26 775	1 365
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	—	29	13	894	27 328	727	1 423	19 492	55 555	27 247	82 969	1 947
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	25	12	962	29 272	770	1 540	19 593	57 816	24 179	81 502	3 608
3329	Other fabricated metal product manufacturing .....	1	25	11	604	20 670	424	859	11 600	59 859	30 790	90 057	3 207
33299	All other fabricated metal product manufacturing .....	1	22	10	549	18 201	395	792	10 550	55 258	27 765	82 410	2 602
332999	All other miscellaneous fabricated metal product manufacturing .....	1	18	8	488	15 878	341	683	8 700	51 018	26 504	76 815	2 303
333	Machinery manufacturing .....	—	244	118	15 080	724 588	8 566	17 218	361 986	1 435 492	1 139 469	2 538 979	69 347
3332	Industrial machinery manufacturing .....	1	36	7	673	27 617	359	670	11 039	66 322	43 958	108 127	10 380
33329	Other industrial machinery manufacturing .....	2	26	4	418	17 764	222	419	7 135	31 793	26 402	58 099	9 220
333298	All other industrial machinery manufacturing .....	1	16	3	299	13 093	133	261	4 345	24 305	21 367	45 556	D
3333	Commercial and service industry machinery manufacturing .....	3	11	3	314	9 331	210	387	4 288	21 373	17 495	38 109	1 329
33331	Commercial and service industry machinery manufacturing .....	3	11	3	314	9 331	210	387	4 288	21 373	17 495	38 109	1 329
333319	Other commercial and service industry machinery manufacturing .....	3	9	3	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area—Con.</b>												
333 3335	Machinery manufacturing—Con. Metalworking machinery manufacturing .....	—	139	68	5 667	281 250	4 355	9 078	201 815	570 703	266 232	791 907	25 851
33351	Metalworking machinery manufacturing .....	—	139	68	5 667	281 250	4 355	9 078	201 815	570 703	266 232	791 907	25 851
333511	Industrial mold manufacturing .....	—	32	17	1 570	86 259	1 203	2 523	62 719	168 730	73 892	240 747	9 061
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	83	44	3 305	165 102	2 552	5 413	118 587	341 174	169 646	477 426	14 441
333515	Cutting tool and machine tool accessory manufacturing...	—	18	6	709	26 833	540	1 020	18 534	55 400	19 515	65 835	2 231
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	—	44	30	6 490	301 882	2 532	4 579	96 608	600 893	642 245	1 253 893	22 902
33391	Pump and compressor manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
333911	Pump and pumping equipment manufacturing ..	—	1	1	e	D	D	D	D	D	D	D	D
33392	Material handling equipment manufacturing .....	—	15	10	h	D	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing ..	—	12	8	h	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	2	28	19	1 660	72 974	1 055	2 058	37 211	142 822	144 386	289 604	D
333996	Fluid power pump and motor manufacturing .....	1	4	3	e	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	5	14	9	812	36 759	487	991	17 499	61 503	65 189	127 850	2 621
334	Computer and electronic product manufacturing .....	—	136	13	129	167 265	1 932	4 043	94 191	383 407	155 392	531 363	134 560
3343	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33431	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
334310	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	19	7	12 304	140 587	1 415	3 211	82 126	297 041	87 022	380 043	133 569
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	19	7	12 304	140 587	1 415	3 211	82 126	297 041	87 022	380 043	133 569
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
334516	Analytical laboratory instrument manufacturing .....	—	3	1	e	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	20	6	1 935	69 163	1 528	2 670	48 775	227 286	185 055	415 357	15 074
3352	Household appliance manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing.	—	1	1	g	D	D	D	D	D	D	D	D
335228	Other major household appliance manufacturing ...	—	1	1	g	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	7	3	f	D	D	D	D	D	D	D	2 053
33592	Communication and energy wire and cable manufacturing.	—	2	1	e	D	D	D	D	D	D	D	D
335929	Other communication and energy wire manufacturing .	—	2	1	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area—Con.</b>												
336	Transportation equipment manufacturing .....	—	72	43	14 012	628 710	10 979	20 777	440 749	1 593 617	1 639 662	3 224 409	83 347
3363	Motor vehicle parts manufacturing .....	—	54	37	j	D	D	D	D	D	D	D	80 612
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	7	6	2 297	104 530	1 863	3 769	77 356	336 228	232 101	563 996	D
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	6	5	g	D	D	D	D	D	D	D	20 660
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	1	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	1	2	2	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	22	13	4 760	247 098	3 956	7 620	197 518	609 181	640 827	1 243 863	34 673
336370	Motor vehicle metal stamping .....	—	22	13	4 760	247 098	3 956	7 620	197 518	609 181	640 827	1 243 863	34 673
33639	Other motor vehicle parts manufacturing .....	1	17	12	4 033	167 753	3 085	5 160	100 258	394 039	461 541	855 208	20 330
336399	All other motor vehicle parts manufacturing .....	1	16	11	h	D	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	3	3	e	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	3	3	e	D	D	D	D	D	D	D	D
336413	Other aircraft parts and auxiliary equipment manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	—	5	1	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	—	5	1	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	1	72	26	10 266	503 817	6 189	12 072	225 836	790 410	608 916	1 407 204	61 909
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	33	9	1 144	42 871	830	1 770	24 757	81 040	62 369	144 356	8 221
33712	Household and institutional furniture manufacturing .....	—	21	9	1 057	40 242	763	1 633	22 990	75 619	59 255	135 820	7 857
337122	Nonupholstered wood household furniture manufacturing .....	1	14	7	f	D	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	1	33	14	9 019	458 075	5 278	10 154	199 169	701 713	541 048	1 249 712	53 406
33721	Office furniture (including fixtures) manufacturing .....	1	33	14	9 019	458 075	5 278	10 154	199 169	701 713	541 048	1 249 712	53 406
337211	Wood office furniture manufacturing .....	—	7	3	1 496	42 975	1 237	1 937	29 839	76 093	48 890	126 685	D
337214	Office furniture (except wood) manufacturing .....	1	8	3	i	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	2	15	6	e	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	100	21	1 990	76 958	1 403	2 755	45 593	246 351	106 084	353 625	8 819

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Grand Rapids-Wyoming, MI Metropolitan Statistical Area—Con.</b>												
339 3391	Miscellaneous manufacturing—Con. Medical equipment and supplies manufacturing .....	—	37	11	1 207	47 516	821	1 636	26 836	192 979	49 609	243 440	6 328
33911	Medical equipment and supplies manufacturing .....	—	37	11	1 207	47 516	821	1 636	26 836	192 979	49 609	243 440	6 328
339112	Surgical and medical instrument manufacturing .....	—	7	3	403	16 419	234	497	6 895	88 819	20 911	109 687	3 039
339113	Surgical appliance and supplies manufacturing .....	—	4	3	367	16 328	290	551	11 632	70 108	7 719	78 835	2 071
3399	Other miscellaneous manufacturing .....	1	63	10	783	29 442	582	1 119	18 757	53 372	56 475	110 185	2 491
33999	All other miscellaneous manufacturing .....	—	27	6	497	18 615	397	774	13 523	33 463	39 123	73 384	1 820
339999	All other miscellaneous manufacturing .....	1	23	5	e	D	D	D	D	D	D	D	D
	<b>Holland-Grand Haven, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	1	616	216	35 521	1 339 157	26 234	52 140	790 874	4 672 629	4 049 810	8 653 850	224 845
311	Food manufacturing .....	—	33	15	3 806	129 955	3 069	6 086	92 865	847 836	847 361	1 721 774	57 494
3114	Fruit and vegetable preserving and specialty food manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
31141 311412	Frozen food manufacturing .... Frozen specialty food manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
31142	Fruit and vegetable canning, pickling, and drying .....	—	1	1	e	D	D	D	D	D	D	D	D
311422	Specialty canning .....	—	1	1	e	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	4	4	915	41 444	547	1 192	25 414	599 472	317 117	920 958	8 993
31151	Dairy product (except frozen) manufacturing .....	—	4	4	915	41 444	547	1 192	25 414	599 472	317 117	920 958	8 993
311511 311514	Fluid milk manufacturing .... Dry, condensed, and evaporated dairy product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	5	3	1 256	39 097	1 152	2 302	32 456	38 478	353 208	415 990	27 338
31161 311615	Animal slaughtering and processing .... Poultry processing .....	—	5	3	1 256	39 097	1 152	2 302	32 456	38 478	353 208	415 990	27 338
3119	Other food manufacturing .....	—	6	3	e	D	D	D	D	D	D	D	D
31194 311941	Seasoning and dressing manufacturing .... Mayonnaise, dressing, and other prepared sauce manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	1	2	1	e	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	1	2	1	e	D	D	D	D	D	D	D	D
31211 312111	Soft drink and ice manufacturing .... Soft drink manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
316	Leather and allied product manufacturing .....	—	3	1	e	D	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing .....	—	1	1	e	D	D	D	D	D	D	D	D
31611 316110	Leather and hide tanning and finishing .....	—	1	1	e	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	1	28	12	621	17 972	463	871	10 874	39 150	48 414	86 897	1 955
3219	Other wood product manufacturing .....	1	22	10	457	12 402	354	655	8 234	24 791	29 598	53 879	1 437

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Holland-Grand Haven, MI Metropolitan Statistical Area—Con.</b>												
322	Paper manufacturing .....	1	7	6	562	19 825	362	734	11 284	44 195	44 277	88 296	4 664
3222	Converted paper product manufacturing .....	1	7	6	562	19 825	362	734	11 284	44 195	44 277	88 296	4 664
32221	Paperboard container manufacturing .....	2	4	4	e	D	D	D	D	D	D	D	D
32229	Other converted paper product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
322299	All other converted paper product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	3	35	4	255	7 218	168	306	3 769	11 382	8 974	20 458	745
3231	Printing and related support activities .....	3	35	4	255	7 218	168	306	3 769	11 382	8 974	20 458	745
32311	Printing .....	3	33	4	e	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	2	16	8	1 060	54 567	655	1 361	25 582	228 501	196 110	390 185	12 356
3254	Pharmaceutical and medicine manufacturing .....	—	5	3	705	37 954	418	832	15 729	156 822	120 475	241 015	9 536
32541	Pharmaceutical and medicine manufacturing .....	—	5	3	705	37 954	418	832	15 729	156 822	120 475	241 015	9 536
325411	Medicinal and botanical manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	2	4	2	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	27	16	3 795	130 441	2 851	5 790	77 172	383 841	306 555	688 148	18 643
3261	Plastics product manufacturing ..	—	26	16	h	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	18	12	3 565	122 417	2 683	5 404	72 120	367 589	290 086	655 540	12 748
326199	All other plastics product manufacturing .....	—	17	11	h	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	18	10	3 344	134 835	2 432	5 121	72 951	416 268	370 407	783 969	25 899
3272	Glass and glass product manufacturing .....	—	6	5	h	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	6	5	h	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	6	5	h	D	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	5	9	5	e	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	1	11	4	412	15 511	296	578	9 339	37 981	37 387	75 527	1 268
332	Fabricated metal product manufacturing .....	1	152	38	3 494	123 903	2 641	5 182	81 007	250 085	180 760	430 636	17 946
3321	Forging and stamping.....	2	11	5	393	10 655	326	635	7 275	21 125	24 867	45 746	2 487
33211	Forging and stamping.....	2	11	5	393	10 655	326	635	7 275	21 125	24 867	45 746	2 487
3323	Architectural and structural metals manufacturing .....	1	22	6	1 227	46 234	912	1 811	30 038	92 205	72 525	163 061	5 936
33232	Ornamental and architectural metal products manufacturing .....	—	14	4	1 066	40 665	801	1 636	26 896	80 451	60 784	139 576	5 575
332322	Sheet metal work manufacturing .....	—	11	3	e	D	D	D	D	D	D	D	D
332323	Ornamental and architectural metal work manufacturing ..	—	3	1	f	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	68	10	776	28 993	615	1 217	20 306	58 382	32 295	90 452	2 848
33271	Machine shops .....	2	54	4	356	12 332	281	515	8 668	25 589	10 779	36 208	714
332710	Machine shops .....	2	54	4	356	12 332	281	515	8 668	25 589	10 779	36 208	714
33272	Turned product and screw, nut, and bolt manufacturing .....	1	14	6	420	16 661	334	702	11 638	32 793	21 516	54 244	2 134
332721	Precision turned product manufacturing .....	1	13	6	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	2	23	8	409	12 830	309	577	8 549	28 028	11 022	39 081	3 066
33281	Coating, engraving, heat treating, and allied activities ..	2	23	8	409	12 830	309	577	8 549	28 028	11 022	39 081	3 066
3329	Other fabricated metal product manufacturing .....	1	20	4	377	13 744	259	492	8 322	24 652	24 701	49 740	2 553
33299	All other fabricated metal product manufacturing .....	1	19	4	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Holland-Grand Haven, MI Metropolitan Statistical Area—Con.</b>												
333	Machinery manufacturing .....	4	93	23	2 475	103 941	1 665	3 040	59 590	211 526	172 147	368 675	9 972
3332	Industrial machinery manufacturing .....	1	15	3	279	8 974	192	414	5 326	18 146	14 506	31 902	798
3333	Commercial and service industry machinery manufacturing .....	9	4	2	e	D	D	D	D	D	D	D	748
33331	Commercial and service industry machinery manufacturing .....	9	4	2	e	D	D	D	D	D	D	D	748
333319	Other commercial and service industry machinery manufacturing .....	9	4	2	e	D	D	D	D	D	D	D	748
3335	Metalworking machinery manufacturing .....	1	53	12	1 154	51 858	783	1 562	31 542	99 409	57 850	150 587	6 949
33351	Metalworking machinery manufacturing .....	1	53	12	1 154	51 858	783	1 562	31 542	99 409	57 850	150 587	6 949
333514	Special die and tool, die set, jig, and fixture manufacturing .....	1	25	6	532	22 930	429	889	16 960	38 136	22 122	60 455	3 805
3339	Other general purpose machinery manufacturing .....	4	18	6	640	26 861	422	740	13 610	55 762	41 172	93 138	1 400
33392	Material handling equipment manufacturing .....	6	7	3	e	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	4	10	2	330	15 290	211	391	8 356	32 429	22 358	51 535	756
333999	All other miscellaneous general purpose machinery manufacturing .....	4	7	2	298	13 318	197	362	7 938	26 729	18 398	42 441	690
334	Computer and electronic product manufacturing .....	—	19	11	1 704	63 958	1 273	2 504	39 066	212 805	127 651	332 968	3 111
3344	Semiconductor and other electronic component manufacturing .....	—	5	4	266	8 926	180	348	4 326	16 323	16 902	32 892	D
33441	Semiconductor and other electronic component manufacturing .....	—	5	4	266	8 926	180	348	4 326	16 323	16 902	32 892	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	10	4	1 058	39 570	822	1 540	26 498	116 308	92 222	200 761	1 669
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	10	4	1 058	39 570	822	1 540	26 498	116 308	92 222	200 761	1 669
334512	Automatic environmental control manufacturing for residential, commercial, and appliance use.....	—	10	4	1 058	39 570	822	1 540	26 498	116 308	92 222	200 761	1 669
334518	Watch, clock, and part manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	2	44	28	5 268	218 314	4 114	8 255	148 043	589 598	549 476	1 140 275	23 976
3362	Motor vehicle body and trailer manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
336211	Motor vehicle body manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	2	34	24	h	D	D	D	D	D	D	D	22 434
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	6	4	1 203	52 394	1 052	2 091	43 356	229 078	94 537	323 584	3 282
336312	Gasoline engine and engine parts manufacturing .....	—	6	4	1 203	52 394	1 052	2 091	43 356	229 078	94 537	323 584	3 282
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	4	3	253	9 155	224	466	7 417	23 804	26 861	50 513	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336367	Motor vehicle metal stamping .....	5	14	11	1 872	78 682	1 544	3 210	56 522	159 642	143 938	303 420	9 570
336370	Motor vehicle metal stamping .....	5	14	11	1 872	78 682	1 544	3 210	56 522	159 642	143 938	303 420	9 570

See footnotes at end of table.

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[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Holland-Grand Haven, MI Metropolitan Statistical Area—Con.</b>											
336	Transportation equipment manufacturing—Con.											
3363	Motor vehicle parts manufacturing—Con.											
33639	Other motor vehicle parts manufacturing .....	3	6	3	571	26 462	358	774	12 410	51 214	62 700	112 721
336399	All other motor vehicle parts manufacturing .....	3	6	3	571	26 462	358	774	12 410	51 214	62 700	112 721
3364	Aerospace product and parts manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	4	57	28	6 974	256 202	5 270	10 398	130 134	1 210 740	751 235	1 929 104
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	26	9	981	31 274	733	1 429	18 624	96 244	76 306	174 998
33712	Household and institutional furniture manufacturing .....	—	16	7	825	26 866	604	1 158	15 413	87 958	65 125	155 623
337122	Nonupholstered wood household furniture manufacturing .....	—	7	2	335	9 593	294	574	7 302	12 124	10 098	24 824
337127	Institutional furniture manufacturing .....	—	6	5	469	16 712	292	549	7 634	74 339	53 426	127 703
3372	Office furniture (including fixtures) manufacturing .....	4	28	19	5 983	224 684	4 529	8 959	111 380	1 114 018	674 561	1 753 261
33721	Office furniture (including fixtures) manufacturing .....	4	28	19	5 983	224 684	4 529	8 959	111 380	1 114 018	674 561	1 753 261
337214	Office furniture (except wood) manufacturing .....	4	9	8	i	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	—	12	6	e	D	D	D	D	D	D	839
339	Miscellaneous manufacturing .....	—	46	5	690	24 778	354	718	10 399	49 673	27 530	81 994
3391	Medical equipment and supplies manufacturing .....	—	11	2	440	17 075	204	417	6 281	33 940	12 508	51 230
33911	Medical equipment and supplies manufacturing .....	—	11	2	440	17 075	204	417	6 281	33 940	12 508	51 230
339111	Laboratory apparatus and furniture manufacturing .....	—	3	1	e	D	D	D	D	D	D	459
3399	Other miscellaneous manufacturing .....	1	35	3	250	7 703	150	301	4 118	15 733	15 022	30 764
	<b>Muskegon-Norton Shores, MI Metropolitan Statistical Area</b>											
31-33	Manufacturing .....	—	332	124	14 344	575 192	10 566	22 301	368 164	1 554 642	1 285 184	2 852 258
311	Food manufacturing .....	—	11	4	340	13 628	241	467	7 473	42 501	21 519	62 969
322	Paper manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	1	1	f	D	D	D	D	D	D	D
32212	Paper mills .....	—	1	1	f	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	1	1	f	D	D	D	D	D	D	D
323	Printing and related support activities .....	—	17	5	325	12 022	196	397	6 005	22 689	12 810	36 125
3231	Printing and related support activities .....	—	17	5	325	12 022	196	397	6 005	22 689	12 810	36 125
32311	Printing .....	—	17	5	325	12 022	196	397	6 005	22 689	12 810	36 125
325	Chemical manufacturing .....	—	10	5	652	30 120	369	655	14 266	116 793	120 291	239 227
3251	Basic chemical manufacturing .....	—	4	3	f	D	D	D	D	D	D	D
32513	Synthetic dye and pigment manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
325132	Synthetic organic dye and pigment manufacturing .....	—	2	2	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Muskegon-Norton Shores, MI Metropolitan Statistical Area—Con.</b>											
326	Plastics and rubber products manufacturing .....	—	11	5	f	D	D	D	D	D	D	4 756
3261	Plastics product manufacturing .....	—	10	5	f	D	D	D	D	D	D	4 756
32619	Other plastics product manufacturing .....	—	9	5	718	17 088	631	1 437	13 395	40 088	48 469	87 945
326199	All other plastics product manufacturing .....	—	9	5	718	17 088	631	1 437	13 395	40 088	48 469	87 945
331	Primary metal manufacturing .....	—	37	28	3 903	143 899	3 124	7 018	103 672	441 267	298 508	741 424
3315	Foundries .....	—	30	23	3 528	128 746	2 880	6 534	94 639	400 151	198 632	595 607
33151	Ferrous metal foundries .....	—	11	11	2 353	89 278	1 983	4 604	68 685	272 979	135 774	407 113
331511	Iron foundries .....	—	4	4	707	33 711	579	1 311	24 998	73 237	36 731	2 471
331512	Steel investment foundries .....	—	4	4	9	D	D	D	D	D	D	8 076
331513	Steel foundries (except investment) .....	5	3	3	e	D	D	D	D	D	D	1 026
33152	Nonferrous metal foundries .....	—	19	12	1 175	39 468	897	1 930	25 954	127 172	62 858	188 494
331521	Aluminum die-casting foundries .....	1	4	4	385	12 588	316	725	10 065	38 233	22 259	60 506
331524	Aluminum foundries (except die-casting) .....	1	9	4	347	9 834	243	526	5 573	36 023	19 072	54 416
331528	Other nonferrous foundries (except die-casting) .....	—	2	2	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	98	29	2 277	91 054	1 588	3 240	55 302	204 929	140 086	345 202
3326	Spring and wire product manufacturing .....	—	10	5	384	12 323	259	557	7 840	28 128	12 971	41 225
33261	Spring and wire product manufacturing .....	—	10	5	384	12 323	259	557	7 840	28 128	12 971	41 225
332612	Spring (light gauge) manufacturing .....	—	6	3	325	10 356	227	493	6 477	25 402	10 550	35 907
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	42	9	639	23 911	493	917	15 946	49 122	27 105	75 959
33271	Machine shops .....	1	39	8	561	21 353	418	776	13 535	44 708	24 992	69 358
332710	Machine shops .....	1	39	8	561	21 353	418	776	13 535	44 708	24 992	69 358
3328	Coating, engraving, heat treating, and allied activities .....	—	14	6	553	22 894	345	755	13 808	56 147	48 759	104 433
33281	Coating, engraving, heat treating, and allied activities .....	—	14	6	553	22 894	345	755	13 808	56 147	48 759	104 433
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	11	3	e	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	—	17	5	346	19 968	247	498	10 788	34 666	13 507	49 194
33299	All other fabricated metal product manufacturing .....	—	17	5	346	19 968	247	498	10 788	34 666	13 507	49 194
333	Machinery manufacturing .....	1	60	17	1 804	85 836	1 109	2 364	40 199	169 091	164 375	337 128
3335	Metalworking machinery manufacturing .....	2	37	7	501	24 356	374	724	16 657	39 994	17 675	59 733
33351	Metalworking machinery manufacturing .....	2	37	7	501	24 356	374	724	16 657	39 994	17 675	59 733
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	1	10	5	637	26 255	400	862	10 859	52 871	63 394	114 877
33392	Material handling equipment manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
333923	Overhead traveling crane, hoist, and monorail system manufacturing .....	—	1	1	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Muskegon-Norton Shores, MI Metropolitan Statistical Area—Con.</b>												
336	Transportation equipment manufacturing .....	—	19	8	1 946	83 619	1 519	2 952	61 520	164 932	226 936	384 759	27 558
3363	Motor vehicle parts manufacturing .....	—	14	6	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	9	13	5	793	27 527	668	1 375	21 339	98 265	57 766	153 849	2 216
3372	Office furniture (including fixtures) manufacturing .....	9	8	5	784	27 335	660	1 362	21 197	97 870	57 406	153 094	2 203
33721	Office furniture (including fixtures) manufacturing .....	9	8	5	784	27 335	660	1 362	21 197	97 870	57 406	153 094	2 203
337214	Office furniture (except wood) manufacturing .....	9	3	2	f	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	24	7	405	12 116	274	488	6 124	83 680	61 488	149 506	2 446
3399	Other miscellaneous manufacturing .....	—	14	4	e	D	D	D	D	D	D	D	D
	<b>LANSING-EAST LANSING-OWOSO, MI COMBINED STATISTICAL AREA</b>												
31-33	Manufacturing .....	—	494	180	27 317	1 293 378	20 791	42 836	951 119	6 111 370	8 315 127	14 424 957	194 027
311	Food manufacturing .....	1	39	10	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing.....	—	5	4	344	13 578	215	465	7 751	44 411	149 969	194 446	D
31151	Dairy product (except frozen) manufacturing .....	—	4	4	e	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	1	3	3	e	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	1	20	10	f	D	D	D	D	D	D	D	D
3219	Other wood product manufacturing .....	5	15	6	e	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	4	3	e	D	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	—	4	3	e	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	4	3	e	D	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	—	4	3	e	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	7	68	14	g	D	D	D	D	D	D	D	7 099
3231	Printing and related support activities .....	7	68	14	g	D	D	D	D	D	D	D	7 099
32311	Printing .....	7	57	11	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	7	30	7	1 093	45 754	720	1 420	25 103	79 922	61 897	142 130	D
325	Chemical manufacturing .....	5	14	8	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	9	2	2	e	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	9	2	2	e	D	D	D	D	D	D	D	D
325414	Biological product (except diagnostic) manufacturing .....	9	2	2	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>LANSING-EAST LANSING-OWOSSO, MI COMBINED STATISTICAL AREA—Con.</b>												
326	Plastics and rubber products manufacturing .....	—	25	15	2 481	63 526	1 595	2 949	31 463	198 061	101 865	285 826	8 004
3261	Plastics product manufacturing .....	—	24	15	g	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	19	11	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	19	11	g	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	2	28	12	870	33 424	677	1 425	23 937	125 774	64 842	192 088	3 495
3273	Cement and concrete product manufacturing .....	3	23	10	f	D	D	D	D	D	D	D	D
32732	Ready-mix concrete manufacturing .....	3	14	4	e	D	D	D	D	D	D	D	D
327320	Ready-mix concrete manufacturing .....	3	14	4	e	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	4	3	587	25 017	413	962	15 466	46 141	77 933	123 258	D
3315	Foundries .....	—	3	2	e	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	2	2	e	D	D	D	D	D	D	D	D
331522	Nonferrous (except aluminum) die-casting foundries .....	—	1	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	88	30	2 567	96 770	1 973	3 979	67 070	276 214	126 890	394 440	22 269
3321	Forging and stamping .....	—	5	4	f	D	D	D	D	D	D	D	D
33211	Forging and stamping .....	—	5	4	f	D	D	D	D	D	D	D	D
332112	Nonferrous forging .....	—	1	1	e	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	1	15	4	e	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	32	8	572	24 092	461	891	17 045	51 107	20 999	69 286	9 247
33271	Machine shops .....	1	26	5	e	D	D	D	D	D	D	D	D
332710	Machine shops .....	1	26	5	e	D	D	D	D	D	D	D	D
33272	Turned product and screw, nut, and bolt manufacturing .....	1	6	3	e	D	D	D	D	D	D	D	D
332721	Precision turned product manufacturing .....	1	6	3	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	1	15	7	e	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, and allied activities ..	1	15	7	e	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	2	16	4	f	D	D	D	D	D	D	D	2 057
33291	Metal valve manufacturing .....	2	3	3	374	12 433	259	531	6 890	46 085	31 112	77 487	1 705
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	63	27	2 029	90 052	1 413	2 906	55 648	159 672	147 800	323 337	7 644
3331	Agriculture, construction, and mining machinery manufacturing .....	2	8	4	e	D	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	1	31	13	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	1	31	13	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333613	Mechanical power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>LANSING-EAST LANSING-OWOSO, MI COMBINED STATISTICAL AREA—Con.</b>											
335	Electrical equipment, appliance, and component manufacturing .....	—	7	5	f	D	D	D	D	D	D	D
3353	Electrical equipment manufacturing .....	—	7	5	f	D	D	D	D	D	D	D
33531	Electrical equipment manufacturing .....	—	7	5	f	D	D	D	D	D	D	D
335312	Motor and generator manufacturing .....	—	4	4	f	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	41	24	12 601	770 783	10 449	22 390	634 759	4 791 826	7 146 490	11 943 556
3361	Motor vehicle manufacturing .....	—	6	4	i	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	4	3	i	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	4	3	i	D	D	D	D	D	D	D
33612	Heavy duty truck manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
336120	Heavy duty truck manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	23	13	h	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	2	4	3	618	30 111	500	1 016	22 343	70 429	50 267	120 326
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	4	3	2	e	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	8	4	2 328	142 419	1 991	3 724	119 870	179 273	445 655	623 168
336370	Motor vehicle metal stamping .....	—	8	4	2 328	142 419	1 991	3 724	119 870	179 273	445 655	623 168
33639	Other motor vehicle parts manufacturing .....	—	5	2	f	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	5	2	f	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	1	3	3	371	18 592	202	470	8 324	40 054	21 856	62 511
33641	Aerospace product and parts manufacturing .....	1	3	3	371	18 592	202	470	8 324	40 054	21 856	62 511
336411	Aircraft manufacturing .....	1	2	2	e	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
336992	Military armored vehicle, tank, and tank component manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	19	7	e	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	15	4	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	36	4	f	D	D	D	D	D	D	3 075
3391	Medical equipment and supplies manufacturing .....	—	13	2	e	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	—	13	2	e	D	D	D	D	D	D	D
	<b>Lansing-East Lansing, MI Metropolitan Statistical Area</b>											
31-33	Manufacturing .....	—	412	149	23 817	1 194 678	18 083	37 650	887 413	5 835 475	8 044 916	13 881 182
311	Food manufacturing .....	1	38	10	799	25 904	498	1 041	14 468	69 883	199 708	269 526
3115	Dairy product manufacturing .....	—	5	4	344	13 578	215	465	7 751	44 411	149 969	194 446
31151	Dairy product (except frozen) manufacturing .....	—	4	4	e	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	1	3	3	e	D	D	D	D	D	D	D
321	Wood product manufacturing .....	1	19	9	506	16 708	375	762	9 852	33 039	76 104	108 918
3219	Other wood product manufacturing .....	5	14	5	278	8 183	210	436	4 996	12 894	20 505	32 986
												478

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>LANSING-EAST LANSING-OWOSSO, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Lansing-East Lansing, MI Metropolitan Statistical Area—Con.</b>											
323	Printing and related support activities .....	7	59	13	1 654	60 978	1 150	2 185	34 670	113 740	77 870	192 003
3231	Printing and related support activities .....	7	59	13	1 654	60 978	1 150	2 185	34 670	113 740	77 870	192 003
32311	Printing .....	7	50	11	1 494	57 044	1 022	1 975	32 549	105 792	76 603	182 784
323110	Commercial lithographic printing .....	7	26	7	1 071	45 026	707	1 393	24 640	77 736	61 687	139 734
325	Chemical manufacturing .....	5	13	8	590	25 719	218	397	8 021	100 463	76 615	175 659
3254	Pharmaceutical and medicine manufacturing .....	9	2	2	e	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	9	2	2	e	D	D	D	D	D	D	D
325414	Biological product (except diagnostic) manufacturing ..	9	2	2	e	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	18	10	1 506	47 213	801	1 577	20 703	136 416	63 273	185 874
3261	Plastics product manufacturing ..	—	17	10	g	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	13	7	f	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	13	7	f	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	1	20	9	589	24 168	465	991	17 755	87 693	46 994	135 578
3273	Cement and concrete product manufacturing .....	2	18	8	e	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	4	3	587	25 017	413	962	15 466	46 141	77 933	123 258
3315	Foundries .....	—	3	2	e	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	—	2	2	e	D	D	D	D	D	D	D
331522	Nonferrous (except aluminum) die-casting foundries .....	—	1	1	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	76	26	2 306	88 833	1 765	3 619	61 797	259 330	114 751	364 886
3321	Forging and stamping .....	—	4	3	530	21 722	457	992	18 416	79 190	27 380	107 451
33211	Forging and stamping .....	—	4	3	530	21 722	457	992	18 416	79 190	27 380	107 451
332112	Nonferrous forging .....	—	1	1	e	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	28	8	554	23 460	447	864	16 594	49 638	20 623	67 437
33271	Machine shops .....	1	23	5	280	11 777	225	421	8 717	22 166	9 128	28 442
332710	Machine shops .....	1	23	5	280	11 777	225	421	8 717	22 166	9 128	28 442
33272	Turned product and screw, nut, and bolt manufacturing .....	—	5	3	274	11 683	222	443	7 877	27 472	11 495	38 995
332721	Precision turned product manufacturing .....	—	5	3	274	11 683	222	443	7 877	27 472	11 495	38 995
3328	Coating, engraving, heat treating, and allied activities .....	—	13	6	350	12 840	265	521	8 642	31 956	6 175	38 156
33281	Coating, engraving, heat treating, and allied activities ..	—	13	6	350	12 840	265	521	8 642	31 956	6 175	38 156
3329	Other fabricated metal product manufacturing .....	2	15	4	512	17 510	350	727	10 642	55 230	36 190	91 687
33291	Metal valve manufacturing .....	2	3	3	374	12 433	259	531	6 890	46 085	31 112	77 487
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	44	20	1 577	74 223	1 127	2 339	47 604	122 548	101 630	241 312
3335	Metalworking machinery manufacturing .....	1	24	12	618	31 422	393	809	17 720	33 751	21 222	70 518
33351	Metalworking machinery manufacturing .....	1	24	12	618	31 422	393	809	17 720	33 751	21 222	70 518

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>LANSING-EAST LANSING-OWOSO, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Lansing-East Lansing, MI Metropolitan Statistical Area—Con.</b>											
333 3336	Machinery manufacturing—Con. Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
333613	Mechanical power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
3353	Electrical equipment manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
33531	Electrical equipment manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
335312	Motor and generator manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	36	21	12 131	754 681	10 082	21 619	624 748	4 749 260	7 071 663	11 826 105
3361	Motor vehicle manufacturing .....	—	6	4	i	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	4	3	i	D	D	D	D	D	D	D
336111 33612	Automobile manufacturing...	—	4	3	i	D	D	D	D	D	D	D
336120	Heavy duty truck manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33612	Heavy duty truck manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	21	12	h	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	2	4	3	618	30 111	500	1 016	22 343	70 429	50 267	120 326
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	4	3	2	e	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing....	—	2	2	f	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing....	—	2	2	f	D	D	D	D	D	D	D
33637 336370	Motor vehicle metal stamping .....	—	8	4	2 328	142 419	1 991	3 724	119 870	179 273	445 655	623 168
33639	Motor vehicle metal stamping .....	—	8	4	2 328	142 419	1 991	3 724	119 870	179 273	445 655	623 168
336399	Other motor vehicle parts manufacturing .....	—	4	2	f	D	D	D	D	D	D	9 014
3364	All other motor vehicle parts manufacturing .....	—	4	2	f	D	D	D	D	D	D	9 014
33641	Aerospace product and parts manufacturing .....	1	3	3	371	18 592	202	470	8 324	40 054	21 856	62 511
336411	Aerospace product and parts manufacturing .....	1	3	3	371	18 592	202	470	8 324	40 054	21 856	62 511
336411	Aircraft manufacturing .....	1	2	2	371	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
336992	Military armored vehicle, tank, and tank component manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	29	4	529	14 903	444	722	10 673	33 713	37 689	72 294
3391	Medical equipment and supplies manufacturing .....	—	12	2	303	9 515	253	491	7 033	16 025	6 524	24 556
33911	Medical equipment and supplies manufacturing .....	—	12	2	303	9 515	253	491	7 033	16 025	6 524	24 556

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>LANSING-EAST LANSING-OWOSO, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Owosso, MI Micropolitan Statistical Area</b>												
31-33	Manufacturing .....	1	82	31	3 500	98 700	2 708	5 186	63 706	275 895	270 211	543 775	10 290
326	Plastics and rubber products manufacturing .....	—	7	5	975	16 313	794	1 372	10 760	61 645	38 592	99 952	1 145
3261	Plastics product manufacturing .....	—	7	5	975	16 313	794	1 372	10 760	61 645	38 592	99 952	1 145
32619	Other plastics product manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	6	8	3	281	9 256	212	434	6 182	38 081	17 848	56 510	1 212
332	Fabricated metal product manufacturing .....	2	12	4	261	7 937	208	360	5 273	16 884	12 139	29 554	1 394
333	Machinery manufacturing .....	1	19	7	452	15 829	286	567	8 044	37 124	46 170	82 025	643
335	Electrical equipment, appliance, and component manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
3353	Electrical equipment manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
33531	Electrical equipment manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
335312	Motor and generator manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
336	Transportation equipment manufacturing .....	—	5	3	470	16 102	367	771	10 011	42 566	74 827	117 451	2 598
3363	Motor vehicle parts manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
	<b>SAGINAW-BAY CITY-SAGINAW TOWNSHIP NORTH, MI COMBINED STATISTICAL AREA</b>												
31-33	Manufacturing .....	—	379	118	22 756	1 302 918	17 558	36 149	946 062	3 281 391	2 830 542	6 139 683	229 275
311	Food manufacturing .....	—	30	6	743	25 469	529	1 036	14 726	94 988	100 633	196 657	D
3113	Sugar and confectionery product manufacturing .....	—	6	1	e	D	D	D	D	D	D	D	D
31131	Sugar manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
311313	Beet sugar manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	3	18	8	e	D	D	D	D	D	D	D	1 034
325	Chemical manufacturing .....	7	7	3	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	14	7	766	37 058	533	1 166	22 394	77 966	98 058	175 941	D
3261	Plastics product manufacturing .....	1	13	6	f	D	D	D	D	D	D	D	D
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	1	2	2	e	D	D	D	D	D	D	D	D
326111	Plastics bag manufacturing .....	1	2	2	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	20	9	f	D	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	—	15	7	f	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	9	5	h	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production and processing .....	—	1	1	e	D	D	D	D	D	D	D	D
33141	Nonferrous metal (except aluminum) smelting and refining .....	—	1	1	e	D	D	D	D	D	D	D	D
331419	Primary smelting and refining of nonferrous metal (except copper and aluminum) .....	—	1	1	e	D	D	D	D	D	D	D	D
3315	Foundries .....	—	7	3	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	6	3	h	D	D	D	D	D	D	D	D
	Iron foundries .....	—	3	2	h	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>SAGINAW-BAY CITY-SAGINAW TOWNSHIP NORTH, MI COMBINED STATISTICAL AREA—Con.</b>												
332	Fabricated metal product manufacturing .....	1	95	27	2 056	69 304	1 604	3 183	48 982	165 650	87 270	260 218	8 763
3323	Architectural and structural metals manufacturing .....	1	19	5	518	18 003	420	880	13 630	38 249	25 230	63 447	1 057
33232	Ornamental and architectural metal products manufacturing .....	—	9	3	e	D	D	D	D	D	D	D	D
332322	Sheet metal work manufacturing .....	—	5	2	e	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	54	12	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	—	46	10	771	23 155	602	1 204	17 647	69 188	26 175	99 510	2 843
332710	Machine shops .....	—	46	10	771	23 155	602	1 204	17 647	69 188	26 175	99 510	2 843
3328	Coating, engraving, heat treating, and allied activities .....	—	9	4	e	D	D	D	D	D	D	D	D
33281	Coating, engraving, heat treating, and allied activities ..	—	9	4	e	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	2	60	28	2 338	91 335	1 424	2 910	53 576	162 619	119 224	295 512	5 817
3335	Metalworking machinery manufacturing .....	3	40	18	1 635	55 958	981	2 006	34 269	90 071	35 746	132 371	D
33351	Metalworking machinery manufacturing .....	3	40	18	1 635	55 958	981	2 006	34 269	90 071	35 746	132 371	D
333515	Cutting tool and machine tool accessory manufacturing...	4	13	7	f	D	D	D	D	D	D	D	D
333518	Other metalworking machinery manufacturing ..	5	2	2	f	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	3	9	5	359	15 087	237	478	7 862	32 150	32 356	67 912	D
336	Transportation equipment manufacturing .....	—	20	11	j	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	16	10	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	5	3	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	5	3	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	4	3	e	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	5	23	3	e	D	D	D	D	D	D	D	D
	<b>Bay City, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	1	138	41	5 119	245 373	4 028	8 226	180 565	512 860	589 460	1 113 549	43 237
311	Food manufacturing .....	—	10	2	464	15 858	363	751	10 524	49 281	72 078	125 454	D
3113	Sugar and confectionery product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
31131	Sugar manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
311313	Beet sugar manufacturing ..	—	1	1	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	6	4	498	25 601	357	785	15 904	22 288	77 317	99 656	D
3261	Plastics product manufacturing ..	1	6	4	498	25 601	357	785	15 904	22 288	77 317	99 656	D
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	1	2	2	e	D	D	D	D	D	D	D	D
326111	Plastics bag manufacturing ..	1	2	2	e	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	10	5	424	15 636	364	763	12 156	49 175	32 861	81 716	1 315
3273	Cement and concrete product manufacturing .....	—	8	4	e	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>SAGINAW-BAY CITY-SAGINAW TOWNSHIP NORTH, MI COMBINED STATISTICAL AREA—Con.</b>												
	<b>Bay City, MI Metropolitan Statistical Area—Con.</b>												
332	Fabricated metal product manufacturing .....	—	28	9	534	20 855	365	728	11 638	34 029	28 102	65 557	3 308
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	19	4	251	10 144	197	390	6 945	15 738	10 176	28 775	2 743
333	Machinery manufacturing .....	1	19	5	410	19 031	279	546	11 185	30 701	22 766	59 573	537
336	Transportation equipment manufacturing .....	—	6	3	1 856	115 684	1 642	3 364	100 421	213 801	260 556	472 106	D
3363	Motor vehicle parts manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
	<b>Saginaw-Saginaw Township North, MI Metropolitan Statistical Area</b>												
31-33	Manufacturing .....	—	1'241	77	'17 637	'1 057 545	'13 530	'27 923	'765 497	'2 768 531	'2 241 082	'5 026 134	'186 038
311	Food manufacturing .....	2	20	4	279	9 611	166	285	4 202	45 707	28 555	71 203	1 455
321	Wood product manufacturing .....	6	7	3	282	6 760	199	397	4 555	10 611	18 889	30 463	826
326	Plastics and rubber products manufacturing .....	—	8	3	268	11 457	176	381	6 490	55 678	20 741	76 285	2 734
331	Primary metal manufacturing .....	—	7	4	h	D	D	D	D	D	D	D	D
3314	Nonferrous metal (except aluminum) production and processing .....	—	1	1	e	D	D	D	D	D	D	D	D
33141	Nonferrous metal (except aluminum) smelting and refining .....	—	1	1	e	D	D	D	D	D	D	D	D
331419	Primary smelting and refining of nonferrous metal (except copper and aluminum) .....	—	1	1	e	D	D	D	D	D	D	D	D
3315	Foundries .....	—	5	2	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	4	2	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	3	2	h	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	67	18	1 522	48 449	1 239	2 455	37 344	131 621	59 168	194 661	5 455
3323	Architectural and structural metals manufacturing .....	2	16	4	443	15 837	376	800	12 464	34 807	23 782	58 583	1 031
33232	Ornamental and architectural metal products manufacturing .....	—	7	2	349	11 971	305	657	10 103	28 156	17 231	45 353	727
332322	Sheet metal work manufacturing .....	—	3	1	e	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	35	8	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	—	34	8	658	18 273	516	1 012	14 609	60 562	22 023	86 664	2 554
332710	Machine shops .....	—	34	8	658	18 273	516	1 012	14 609	60 562	22 023	86 664	2 554
3328	Coating, engraving, heat treating, and allied activities .....	—	7	3	284	8 560	253	464	6 668	26 054	7 048	33 092	467
33281	Coating, engraving, heat treating, and allied activities ..	—	7	3	284	8 560	253	464	6 668	26 054	7 048	33 092	467
333	Machinery manufacturing .....	3	41	23	1 928	72 304	1 145	2 364	42 391	131 918	96 458	235 939	5 280
3335	Metalworking machinery manufacturing .....	4	30	16	1 402	44 785	812	1 683	26 397	78 412	25 619	106 901	3 728
33351	Metalworking machinery manufacturing .....	4	30	16	1 402	44 785	812	1 683	26 397	78 412	25 619	106 901	3 728
333515	Cutting tool and machine tool accessory manufacturing ...	4	12	7	618	21 248	488	1 100	15 865	39 134	8 502	48 639	1 951
333518	Other metalworking machinery manufacturing ..	9	1	1	e	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	5	5	4	266	10 531	185	371	6 108	21 996	24 867	48 784	888

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>SAGINAW-BAY CITY-SAGINAW TOWNSHIP NORTH, MI COMBINED STATISTICAL AREA—Con.</b>											
	<b>Saginaw-Saginaw Township North, MI Metropolitan Statistical Area—Con.</b>											
336	Transportation equipment manufacturing .....	—	14	8	i	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	12	7	i	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	3	1	i	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	2	g	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	1	17	2	263	9 949	207	384	6 928	26 601	6 366	32 803
	<b>ADRIAN, MI MICROPOLITAN STATISTICAL AREA</b>											2 286
31-33	Manufacturing .....	—	170	64	8 044	320 334	5 954	11 721	209 024	980 385	999 238	1 982 032
321	Wood product manufacturing .....	—	9	5	368	12 439	223	435	5 495	15 972	42 835	58 747
325	Chemical manufacturing .....	—	10	8	901	52 365	415	867	18 689	173 952	166 200	335 030
3251	Basic chemical manufacturing .....	—	4	3	569	35 013	229	432	11 116	121 531	135 047	252 316
32519	Other basic organic chemical manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	19	7	1 076	45 669	840	1 707	34 379	173 971	181 657	355 580
3261	Plastics product manufacturing .....	—	18	7	g	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	12	5	923	39 772	725	1 489	30 633	158 509	170 271	328 879
326199	All other plastics product manufacturing .....	—	12	5	923	39 772	725	1 489	30 633	158 509	170 271	328 879
327	Nonmetallic mineral product manufacturing .....	—	10	4	552	20 987	474	827	16 614	54 415	77 910	132 030
3272	Glass and glass product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass .....	—	1	1	e	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	5	4	e	D	D	D	D	D	D	D
3313	Alumina and aluminum production and processing .....	—	2	2	e	D	D	D	D	D	D	D
33131	Alumina and aluminum production and processing .....	—	2	2	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	32	9	779	30 267	569	1 192	19 632	62 534	46 690	109 177
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	14	3	407	18 016	304	667	11 880	35 883	24 185	60 182
33272	Turned product and screw, nut, and bolt manufacturing .....	—	6	3	373	16 694	278	614	10 966	33 529	23 261	56 893
332721	Precision turned product manufacturing .....	—	5	2	e	D	D	D	D	D	D	D

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	<b>ADRIAN, MI MICROPOLITAN STATISTICAL AREA—Con.</b>											
333	Machinery manufacturing .....	—	33	9	1 146	43 925	904	1 743	31 000	73 120	89 571	169 714
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	5	3	762	26 986	643	1 248	21 201	42 997	70 044	120 724
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	5	3	762	26 986	643	1 248	21 201	42 997	70 044	120 724
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	10	7	1 061	38 697	800	1 654	27 303	161 900	173 006	333 580
3363	Motor vehicle parts manufacturing .....	—	8	7	g	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	3	3	f	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	3	3	f	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	7	2	g	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	5	1	f	D	D	D	D	D	D	D
33711	Wood kitchen cabinet and countertop manufacturing ..	—	3	1	f	D	D	D	D	D	D	D
337110	Wood kitchen cabinet and countertop manufacturing ..	—	3	1	f	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
	<b>ALMA, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	60	20	2 626	91 183	2 074	3 788	57 156	211 775	200 311	411 162
326	Plastics and rubber products manufacturing .....	—	7	5	306	7 632	243	444	4 532	23 272	19 815	42 872
333	Machinery manufacturing .....	—	7	5	288	13 844	178	373	7 659	36 737	17 993	55 901
336	Transportation equipment manufacturing .....	—	8	5	1 372	45 508	1 119	1 993	27 800	87 999	103 950	190 152
3363	Motor vehicle parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	1	1	e	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	1	1	e	D	D	D	D	D	D	D
	<b>ALPENA, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	4	52	17	1 893	79 227	1 312	2 560	47 606	224 722	168 523	398 731
321	Wood product manufacturing .....	—	13	3	395	14 228	275	596	8 954	31 144	29 775	61 274
3212	Veneer, plywood, and engineered wood product manufacturing....	—	2	2	e	D	D	D	D	D	D	D
32121	Veneer, plywood, and engineered wood product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
321219	Reconstituted wood product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	9	4	1	e	D	D	D	D	D	D	D
3273	Cement and concrete product manufacturing .....	9	4	1	e	D	D	D	D	D	D	D
32731	Cement manufacturing.....	9	1	1	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>ALPENA, MI MICROPOLITAN STATISTICAL AREA—Con.</b>											
332	Fabricated metal product manufacturing .....	—	10	6	279	8 985	220	451	7 086	14 623	7 911	23 175
333	Machinery manufacturing .....	—	12	5	764	34 065	456	766	14 417	74 084	72 076	150 305
3332	Industrial machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33329	Other industrial machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
333298	All other industrial machinery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
	<b>BATTLE CREEK, MI METROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	202	84	13 970	576 027	10 526	21 564	391 087	2 202 344	1 856 185	4 047 350
311	Food manufacturing .....	—	19	7	1 878	113 450	1 519	3 280	90 058	681 783	324 593	998 606
3112	Grain and oilseed milling .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530
31123	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530
311230	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530
322	Paper manufacturing .....	—	5	4	530	24 050	365	830	13 721	75 784	59 656	134 785
3221	Pulp, paper, and paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
32213	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
322130	Paperboard mills .....	—	2	2	e	D	D	D	D	D	D	D
323	Printing and related support activities .....	1	27	6	382	15 919	286	540	10 938	37 231	21 875	58 348
3231	Printing and related support activities .....	1	27	6	382	15 919	286	540	10 938	37 231	21 875	58 348
32311	Printing .....	1	26	5	e	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	1	14	4	276	10 752	216	393	7 636	23 839	18 088	41 200
326	Plastics and rubber products manufacturing .....	—	13	8	1 433	54 460	984	2 073	32 950	101 286	107 741	208 365
3261	Plastics product manufacturing ..	—	12	7	g	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	10	6	g	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	10	6	g	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	12	4	361	13 583	330	673	12 110	53 853	38 034	92 152
331	Primary metal manufacturing .....	7	6	4	566	23 661	348	752	12 918	44 227	41 581	86 196
3315	Foundries .....	8	5	3	e	D	D	D	D	D	D	2 169
33151	Ferrous metal foundries .....	9	3	2	e	D	D	D	D	D	D	D
331511	Iron foundries .....	9	3	2	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	49	19	1 460	53 210	1 080	2 263	34 771	157 427	126 040	283 001
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	18	8	782	31 515	585	1 269	21 288	95 287	94 460	187 861
33271	Machine shops .....	—	9	2	330	12 883	257	562	8 481	43 548	53 533	97 125
332710	Machine shops .....	—	9	2	330	12 883	257	562	8 481	43 548	53 533	97 125
33272	Turned product and screw, nut, and bolt manufacturing .....	—	9	6	452	18 632	328	707	12 807	51 739	40 927	90 736
332721	Precision turned product manufacturing .....	—	7	5	e	D	D	D	D	D	D	2 663
333	Machinery manufacturing .....	—	17	7	759	25 983	489	842	11 914	56 260	43 770	98 954
3339	Other general purpose machinery manufacturing .....	—	7	5	651	21 226	411	676	8 953	46 191	38 768	83 595
33391	Pump and compressor manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
333911	Pump and pumping equipment manufacturing ..	—	1	1	e	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	—	5	4	e	D	D	D	D	D	D	D

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	<b>BATTLE CREEK, MI METROPOLITAN STATISTICAL AREA—Con.</b>											
335	Electrical equipment, appliance, and component manufacturing .....	—	4	3	1 113	39 784	689	1 522	22 652	84 266	180 895	265 096
3359	Other electrical equipment and component manufacturing .....	—	2	2	g	D	D	D	D	D	D	D
33592	Communication and energy wire and cable manufacturing .	—	1	1	e	D	D	D	D	D	D	D
335929	Other communication and energy wire manufacturing .	—	1	1	e	D	D	D	D	D	D	D
33593	Wiring device manufacturing...	—	1	1	f	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	17	14	4 920	192 391	4 003	7 974	136 137	859 523	882 968	1 742 719
3363	Motor vehicle parts manufacturing .....	—	15	12	h	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	3	3	1 204	46 603	944	1 620	26 259	132 448	152 392	284 190
336321	Vehicular lighting equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	4	2	e	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	4	4	g	D	D	D	D	D	D	56 200
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	3	3	f	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	1	16	5	e	D	D	D	D	D	D	914
3399	Other miscellaneous manufacturing .....	2	11	4	e	D	D	D	D	D	D	741
	<b>BIG RAPIDS, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	34	15	1 770	53 749	1 490	2 897	40 659	195 274	224 238	418 818
316	Leather and allied product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
3162	Footwear manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
31621	Footwear manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
316213	Men's footwear (except athletic) manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	6	4	535	20 701	414	835	15 304	66 588	76 647	142 770
3329	Other fabricated metal product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	2	2	e	D	D	D	D	D	D	D

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>CADILLAC, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	1	85	30	4 421	148 431	3 418	6 845	95 174	417 585	413 921	833 227
321	Wood product manufacturing .....	1	13	6	e	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	8	5	1 353	42 698	1 030	1 957	24 986	89 266	77 496	167 258
3262	Rubber product manufacturing ...	—	7	4	g	D	D	D	D	D	D	D
32622	Rubber and plastics hoses and belting manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
326220	Rubber and plastics hoses and belting manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	—	4	2	f	D	D	D	D	D	D	D
326291	Rubber product manufacturing for mechanical use .....	—	3	2	f	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
3315	Foundries .....	—	2	1	e	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	1	1	e	D	D	D	D	D	D	D
331511	Iron foundries .....	—	1	1	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	18	5	554	21 061	380	850	12 240	59 112	52 446	113 010
3324	Boiler, tank, and shipping container manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
33243	Metal can, box, and other metal container (light gauge) manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
332439	Other metal container manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	16	4	372	13 561	237	480	6 769	41 221	19 405	60 318
335	Electrical equipment, appliance, and component manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
33521	Small electrical appliance manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
335212	Household vacuum cleaner manufacturing .....	9	1	1	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	6	4	959	32 466	787	1 698	23 020	125 773	148 831	274 969
3363	Motor vehicle parts manufacturing .....	—	5	3	e	D	D	D	D	D	D	D
3366	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D
33661	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D
336612	Boat building .....	—	1	1	f	D	D	D	D	D	D	D
	<b>COLDWATER, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	94	43	3 977	134 810	2 976	5 665	88 744	347 710	413 086	758 816
321	Wood product manufacturing .....	1	7	4	303	9 481	260	530	6 673	24 127	28 499	51 458
331	Primary metal manufacturing .....	—	6	5	463	17 091	368	778	12 550	48 770	169 272	220 132
3313	Alumina and aluminum production and processing .....	—	3	3	e	D	D	D	D	D	D	D
33131	Alumina and aluminum production and processing ...	—	3	3	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	24	8	788	27 319	582	1 112	16 886	76 217	43 930	120 036

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>COLDWATER, MI MICROPOLITAN STATISTICAL AREA—Con.</b>											
336	Transportation equipment manufacturing .....	—	11	8	1 235	39 907	899	1 557	26 616	89 638	93 841	181 815
3363	Motor vehicle parts manufacturing .....	—	10	8	g	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	1	3	3	301	10 987	250	293	8 158	12 061	31 842	43 555
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	1	3	3	301	10 987	250	293	8 158	12 061	31 842	43 555
33634	Motor vehicle brake system manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
	<b>ESCANABA, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	63	21	2 740	132 649	2 023	4 090	90 824	409 537	339 002	740 715
322	Paper manufacturing .....	—	2	1	g	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	1	1	g	D	D	D	D	D	D	D
32212	Paper mills .....	—	1	1	g	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	1	1	g	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	8	6	589	23 915	346	771	11 833	63 621	73 605	136 171
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
	<b>HOUGHTON, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	3	49	9	745	23 020	563	1 123	14 321	57 894	79 269	142 452
321	Wood product manufacturing .....	7	9	3	285	9 361	245	520	7 193	16 300	37 498	54 653
	<b>IRON MOUNTAIN, MI-WI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	61	21	2 519	97 701	2 050	4 052	73 819	354 612	320 968	682 059
321	Wood product manufacturing .....	—	13	8	625	17 691	534	1 013	13 790	44 530	60 685	104 454
3219	Other wood product manufacturing .....	—	5	4	e	D	D	D	D	D	D	D
32199	All other wood product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	1	1	f	D	D	D	D	D	D	D
32212	Paper mills .....	—	1	1	f	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	1	1	f	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
3315	Foundries .....	—	2	2	e	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	2	2	e	D	D	D	D	D	D	D
331511	Iron foundries .....	—	2	2	e	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	5	3	326	12 445	290	622	10 975	37 299	30 533	67 778

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>JACKSON, MI METROPOLITAN STATISTICAL AREA</b>												
31-33	Manufacturing .....	—	317	112	10 875	433 509	7 693	15 500	266 637	1 177 854	1 351 284	2 541 850	117 403
325	Chemical manufacturing .....	—	7	1	e	D	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	—	3	1	e	D	D	D	D	D	D	D	D
32552	Adhesive manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
325520	Adhesive manufacturing ....	—	2	1	e	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	16	7	810	29 172	635	1 161	20 918	95 681	158 058	256 468	5 957
3261	Plastics product manufacturing ..	—	14	6	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	11	4	683	24 912	541	980	18 201	85 750	149 450	237 325	D
326199	All other plastics product manufacturing .....	—	10	4	f	D	D	D	D	D	D	D	5 386
331	Primary metal manufacturing .....	—	10	5	619	35 551	411	937	22 516	76 196	135 526	211 245	D
3311	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	1	1	e	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	130	41	3 501	129 980	2 694	5 322	84 337	323 578	180 191	503 286	14 272
3325	Hardware manufacturing .....	9	3	3	e	D	D	D	D	D	D	D	D
33251	Hardware manufacturing .....	9	3	3	e	D	D	D	D	D	D	D	D
332510	Hardware manufacturing ....	9	3	3	e	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	78	20	1 599	57 201	1 300	2 435	40 887	114 624	54 349	167 139	7 786
33271	Machine shops .....	1	55	11	904	29 860	719	1 211	20 944	54 988	31 496	86 647	2 688
332710	Machine shops .....	1	55	11	904	29 860	719	1 211	20 944	54 988	31 496	86 647	2 688
33272	Turned product and screw, nut, and bolt manufacturing .....	1	23	9	695	27 341	581	1 224	19 943	59 636	22 853	80 492	5 098
332721	Precision turned product manufacturing .....	1	19	9	674	26 436	565	1 189	19 339	57 505	21 364	76 872	4 989
3328	Coating, engraving, heat treating, and allied activities .....	2	16	5	371	13 846	290	590	9 043	30 037	9 002	39 038	883
33281	Coating, engraving, heat treating, and allied activities ..	2	16	5	371	13 846	290	590	9 043	30 037	9 002	39 038	883
3329	Other fabricated metal product manufacturing .....	—	13	7	716	28 596	521	1 105	18 054	108 265	52 130	161 752	3 418
33291	Metal valve manufacturing .....	—	8	6	663	27 143	487	1 047	17 254	105 577	50 501	157 406	3 359
332912	Fluid power valve and hose fitting manufacturing .....	—	7	6	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	52	22	1 711	72 291	1 184	2 429	43 567	138 073	89 009	228 912	9 449
3331	Agriculture, construction, and mining machinery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
33311	Agricultural implement manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
333112	Lawn and garden tractor and home lawn and garden equipment manufacturing ..	—	1	1	e	D	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	2	31	9	516	24 419	359	738	15 793	45 213	17 777	59 487	1 579
33351	Metalworking machinery manufacturing .....	2	31	9	516	24 419	359	738	15 793	45 213	17 777	59 487	1 579
3339	Other general purpose machinery manufacturing .....	3	11	8	528	22 285	357	745	13 083	37 424	22 256	61 202	1 944
33399	All other general purpose machinery manufacturing ....	3	9	7	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	16	12	2 426	104 607	1 667	3 598	64 352	345 905	618 669	973 123	53 874

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**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>JACKSON, MI METROPOLITAN STATISTICAL AREA—Con.</b>											
336	Transportation equipment manufacturing—Con.											
3363	Motor vehicle parts manufacturing .....	-	16	12	2 426	104 607	1 667	3 598	64 352	345 905	618 669	973 123
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	3	2	e	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	2	2	e	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	-	2	2	e	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	-	2	2	e	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	-	4	2	f	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	-	1	1	f	D	D	D	D	D	D	D
		-	19	5	270	9 529	183	322	5 558	20 654	10 584	31 738
	<b>KALAMAZOO-PORTAGE, MI METROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	1	1489	167	20 884	1800 570	14 279	128 629	1435 457	15 035 957	12 111 176	17 098 537
311	Food manufacturing .....	4	37	13	1 063	33 289	742	1 391	19 984	115 326	105 457	221 259
3114	Fruit and vegetable preserving and specialty food manufacturing .....	3	10	7	467	11 102	422	833	9 011	38 384	46 497	85 008
31142	Fruit and vegetable canning, pickling, and drying.....	4	5	4	297	7 487	271	544	6 257	24 653	31 660	56 440
311421	Fruit and vegetable canning .....	4	5	4	297	7 487	271	544	6 257	24 653	31 660	56 440
3118	Bakeries and tortilla manufacturing .....	-	17	4	294	7 371	157	271	3 575	32 335	10 910	43 244
31181	Bread and bakery product manufacturing .....	-	17	4	294	7 371	157	271	3 575	32 335	10 910	43 244
3119	Other food manufacturing .....	9	4	1	e	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	-	9	5	999	38 840	790	1 458	29 920	435 272	255 304	691 603
3121	Beverage manufacturing .....	-	9	5	999	38 840	790	1 458	29 920	435 272	255 304	691 603
31211	Soft drink and ice manufacturing .....	-	4	3	f	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	3	3	f	D	D	D	D	D	D	D
322	Paper manufacturing .....	-	19	15	2 492	87 691	1 950	3 890	56 478	340 733	339 976	673 897
3221	Pulp, paper, and paperboard mills .....	-	2	2	e	D	D	D	D	D	D	D
32213	Paperboard mills .....	-	2	2	e	D	D	D	D	D	D	D
322130	Paperboard mills .....	-	2	2	e	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	-	17	13	g	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	-	10	7	1 397	45 072	1 097	2 125	29 737	204 350	178 988	384 414
322211	Corrugated and solid fiber box manufacturing .....	-	6	4	f	D	D	D	D	D	D	D
322215	Nonfolding sanitary food container manufacturing .....	-	2	2	f	D	D	D	D	D	D	D
32222	Paper bag and coated and treated paper manufacturing .....	-	2	2	e	D	D	D	D	D	D	D
322221	Coated and laminated packaging paper and plastics film manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
32229	Other converted paper product manufacturing .....	3	5	4	e	D	D	D	D	D	D	437
322299	All other converted paper product manufacturing .....	-	4	3	303	8 833	257	470	6 058	15 078	19 647	33 724
323	Printing and related support activities .....	4	55	12	1 091	38 955	758	1 388	23 137	108 618	43 771	152 502
3231	Printing and related support activities .....	4	55	12	1 091	38 955	758	1 388	23 137	108 618	43 771	152 502
32311	Printing .....	6	48	10	897	27 684	634	1 120	16 748	74 923	36 880	111 869
323110	Commercial lithographic printing .....	1	22	5	327	10 286	247	382	5 988	21 073	12 835	33 595
323118	Blankbook, looseleaf binders, and devices manufacturing .....	9	1	1	e	D	D	D	D	D	D	799

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>KALAMAZOO-PORTEGE, MI METROPOLITAN STATISTICAL AREA—Con.</b>												
325	Chemical manufacturing .....	—	27	12	2 556	122 987	1 463	3 294	62 293	2 728 954	386 211	3 085 285	97 121
3254	Pharmaceutical and medicine manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
3259	Other chemical product and preparation manufacturing .....	1	11	5	e	D	D	D	D	D	D	D	2 944
326	Plastics and rubber products manufacturing .....	—	27	18	2 588	70 308	2 032	4 110	44 291	264 793	167 937	432 424	14 715
3261	Plastics product manufacturing ..	—	25	17	h	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	21	13	2 395	64 800	1 885	3 818	40 698	238 446	145 950	384 895	13 155
326199	All other plastics product manufacturing .....	—	21	13	2 395	64 800	1 885	3 818	40 698	238 446	145 950	384 895	13 155
331	Primary metal manufacturing .....	1	9	4	530	16 968	437	906	13 133	36 562	36 923	73 861	1 601
3313	Alumina and aluminum production and processing .....	—	2	2	e	D	D	D	D	D	D	D	D
33131	Alumina and aluminum production and processing ...	—	2	2	e	D	D	D	D	D	D	D	D
331316	Aluminum extruded product manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	100	25	2 301	78 945	1 601	3 301	44 380	178 577	158 633	337 182	14 489
3323	Architectural and structural metals manufacturing .....	2	20	7	250	8 070	168	319	4 228	17 197	9 528	26 897	1 900
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	38	6	343	13 347	264	559	9 437	25 593	10 130	35 847	4 564
33271	Machine shops .....	1	32	4	265	10 112	206	440	7 281	18 617	5 047	23 904	D
332710	Machine shops .....	1	32	4	265	10 112	206	440	7 281	18 617	5 047	23 904	D
3328	Coating, engraving, heat treating, and allied activities .....	—	23	4	389	10 046	297	571	6 738	17 907	7 894	25 796	3 167
33281	Coating, engraving, heat treating, and allied activities ..	—	23	4	389	10 046	297	571	6 738	17 907	7 894	25 796	3 167
3329	Other fabricated metal product manufacturing .....	—	10	7	1 243	44 639	821	1 747	22 209	112 448	126 236	238 240	4 539
33291	Metal valve manufacturing ....	—	3	3	481	21 094	308	669	10 368	45 014	29 939	74 490	D
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	e	D	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	—	7	4	762	23 545	513	1 078	11 841	67 434	96 297	163 750	D
332999	All other miscellaneous fabricated metal product manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	84	26	2 414	115 328	1 425	2 782	57 382	179 586	119 627	298 151	8 013
3335	Metalworking machinery manufacturing .....	1	36	13	814	38 635	576	1 256	26 377	63 864	26 562	89 759	3 458
33351	Metalworking machinery manufacturing .....	1	36	13	814	38 635	576	1 256	26 377	63 864	26 562	89 759	3 458
333511	Industrial mold manufacturing .....	1	20	9	523	27 311	393	865	19 562	46 900	16 823	63 286	2 390
3339	Other general purpose machinery manufacturing .....	—	26	6	1 152	58 882	584	1 028	23 643	77 094	67 477	143 963	3 959
33391	Pump and compressor manufacturing .....	—	4	1	e	D	D	D	D	D	D	D	D
333911	Pump and pumping equipment manufacturing ..	—	2	1	e	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	—	14	3	571	30 348	291	563	11 864	33 311	44 671	79 256	2 469
333996	Fluid power pump and motor manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	15	10	1 221	43 679	929	1 876	25 576	107 251	112 914	216 993	8 736
3363	Motor vehicle parts manufacturing .....	—	11	9	1 185	42 820	904	1 837	25 110	105 933	110 845	213 606	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336367	Motor vehicle metal stamping .....	—	4	3	692	22 524	575	1 167	15 001	56 382	52 248	106 073	3 909
336370	Motor vehicle metal stamping .....	—	4	3	692	22 524	575	1 167	15 001	56 382	52 248	106 073	3 909

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>KALAMAZOO-PORTAGE, MI METROPOLITAN STATISTICAL AREA—Con.</b>												
337	Furniture and related product manufacturing .....	—	13	5	886	29 592	616	1 036	15 222	69 048	56 124	120 220	7 038
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	8	3	e	D	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	—	7	3	e	D	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	—	3	2	e	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	4	2	e	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	4	2	e	D	D	D	D	D	D	D	D
337215	Showcase, partition, shelving, and locker manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	6	46	12	2 083	100 320	1 074	2 321	31 272	413 657	242 081	649 657	7 748
3391	Medical equipment and supplies manufacturing .....	6	21	6	g	D	D	D	D	D	D	D	7 322
33911	Medical equipment and supplies manufacturing .....	6	21	6	g	D	D	D	D	D	D	D	7 322
339113	Surgical appliance and supplies manufacturing .....	6	6	3	g	D	D	D	D	D	D	D	D
3399	Other miscellaneous manufacturing .....	4	25	6	e	D	D	D	D	D	D	D	426
	<b>MARINETTE, WI-MI MICROPOLITAN STATISTICAL AREA</b>												
31-33	Manufacturing .....	—	159	50	8 295	303 149	6 458	12 805	207 704	958 763	898 679	1 865 646	56 562
321	Wood product manufacturing .....	2	38	8	629	16 407	528	965	12 307	29 037	55 558	90 489	3 822
3219	Other wood product manufacturing .....	1	16	2	290	7 088	244	449	5 017	15 166	28 024	43 187	2 578
322	Paper manufacturing .....	—	5	5	1 158	58 178	936	1 815	43 793	303 360	270 565	582 581	9 026
3221	Pulp, paper, and paperboard mills .....	—	5	5	1 158	58 178	936	1 815	43 793	303 360	270 565	582 581	9 026
32212	Paper mills .....	1	4	4	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	1	4	4	g	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	5	3	281	8 309	232	422	5 184	33 790	7 167	41 038	D
3261	Plastics product manufacturing ..	—	5	3	281	8 309	232	422	5 184	33 790	7 167	41 038	D
331	Primary metal manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
3315	Foundries .....	—	5	4	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	3	3	g	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	29	5	608	18 677	440	934	12 620	27 735	22 472	48 480	2 563
333	Machinery manufacturing .....	—	18	7	891	25 865	677	1 189	17 366	99 012	101 414	201 638	7 082
3333	Commercial and service industry machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
33331	Commercial and service industry machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
333319	Other commercial and service industry machinery manufacturing .....	—	1	1	e	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	8	7	2 073	78 949	1 652	3 240	52 564	165 534	214 383	373 910	23 062
3363	Motor vehicle parts manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3366	Ship and boat building .....	—	2	2	f	D	D	D	D	D	D	D	D
33661	Ship and boat building .....	—	2	2	f	D	D	D	D	D	D	D	D
336611	Ship building and repairing ..	—	1	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>MARINETTE, WI-MI MICROPOLITAN STATISTICAL AREA—Con.</b>											
337	Furniture and related product manufacturing .....	1	9	4	f	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	6	2	441	13 099	346	728	9 116	34 090	18 092	52 307
33712	Household and institutional furniture manufacturing .....	1	5	2	e	D	D	D	D	D	D	D
337125	Household furniture (except wood and metal) manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	-	5	3	f	D	D	D	D	D	D	D
3399	Other miscellaneous manufacturing .....	-	5	3	f	D	D	D	D	D	D	D
33999	All other miscellaneous manufacturing .....	-	4	2	f	D	D	D	D	D	D	D
339999	All other miscellaneous manufacturing .....	-	2	2	f	D	D	D	D	D	D	D
	<b>MARQUETTE, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	-	47	7	884	27 479	551	1 091	15 097	60 897	80 573	140 690
311	Food manufacturing .....	-	9	2	e	D	D	D	D	D	D	D
321	Wood product manufacturing .....	-	7	2	e	D	D	D	D	D	D	435
	<b>MIDLAND, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	3	69	20	5 742	284 574	4 265	7 826	206 993	651 105	1 580 566	2 177 629
323	Printing and related support activities .....	-	13	3	969	28 018	718	806	17 462	58 286	43 205	98 088
3231	Printing and related support activities .....	-	13	3	969	28 018	718	806	17 462	58 286	43 205	98 088
32311	Printing .....	-	12	3	f	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	-	5	2	f	D	D	D	D	D	D	D
323113	Commercial screen printing..	-	1	1	e	D	D	D	D	D	D	D
325	Chemical manufacturing .....	3	6	4	h	D	D	D	D	D	D	D
3251	Basic chemical manufacturing ...	4	4	2	h	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	4	3	2	h	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing .....	4	3	2	h	D	D	D	D	D	D	D
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
32521	Resin and synthetic rubber manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	-	1	1	e	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	4	4	3	512	20 900	373	743	14 352	48 164	43 031	90 803
3261	Plastics product manufacturing ..	5	3	2	e	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	5	2	2	e	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	5	2	2	e	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	-	7	2	318	8 236	274	520	6 228	8 598	16 536	25 359
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	-	6	1	e	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	-	3	1	e	D	D	D	D	D	D	D
337127	Institutional furniture manufacturing .....	-	1	1	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>MOUNT PLEASANT, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	57	13	2 606	86 174	1 817	3 333	52 733	204 160	237 686	443 008
332	Fabricated metal product manufacturing .....	—	10	2	349	10 491	233	431	6 652	29 743	11 838	41 976
3323	Architectural and structural metals manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33232	Ornamental and architectural metal products manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
332322	Sheet metal work manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	7	4	1 405	51 735	902	1 671	27 638	121 257	102 058	223 937
3331	Agriculture, construction, and mining machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
33312	Construction machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
333120	Construction machinery manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
3332	Industrial machinery manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
33321	Sawmill and woodworking machinery manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
333210	Sawmill and woodworking machinery manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	5	2	566	17 682	452	823	13 933	39 756	109 544	149 530
3363	Motor vehicle parts manufacturing .....	—	4	2	f	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
	<b>NILES-BENTON HARBOR, MI METROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	2	370	129	14 392	547 184	10 588	21 584	353 086	1 257 131	1 175 189	2 440 261
311	Food manufacturing .....	—	16	5	372	9 974	286	522	6 650	46 664	57 816	110 564
322	Paper manufacturing .....	2	11	7	484	17 963	356	708	10 957	40 138	81 821	123 366
3222	Converted paper product manufacturing .....	2	10	6	e	D	D	D	D	D	D	822
323	Printing and related support activities .....	—	20	6	939	33 611	749	1 344	25 008	78 989	62 123	142 963
3231	Printing and related support activities .....	—	20	6	939	33 611	749	1 344	25 008	78 989	62 123	142 963
32311	Printing .....	—	18	6	f	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	—	8	3	701	27 162	560	975	20 629	65 690	53 182	121 109
326	Plastics and rubber products manufacturing .....	3	122	13	1 622	140 843	1 151	1 333	127 012	196 794	190 192	188 311
3261	Plastics product manufacturing ..	5	19	11	1 368	132 455	1 959	1 968	122 066	165 481	155 175	122 332
32619	Other plastics product manufacturing .....	5	16	9	1 310	131 003	1 917	1 895	121 266	162 146	152 947	116 766
326199	All other plastics product manufacturing .....	5	15	8	g	D	D	D	D	D	D	D
3262	Rubber product manufacturing .....	—	3	2	254	8 388	192	365	4 946	31 313	35 017	65 979
32629	Other rubber product manufacturing .....	—	3	2	254	8 388	192	365	4 946	31 313	35 017	65 979

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MiSAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>NILES-BENTON HARBOR, MI METROPOLITAN STATISTICAL AREA—Con.</b>											
327	Nonmetallic mineral product manufacturing .....	—	11	4	489	16 158	402	757	11 230	39 333	46 677	86 113
3272	Glass and glass product manufacturing .....	—	3	3	416	13 386	345	642	9 050	32 224	39 987	72 297
32721	Glass and glass product manufacturing .....	—	3	3	416	13 386	345	642	9 050	32 224	39 987	72 297
327215	Glass product manufacturing made of purchased glass ..	—	3	3	416	13 386	345	642	9 050	32 224	39 987	72 297
331	Primary metal manufacturing .....	1	30	19	1 694	62 086	1 357	2 913	42 632	139 840	137 764	273 266
3315	Foundries .....	1	26	17	1 388	50 303	1 108	2 371	34 126	106 848	97 000	202 252
33152	Nonferrous metal foundries .....	—	22	15	1 305	47 324	1 040	2 233	31 974	99 327	93 174	190 905
331521	Aluminum die-casting foundries .....	—	15	11	1 039	38 022	831	1 796	26 080	73 476	78 696	151 245
332	Fabricated metal product manufacturing .....	1	86	23	1 391	50 911	1 013	2 095	32 123	118 204	92 660	210 130
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	35	8	474	17 083	341	715	11 347	32 306	18 897	50 235
332711	Machine shops .....	2	25	3	254	8 864	179	349	5 746	16 575	13 424	29 225
332710	Machine shops .....	2	25	3	254	8 864	179	349	5 746	16 575	13 424	29 225
333	Machinery manufacturing .....	2	166	128	12 220	198 444	1 409	1 816	52 245	176 792	131 151	311 578
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	13	50	17	1 102	52 455	789	1 683	33 069	81 530	45 888	130 851
33351	Metalworking machinery manufacturing .....	13	50	17	1 102	52 455	789	1 683	33 069	81 530	45 888	130 851
333511	Industrial mold manufacturing .....	—	23	9	569	26 207	443	918	17 945	41 790	16 282	60 575
333514	Special die and tool, die set, jig, and fixture manufacturing .....	3	17	4	271	12 689	203	433	8 332	19 656	9 344	28 960
334	Computer and electronic product manufacturing .....	—	8	3	f	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
334516	Analytical laboratory instrument manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	7	3	405	17 601	349	797	14 359	29 008	24 666	54 015
3352	Household appliance manufacturing .....	—	3	1	e	D	D	D	D	D	D	D
33522	Major appliance manufacturing. Household laundry equipment manufacturing ..	—	2	1	e	D	D	D	D	D	D	D
335224	Household laundry equipment manufacturing ..	—	1	1	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	2	23	8	2 929	133 180	2 438	5 197	100 985	364 868	342 885	702 618
3363	Motor vehicle parts manufacturing .....	2	15	6	h	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	2	1	g	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	1	g	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	6	7	3	1 298	45 399	1 089	2 148	33 356	113 486	117 764	230 643
336399	All other motor vehicle parts manufacturing .....	6	7	3	1 298	45 399	1 089	2 148	33 356	113 486	117 764	230 643

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)				
	<b>NILES-BENTON HARBOR, MI METROPOLITAN STATISTICAL AREA—Con.</b>											
337	Furniture and related product manufacturing .....	6	19	5	621	19 349	467	929	11 932	28 507	47 555	75 451
3372	Office furniture (including fixtures) manufacturing .....	7	6	4	509	16 118	388	762	10 224	22 085	40 105	61 599
33721	Office furniture (including fixtures) manufacturing .....	7	6	4	509	16 118	388	762	10 224	22 085	40 105	61 599
337215	Showcase, partition, shelving, and locker manufacturing .....	7	5	4	e	D	D	D	D	D	D	D
	<b>SAULT STE. MARIE, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	6	25	9	f	D	D	D	D	D	D	5 887
	<b>SOUTH BEND-MISHAWAKA, IN-MI METROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	539	197	22 716	857 250	16 130	31 817	526 030	2 940 425	2 618 498	5 653 183
311	Food manufacturing .....	3	25	9	690	19 400	423	821	9 339	63 527	127 160	196 323
321	Wood product manufacturing .....	—	25	7	932	25 896	695	1 354	16 035	64 956	197 952	261 581
3219	Other wood product manufacturing .....	—	20	4	f	D	D	D	D	D	D	963
32191	Millwork.....	—	7	3	f	D	D	D	D	D	D	D
321911	Wood window and door manufacturing .....	—	3	2	e	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	10	8	586	21 419	449	936	11 984	64 532	92 682	157 314
3222	Converted paper product manufacturing .....	—	10	8	586	21 419	449	936	11 984	64 532	92 682	157 314
32221	Paperboard container manufacturing .....	—	8	8	f	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	—	5	5	451	17 748	335	685	9 644	48 168	85 346	133 442
323	Printing and related support activities .....	1	42	10	750	30 423	526	1 037	17 380	67 281	44 030	111 599
3231	Printing and related support activities .....	1	42	10	750	30 423	526	1 037	17 380	67 281	44 030	111 599
32311	Printing .....	1	39	10	728	30 104	519	1 028	17 186	66 519	43 932	110 729
323110	Commercial lithographic printing .....	1	20	8	f	D	D	D	D	D	D	D
325	Chemical manufacturing .....	—	21	6	1 150	50 829	656	1 731	29 151	487 872	436 305	985 326
3254	Pharmaceutical and medicine manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	—	2	1	f	D	D	D	D	D	D	D
325413	In-vitro diagnostic substance manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	51	31	3 876	93 135	2 680	5 098	66 584	245 065	143 628	391 977
3261	Plastics product manufacturing ..	1	44	29	3 504	81 544	2 356	4 496	57 066	222 024	120 201	342 865
32619	Other plastics product manufacturing .....	1	37	28	3 361	77 275	2 243	4 239	54 099	211 834	110 447	323 083
326199	All other plastics product manufacturing .....	1	35	27	h	D	D	D	D	D	D	D
3262	Rubber product manufacturing ...	1	7	2	372	11 591	324	602	9 518	23 041	23 427	49 112
32621	Tire manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
326211	Tire manufacturing (except retreading) .....	—	1	1	e	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	14	5	341	16 459	254	522	10 752	63 708	32 178	95 143
												5 787

See footnotes at end of table.

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		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>SOUTH BEND-MISHAWAKA, IN-MI METROPOLITAN STATISTICAL AREA—Con.</b>												
331	Primary metal manufacturing .....	—	22	18	2 153	73 936	1 653	3 298	50 832	169 298	205 077	374 012	12 707
3312	Steel product manufacturing from purchased steel .....	—	4	4	490	15 725	381	737	10 554	41 828	63 642	105 161	1 858
33121	Iron and steel pipe and tube manufacturing from purchased steel .....	—	2	2	e	D	D	D	D	D	D	D	D
331210	Iron and steel pipe and tube manufacturing from purchased steel .....	—	2	2	e	D	D	D	D	D	D	D	D
3313	Alumina and aluminum production and processing .....	—	4	4	e	D	D	D	D	D	D	D	7 957
33131	Alumina and aluminum production and processing .....	—	4	4	e	D	D	D	D	D	D	D	7 957
331316	Aluminum extruded product manufacturing .....	—	3	3	449	12 701	357	751	8 977	20 453	35 158	55 065	D
3314	Nonferrous metal (except aluminum) production and processing .....	3	3	3	e	D	D	D	D	D	D	D	D
33142	Copper rolling, drawing, extruding, and alloying .....	3	3	3	e	D	D	D	D	D	D	D	D
331421	Copper rolling, drawing, and extruding .....	3	3	3	e	D	D	D	D	D	D	D	D
3315	Foundries .....	—	11	7	804	32 101	582	1 143	21 605	79 179	51 353	131 163	D
33152	Nonferrous metal foundries .....	—	7	4	557	24 302	376	730	15 409	65 561	44 330	110 884	D
331521	Aluminum die-casting foundries .....	—	2	2	e	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	130	42	4 074	179 766	2 871	5 864	112 461	922 218	357 987	1 288 611	26 655
3321	Forging and stamping .....	—	6	4	301	13 420	230	542	8 888	30 096	29 124	57 592	824
33211	Forging and stamping .....	—	6	4	301	13 420	230	542	8 888	30 096	29 124	57 592	824
3322	Cutlery and handtool manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
33221	Cutlery and handtool manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
332212	Hand and edge tool manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	1	23	4	601	21 698	463	932	14 606	44 394	47 150	91 319	2 471
33232	Ornamental and architectural metal products manufacturing .....	1	13	3	360	11 867	287	556	8 527	23 173	22 335	45 248	732
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	2	57	14	850	30 925	641	1 283	20 349	63 911	22 887	87 501	3 745
33271	Machine shops .....	3	43	9	531	19 052	407	806	12 833	38 035	13 910	52 263	2 840
33272	Machine shops .....	3	43	9	531	19 052	407	806	12 833	38 035	13 910	52 263	2 840
332721	Turned product and screw, nut, and bolt manufacturing .....	1	14	5	319	11 873	234	477	7 516	25 876	8 977	35 238	905
332721	Precision turned product manufacturing .....	—	13	5	e	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	—	14	7	1 188	65 730	763	1 658	40 967	659 353	190 430	860 224	15 679
33281	Coating, engraving, heat treating, and allied activities .....	—	14	7	1 188	65 730	763	1 658	40 967	659 353	190 430	860 224	15 679
332811	Metal heat treating .....	—	4	3	f	D	D	D	D	D	D	D	D
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	—	5	1	e	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	5	16	7	401	14 854	286	480	8 008	31 306	16 881	47 326	829
33291	Metal valve manufacturing .....	6	6	5	259	10 211	175	339	4 815	22 551	11 952	33 767	529
333	Machinery manufacturing .....	2	62	18	1 190	56 231	763	1 559	31 555	85 016	68 867	160 697	D
3335	Metalworking machinery manufacturing .....	—	43	8	635	31 309	408	872	18 551	42 689	24 442	74 153	D
33351	Metalworking machinery manufacturing .....	—	43	8	635	31 309	408	872	18 551	42 689	24 442	74 153	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	13	3	254	13 220	150	330	7 687	19 172	10 249	30 870	D
335	Electrical equipment, appliance, and component manufacturing .....	1	11	5	438	14 820	317	631	6 326	108 408	32 969	140 578	1 755
3359	Other electrical equipment and component manufacturing .....	—	8	3	311	9 400	243	479	4 838	95 764	23 570	119 135	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MSAAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>SOUTH BEND-MISHAWAKA, IN-MI METROPOLITAN STATISTICAL AREA—Con.</b>											
336	Transportation equipment manufacturing .....	—	34	20	h	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	g	D	D	D	D	D	D	D
3362	Motor vehicle body and trailer manufacturing .....	—	8	5	e	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	—	8	5	e	D	D	D	D	D	D	D
336213	Motor home manufacturing ..	—	4	2	e	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	18	10	1 882	65 122	1 493	3 224	47 358	174 213	252 410	442 621
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	3	2	f	D	D	D	D	D	D	D
336311	Carburetor, piston, piston ring, and valve manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	4	7	3	361	10 442	256	492	6 298	18 542	29 770
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	4	7	3	361	10 442	256	492	6 298	18 542	29 770
33639	Other motor vehicle parts manufacturing .....	—	5	4	743	21 837	597	1 230	16 333	61 614	134 343	208 512
336399	All other motor vehicle parts manufacturing .....	—	5	4	743	21 837	597	1 230	16 333	61 614	134 343	208 512
3364	Aerospace product and parts manufacturing .....	—	7	4	g	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	7	4	g	D	D	D	D	D	D	D
336413	Other aircraft parts and auxiliary equipment manufacturing .....	—	5	3	f	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	7	24	7	f	D	D	D	D	D	D	1 045
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	9	15	1	f	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	9	8	1	f	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	9	6	1	f	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	4	45	7	f	D	D	D	D	D	D	D
3399	Other miscellaneous manufacturing .....	2	28	5	e	D	D	D	D	D	D	D
	<b>STURGIS, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	157	70	8 977	386 645	6 919	14 613	274 681	1 294 691	1 068 653	2 341 397
311	Food manufacturing .....	—	7	2	f	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
311514	Dry, condensed, and evaporated dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	11	9	811	32 760	639	1 435	23 413	96 938	194 865	290 955
3222	Converted paper product manufacturing .....	—	9	7	f	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	4	3	301	12 502	233	518	8 412	26 908	50 925	77 186
326	Plastics and rubber products manufacturing .....	1	24	15	1 952	65 296	1 668	3 556	48 760	173 941	127 888	299 956
3261	Plastics product manufacturing ..	—	20	13	1 831	61 557	1 573	3 349	46 337	165 829	121 437	285 391
32619	Other plastics product manufacturing .....	—	17	12	1 799	60 619	1 546	3 306	45 626	162 817	119 106	280 118
326199	All other plastics product manufacturing .....	—	16	11	g	D	D	D	D	D	D	11 371
331	Primary metal manufacturing .....	—	5	3	285	12 554	225	448	9 090	36 501	33 163	69 169

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MISAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text.]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)			
	<b>STURGIS, MI MICROPOLITAN STATISTICAL AREA—Con.</b>											
332	Fabricated metal product manufacturing .....	—	35	14	1 075	39 588	769	1 526	23 783	88 110	52 616	140 742
3329	Other fabricated metal product manufacturing .....	—	9	5	514	20 149	353	665	11 099	49 354	28 719	77 898
33291	Metal valve manufacturing ....	—	2	2	e	D	D	D	D	D	D	D
332911	Industrial valve manufacturing .....	—	2	2	e	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	27	11	939	42 024	650	1 380	26 525	81 532	46 791	130 323
3335	Metalworking machinery manufacturing .....	—	19	8	574	28 045	452	979	21 634	48 631	23 328	75 328
33351	Metalworking machinery manufacturing .....	—	19	8	574	28 045	452	979	21 634	48 631	23 328	75 328
333513	Machine tool (metal forming types) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	15	12	2 957	153 490	2 315	4 925	117 972	295 448	420 229	711 028
3362	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D
336211	Motor vehicle body manufacturing .....	—	1	1	e	D	D	D	D	D	D	D
336214	Travel trailer and camper manufacturing .....	2	8	7	f	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	4	3	1 951	120 736	1 522	3 403	95 766	233 162	330 985	561 004
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
	<b>TRAVERSE CITY, MI MICROPOLITAN STATISTICAL AREA</b>											
31-33	Manufacturing .....	—	271	71	6 937	240 543	4 876	9 580	141 208	624 822	555 378	1 176 694
311	Food manufacturing .....	—	24	6	1 047	34 112	856	1 574	27 683	162 464	158 774	320 391
3114	Fruit and vegetable preserving and specialty food manufacturing .....	—	4	4	372	9 844	278	399	6 234	19 402	39 236	57 861
31142	Fruit and vegetable canning, pickling, and drying .....	—	2	2	e	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	—	9	2	f	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	—	9	2	f	D	D	D	D	D	D	D
311813	Frozen cakes, pies, and other pastries manufacturing .....	—	1	1	f	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	11	3	292	8 459	236	470	5 521	18 091	16 149	34 051
3261	Plastics product manufacturing ..	1	10	3	e	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	43	14	852	29 647	644	1 336	18 957	67 686	41 556	109 787
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	23	9	507	17 695	422	864	12 960	41 658	27 713	69 329
33271	Machine shops .....	2	16	4	254	8 697	211	420	6 394	17 920	7 043	25 212
332710	Machine shops .....	2	16	4	254	8 697	211	420	6 394	17 920	7 043	25 212
33272	Turned product and screw, nut, and bolt manufacturing .....	—	7	5	253	8 998	211	444	6 566	23 738	20 670	44 117
333	Machinery manufacturing .....	1	35	12	1 080	42 155	587	1 190	19 203	94 890	65 778	160 092
3335	Metalworking machinery manufacturing .....	1	22	5	405	18 085	271	544	10 740	37 935	20 570	59 175
33351	Metalworking machinery manufacturing .....	1	22	5	405	18 085	271	544	10 740	37 935	20 570	59 175
3339	Other general purpose machinery manufacturing .....	2	5	5	325	9 178	162	343	4 553	25 752	24 064	48 526
33399	All other general purpose machinery manufacturing ....	2	2	2	e	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 2. Industry Statistics for Metropolitan and Micropolitan Statistical Areas: 2002—Con.**

[Includes data for industry groups and industries with 250 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For definitions of CSAs, MeSAs, MIsAs, and MDs, see Appendix E. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
		E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)					
	<b>TRAVERSE CITY, MI MICROPOLITAN STATISTICAL AREA—Con.</b>												
334	Computer and electronic product manufacturing .....	2	11	5	422	15 845	237	343	5 421	18 786	6 419	25 213	583
3344	Semiconductor and other electronic component manufacturing .....	4	5	3	310	10 469	194	310	4 344	9 742	3 464	13 056	317
33441	Semiconductor and other electronic component manufacturing .....	4	5	3	310	10 469	194	310	4 344	9 742	3 464	13 056	317
335	Electrical equipment, appliance, and component manufacturing .....	—	6	3	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
33593 335931	Wiring device manufacturing... Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	13	6	1 137	37 400	916	1 919	23 997	106 907	166 816	273 051	6 880
3363	Motor vehicle parts manufacturing .....	—	12	6	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	1	e	D	D	D	D	D	D	D	D
33637 336370	Motor vehicle metal stamping... Motor vehicle metal stamping .....	—	3	2	451	18 576	379	886	15 018	48 367	62 598	111 130	2 405
337	Furniture and related product manufacturing .....	3	20	6	287	9 022	224	469	6 360	16 739	10 102	26 695	1 142
339	Miscellaneous manufacturing .....	1	30	4	304	10 981	191	371	5 233	32 209	13 118	45 071	1 823

<sup>1</sup>Some 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.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Industries 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: 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.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Industry Statistics for Counties: 2002**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>ALGER</b>												
31-33	Manufacturing .....	-	9	3	753	27 072	612	1 191	19 818	75 441	86 270	161 956	5 848
	<b>ALLEGAN</b>												
31-33	Manufacturing .....	-	208	90	16 614	609 067	11 936	24 747	384 517	2 101 598	2 221 353	4 322 906	92 857
311	Food manufacturing .....	-	18	9	2 118	62 367	1 755	3 599	48 054	412 732	514 984	928 245	7 652
3116	Animal slaughtering and processing .....	-	3	2	g	D	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	-	3	2	g	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	-	1	1	g	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	-	2	1	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	3	5	3	511	29 468	362	774	19 138	103 772	77 142	180 492	8 889
325	Chemical manufacturing .....	-	5	4	h	D	D	D	D	D	D	D	19 502
3254	Pharmaceutical and medicine manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	13	11	1 689	126 234	1 461	1 029	12 506	184 223	162 483	142 863	13 206
3261	Plastics product manufacturing ..	-	12	10	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	-	11	4	564	21 314	414	728	12 364	96 453	113 771	209 961	D
332	Fabricated metal product manufacturing .....	-	53	18	1 816	63 774	1 406	2 717	42 417	156 703	68 657	228 154	3 909
3329	Other fabricated metal product manufacturing .....	-	8	4	695	28 124	524	1 002	18 910	65 806	23 909	92 782	1 731
33291	Metal valve manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	3	139	111	1 724	129 475	1 488	1 952	16 691	165 152	145 001	107 674	13 325
336	Transportation equipment manufacturing .....	1	14	9	3 561	122 031	2 703	5 511	83 546	304 007	580 593	881 912	12 982
3363	Motor vehicle parts manufacturing .....	-	9	7	h	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	3	3	f	D	D	D	D	D	D	D	3 751
336370	Motor vehicle metal stamping .....	-	3	3	f	D	D	D	D	D	D	D	3 751
3366	Ship and boat building .....	9	2	2	f	D	D	D	D	D	D	D	D
33661	Ship and boat building .....	9	2	2	f	D	D	D	D	D	D	D	D
336612	Boat building .....	9	2	2	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	-	11	6	g	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	-	7	5	g	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	-	7	5	g	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
	<b>ALPENA</b>												
31-33	Manufacturing .....	4	52	17	1 893	79 227	1 312	2 560	47 606	224 722	168 523	398 731	9 086
333	Machinery manufacturing .....	-	12	5	764	34 065	456	766	14 417	74 084	72 076	150 305	1 029
	<b>ANTRIM</b>												
31-33	Manufacturing .....	2	55	13	1 218	44 226	799	1 668	26 994	103 212	104 656	202 448	5 261
	<b>ARENAC</b>												
31-33	Manufacturing .....	2	32	12	576	17 980	465	903	12 632	43 358	43 279	87 433	3 043

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BARRY</b>												
31-33	Manufacturing .....	1	75	15	3 419	121 685	2 664	4 929	82 817	363 253	279 196	643 561	15 295
326	Plastics and rubber products manufacturing .....	-	6	3	610	21 914	466	973	14 481	59 689	29 633	90 255	1 943
335	Electrical equipment, appliance, and component manufacturing .....	-	3	1	g	D	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	-	2	1	g	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing.	-	1	1	g	D	D	D	D	D	D	D	D
335228	Other major household appliance manufacturing ...	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	6	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>BAY</b>												
31-33	Manufacturing .....	1	138	41	5 119	245 373	4 028	8 226	180 565	512 860	589 460	1 113 549	43 237
332	Fabricated metal product manufacturing .....	-	28	9	534	20 855	365	728	11 638	34 029	28 102	65 557	3 308
336	Transportation equipment manufacturing .....	-	6	3	1 856	115 684	1 642	3 364	100 421	213 801	260 556	472 106	D
3363	Motor vehicle parts manufacturing .....	-	4	3	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
	<b>BERRIEN</b>												
31-33	Manufacturing .....	2	370	129	14 392	547 184	10 588	21 584	353 086	1 257 131	1 175 189	2 440 261	78 786
323	Printing and related support activities .....	-	20	6	939	33 611	749	1 344	25 008	78 989	62 123	142 963	2 682
3231	Printing and related support activities .....	-	20	6	939	33 611	749	1 344	25 008	78 989	62 123	142 963	2 682
32311	Printing .....	-	18	6	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	-	8	3	701	27 162	560	975	20 629	65 690	53 182	121 109	1 891
326	Plastics and rubber products manufacturing .....	3	22	13	'1 622	'40 843	'1 151	'2 333	'27 012	'96 794	'90 192	'188 311	'8 616
3261	Plastics product manufacturing ..	5	'19	'11	'1 368	'32 455	'959	'1 968	'22 066	'65 481	'55 175	'122 332	D
32619	Other plastics product manufacturing .....	5	'16	'9	'1 310	'31 003	'917	'1 895	'21 266	'62 146	'52 947	'116 766	'7 175
326199	All other plastics product manufacturing .....	'5	'15	'8	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	1	30	19	1 694	62 086	1 357	2 913	42 632	139 840	137 764	273 266	12 270
3315	Foundries .....	1	26	17	1 388	50 303	1 108	2 371	34 126	106 848	97 000	202 252	D
33152	Nonferrous metal foundries ....	-	22	15	1 305	47 324	1 040	2 233	31 974	99 327	93 174	190 905	7 520
331521	Aluminum die-casting foundries.....	-	15	11	1 039	38 022	831	1 796	26 080	73 476	78 696	151 245	D
332	Fabricated metal product manufacturing .....	1	86	23	1 391	50 911	1 013	2 095	32 123	118 204	92 660	210 130	6 646
333	Machinery manufacturing .....	2	'66	'28	'2 220	'98 444	'1 409	'2 816	'52 245	'176 792	'131 151	'311 578	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	'3	'50	'17	'1 102	'52 455	'789	'1 683	'33 069	'81 530	'45 888	'130 851	'3 214
33351	Metalworking machinery manufacturing .....	'3	'50	'17	'1 102	'52 455	'789	'1 683	'33 069	'81 530	'45 888	'130 851	'3 214
333511	Industrial mold manufacturing .....	-	'23	'9	'569	'26 207	'443	'918	'17 945	'41 790	'16 282	'60 575	'1 996

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	<b>BERRIEN—Con.</b>												
334	Computer and electronic product manufacturing .....	—	8	3	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	2	1	f	D	D	D	D	D	D	D	D
334516	Analytical laboratory instrument manufacturing ..	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	2	23	8	2 929	133 180	2 438	5 197	100 985	364 868	342 885	702 618	28 314
3363	Motor vehicle parts manufacturing .....	2	15	6	h	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	6	7	3	1 298	45 399	1 089	2 148	33 356	113 486	117 764	230 643	5 415
336399	All other motor vehicle parts manufacturing .....	6	7	3	1 298	45 399	1 089	2 148	33 356	113 486	117 764	230 643	5 415
337	Furniture and related product manufacturing .....	6	19	5	621	19 349	467	929	11 932	28 507	47 555	75 451	856
3372	Office furniture (including fixtures) manufacturing .....	7	6	4	509	16 118	388	762	10 224	22 085	40 105	61 599	D
33721	Office furniture (including fixtures) manufacturing .....	7	6	4	509	16 118	388	762	10 224	22 085	40 105	61 599	D
	<b>BRANCH</b>												
31-33	Manufacturing .....	—	94	43	3 977	134 810	2 976	5 665	88 744	347 710	413 086	758 816	45 051
332	Fabricated metal product manufacturing .....	—	24	8	788	27 319	582	1 112	16 886	76 217	43 930	120 036	2 137
336	Transportation equipment manufacturing .....	—	11	8	1 235	39 907	899	1 557	26 616	89 638	93 841	181 815	31 603
3363	Motor vehicle parts manufacturing .....	—	10	8	g	D	D	D	D	D	D	D	D
	<b>CALHOUN</b>												
31-33	Manufacturing .....	—	202	84	13 970	576 027	10 526	21 564	391 087	2 202 344	1 856 185	4 047 350	212 284
311	Food manufacturing .....	—	19	7	1 878	113 450	1 519	3 280	90 058	681 783	324 593	998 606	65 141
3112	Grain and oilseed milling .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
31123	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
311230	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
322	Paper manufacturing .....	—	5	4	530	24 050	365	830	13 721	75 784	59 656	134 785	5 341
326	Plastics and rubber products manufacturing .....	—	13	8	1 433	54 460	984	2 073	32 950	101 286	107 741	208 365	11 897
3261	Plastics product manufacturing ..	—	12	7	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	10	6	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	10	6	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	7	6	4	566	23 661	348	752	12 918	44 227	41 581	86 196	2 169
332	Fabricated metal product manufacturing .....	1	49	19	1 460	53 210	1 080	2 263	34 771	157 427	126 040	283 001	6 753
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	18	8	782	31 515	585	1 269	21 288	95 287	94 460	187 861	5 618
333	Machinery manufacturing .....	—	17	7	759	25 983	489	842	11 914	56 260	43 770	98 954	7 498
3339	Other general purpose machinery manufacturing .....	—	7	5	651	21 226	411	676	8 953	46 191	38 768	83 595	D
335	Electrical equipment, appliance, and component manufacturing .....	—	4	3	1 113	39 784	689	1 522	22 652	84 266	180 895	265 096	D
3359	Other electrical equipment and component manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33593	Wiring device manufacturing... Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
335931	Wiring device manufacturing... Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>CALHOUN—Con.</b>												
336	Transportation equipment manufacturing .....	—	17	14	4 920	192 391	4 003	7 974	136 137	859 523	882 968	1 742 719	95 316
3363	Motor vehicle parts manufacturing .....	—	15	12	h	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
336321	Vehicular lighting equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
	<b>CASS</b>												
31-33	Manufacturing .....	1	87	29	3 474	109 358	2 715	5 220	70 715	269 418	318 303	584 158	10 488
326	Plastics and rubber products manufacturing .....	—	9	5	572	15 080	472	881	10 279	39 240	29 555	68 243	1 864
3261	Plastics product manufacturing ..	—	8	5	f	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	6	4	722	27 398	514	971	17 482	71 518	71 499	143 923	1 929
337	Furniture and related product manufacturing .....	9	7	2	f	D	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	9	5	1	f	D	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	9	3	1	f	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	9	3	1	f	D	D	D	D	D	D	D	D
	<b>CHARLEVOIX</b>												
31-33	Manufacturing .....	2	58	20	2 535	101 601	1 917	4 037	64 411	343 927	211 914	549 353	22 597
331	Primary metal manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3315	Foundries .....	—	2	2	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	1	1	f	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>CHEBOYGAN</b>												
31-33	Manufacturing .....	1	32	6	677	17 891	534	1 063	10 952	40 376	42 913	83 813	17 293
	<b>CHIPPEWA</b>												
31-33	Manufacturing .....	6	25	9	f	D	D	D	D	D	D	D	5 887
	<b>CLARE</b>												
31-33	Manufacturing .....	—	27	9	815	27 085	658	1 299	18 705	51 963	75 405	129 119	2 536
	<b>CLINTON</b>												
31-33	Manufacturing .....	—	65	19	g	D	D	D	D	D	D	D	15 060
333	Machinery manufacturing .....	1	16	7	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333613	Mechanical power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	1 203
3363	Motor vehicle parts manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	1 203
33639	Other motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>CRAWFORD</b>												
31-33	Manufacturing .....	1	18	9	641	23 165	470	908	15 356	61 047	87 485	147 024	5 918
	<b>DELTA</b>												
31-33	Manufacturing .....	-	63	21	2 740	132 649	2 023	4 090	90 824	409 537	339 002	740 715	35 172
322	Paper manufacturing .....	-	2	1	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	-	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	-	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	-	1	1	g	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	8	6	589	23 915	346	771	11 833	63 621	73 605	136 171	D
	<b>DICKINSON</b>												
31-33	Manufacturing .....	-	51	19	g	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, and 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
	<b>EATON</b>												
31-33	Manufacturing .....	-	82	31	h	D	D	D	D	D	D	D	19 493
331	Primary metal manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	25	5	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	8	4	f	D	D	D	D	D	D	D	D
	<b>EMMET</b>												
31-33	Manufacturing .....	-	66	14	1 765	61 025	1 231	2 363	35 321	168 677	135 259	304 104	6 262
	<b>GENESEE</b>												
31-33	Manufacturing .....	-	347	98	23 871	1 350 015	19 399	36 700	1 077 780	2 677 385	6 573 440	9 269 929	140 474
322	Paper manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	1 790
3222	Converted paper product manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	1 790
32221	Paperboard container manufacturing .....	-	4	4	f	D	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	16	9	1 548	52 401	1 218	2 514	33 673	131 085	117 223	258 296	5 599
3261	Plastics product manufacturing ..	1	16	9	1 548	52 401	1 218	2 514	33 673	131 085	117 223	258 296	5 599
32619	Other plastics product manufacturing .....	2	12	6	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	2	12	6	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	4	72	21	1 475	50 271	1 103	2 247	32 104	111 595	81 247	192 159	3 753
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	4	29	10	573	23 528	443	929	16 160	53 860	34 101	86 870	1 797
333	Machinery manufacturing .....	1	37	16	933	47 116	650	1 348	33 253	98 369	90 981	186 887	3 801
3335	Metalworking machinery manufacturing .....	2	27	13	630	31 117	431	901	20 715	63 273	43 262	104 008	1 464
33351	Metalworking machinery manufacturing .....	2	27	13	630	31 117	431	901	20 715	63 273	43 262	104 008	1 464
334	Computer and electronic product manufacturing .....	-	12	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	-	5	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	-	5	1	g	D	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D

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	<b>GENESEE—Con.</b>												
336	Transportation equipment manufacturing .....	—	29	16	j	D	D	D	D	D	D	D	99 273
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	22	14	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	8	6	4 401	268 994	4 041	6 407	242 613	942 026	1 535 864	2 474 845	D
336312	Gasoline engine and engine parts manufacturing .....	—	8	6	4 401	268 994	4 041	6 407	242 613	942 026	1 535 864	2 474 845	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	6	4	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	6	4	h	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	1	36	9	556	16 692	372	692	9 274	35 201	18 955	54 433	834
	<b>GLADWIN</b>												
31-33	Manufacturing .....	3	42	12	1 000	34 771	704	1 301	20 426	80 577	58 225	137 293	9 861
	<b>GOGEBIC</b>												
31-33	Manufacturing .....	3	26	6	602	16 065	516	905	11 895	36 421	27 588	63 565	1 694
	<b>GRAND TRAVERSE</b>												
31-33	Manufacturing .....	—	206	56	5 581	200 314	3 845	7 762	115 317	544 825	474 380	1 015 515	29 948
311	Food manufacturing .....	—	14	3	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	—	7	2	f	D	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	—	7	2	f	D	D	D	D	D	D	D	D
311813	Frozen cakes, pies, and other pastries manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	30	10	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	30	12	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	5	2	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
33593	Wiring device manufacturing...	—	1	1	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	11	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	11	5	g	D	D	D	D	D	D	D	D
	<b>GRATIO</b>												
31-33	Manufacturing .....	—	60	20	2 626	91 183	2 074	3 788	57 156	211 775	200 311	411 162	14 422
336	Transportation equipment manufacturing .....	—	8	5	1 372	45 508	1 119	1 993	27 800	87 999	103 950	190 152	4 500
3363	Motor vehicle parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>HILLSDALE</b>												
31-33	Manufacturing .....	—	102	46	6 076	205 907	4 851	9 895	146 349	525 585	909 755	1 431 367	49 777
326	Plastics and rubber products manufacturing .....	—	9	3	604	17 650	496	931	12 391	45 946	40 517	86 139	D
3261	Plastics product manufacturing ..	—	8	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	35	18	1 327	40 787	975	1 860	24 457	106 427	73 875	180 262	5 786
336	Transportation equipment manufacturing .....	—	12	10	2 710	93 826	2 301	4 953	73 537	260 024	566 920	826 654	30 257
3363	Motor vehicle parts manufacturing .....	—	12	10	2 710	93 826	2 301	4 953	73 537	260 024	566 920	826 654	30 257
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	4	4	1 264	40 894	1 075	2 291	31 898	117 509	416 071	534 877	14 502
	All other motor vehicle parts manufacturing .....	—	4	4	1 264	40 894	1 075	2 291	31 898	117 509	416 071	534 877	14 502
	<b>HOUGHTON</b>												
31-33	Manufacturing .....	3	46	9	f	D	D	D	D	D	D	D	D
	<b>HURON</b>												
31-33	Manufacturing .....	—	78	27	3 487	116 777	2 758	5 471	83 840	363 617	312 515	683 077	29 704
326	Plastics and rubber products manufacturing .....	—	9	8	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	8	7	848	22 335	652	1 415	15 052	77 931	54 414	132 035	D
32619	Other plastics product manufacturing .....	—	8	7	848	22 335	652	1 415	15 052	77 931	54 414	132 035	D
326199	All other plastics product manufacturing .....	—	8	7	848	22 335	652	1 415	15 052	77 931	54 414	132 035	D
333	Machinery manufacturing .....	—	15	6	562	20 400	409	871	13 878	43 827	17 153	64 659	1 550
336	Transportation equipment manufacturing .....	—	8	6	1 178	43 675	984	1 845	33 158	155 851	176 076	335 246	D
3363	Motor vehicle parts manufacturing .....	—	7	6	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	2	2	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>INGHAM</b>												
31-33	Manufacturing .....	—	265	99	j	D	D	D	D	D	D	D	149 184
311	Food manufacturing .....	1	31	9	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	7	51	11	1 524	57 294	1 057	2 011	32 356	105 644	73 168	179 203	D
3231	Printing and related support activities .....	7	51	11	1 524	57 294	1 057	2 011	32 356	105 644	73 168	179 203	D
32311	Printing .....	7	43	9	g	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	7	23	6	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	12	6	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	12	6	g	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	41	19	g	D	D	D	D	D	D	D	18 255
3321	Forging and stamping .....	—	3	3	f	D	D	D	D	D	D	D	D
33211	Forging and stamping .....	—	3	3	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	23	10	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>INGHAM—Con.</b>												
336	Transportation equipment manufacturing .....	—	24	15	j	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	4	3	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	3	3	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing...	—	3	3	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	12	7	h	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing....	—	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing..	—	2	2	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	6	3	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping.....	—	6	3	g	D	D	D	D	D	D	D	D
	<b>IONIA</b>												
31-33	Manufacturing .....	—	76	30	3 067	107 576	2 343	4 368	60 137	344 720	385 005	720 889	19 015
336	Transportation equipment manufacturing .....	—	6	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	5	5	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>IOSCO</b>												
31-33	Manufacturing .....	1	37	9	1 257	39 471	1 006	2 083	28 289	116 257	98 723	215 607	7 633
326	Plastics and rubber products manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	3	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>ISABELLA</b>												
31-33	Manufacturing .....	—	57	13	2 606	86 174	1 817	3 333	52 733	204 160	237 686	443 008	14 059
333	Machinery manufacturing .....	—	7	4	1 405	51 735	902	1 671	27 638	121 257	102 058	223 937	2 932
3332	Industrial machinery manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33321	Sawmill and woodworking machinery manufacturing ....	—	1	1	f	D	D	D	D	D	D	D	D
333210	Sawmill and woodworking machinery manufacturing ..	—	1	1	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	5	2	566	17 682	452	823	13 933	39 756	109 544	149 530	D
3363	Motor vehicle parts manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D

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**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>JACKSON</b>												
31-33	Manufacturing .....	-	317	112	10 875	433 509	7 693	15 500	266 637	1 177 854	1 351 284	2 541 850	117 403
326	Plastics and rubber products manufacturing .....	-	16	7	810	29 172	635	1 161	20 918	95 681	158 058	256 468	5 957
3261	Plastics product manufacturing ..	-	14	6	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	11	4	683	24 912	541	980	18 201	85 750	149 450	237 325	D
326199	All other plastics product manufacturing .....	-	10	4	f	D	D	D	D	D	D	D	5 386
331	Primary metal manufacturing .....	-	10	5	169	35 551	411	937	22 516	76 196	135 526	211 245	D
332	Fabricated metal product manufacturing .....	2	130	41	3 501	129 980	2 694	5 322	84 337	323 578	180 191	503 286	14 272
3327	Machinet shops; turned product; and screw, nut, and bolt manufacturing .....	1	78	20	1 599	57 201	1 300	2 435	40 887	114 624	54 349	167 139	7 786
33271	Machine shops .....	1	55	11	904	29 860	719	1 211	20 944	54 988	31 496	86 647	2 688
332710	Machine shops .....	1	55	11	904	29 860	719	1 211	20 944	54 988	31 496	86 647	2 688
33272	Turned product and screw, nut, and bolt manufacturing .....	1	23	9	695	27 341	581	1 224	19 943	59 636	22 853	80 492	5 098
332721	Precision turned product manufacturing .....	1	19	9	674	26 436	565	1 189	19 339	57 505	21 364	76 872	4 989
3329	Other fabricated metal product manufacturing .....	-	13	7	716	28 596	521	1 105	18 054	108 265	52 130	161 752	3 418
33291	Metal valve manufacturing .....	-	8	6	663	27 143	487	1 047	17 254	105 577	50 501	157 406	3 359
332912	Fluid power valve and hose fitting manufacturing .....	-	7	6	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	52	22	1 711	72 291	1 184	2 429	43 567	138 073	89 009	228 912	D
3335	Metalworking machinery manufacturing .....	2	31	9	516	24 419	359	738	15 793	45 213	17 777	59 487	1 579
33351	Metalworking machinery manufacturing .....	2	31	9	516	24 419	359	738	15 793	45 213	17 777	59 487	1 579
3339	Other general purpose machinery manufacturing .....	3	11	8	528	22 285	357	745	13 083	37 424	22 256	61 202	D
33399	All other general purpose machinery manufacturing .....	3	9	7	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	16	12	2 426	104 607	1 667	3 598	64 352	345 905	618 669	973 123	53 874
3363	Motor vehicle parts manufacturing .....	-	16	12	2 426	104 607	1 667	3 598	64 352	345 905	618 669	973 123	53 874
33639	Other motor vehicle parts manufacturing .....	-	4	2	f	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>KALAMAZOO</b>												
31-33	Manufacturing .....	1	385	130	16 675	662 603	11 070	22 218	346 030	1 273 710	1 662 194	5 893 488	163 956
311	Food manufacturing .....	5	22	5	544	21 425	297	530	10 649	76 855	58 707	135 920	2 659
322	Paper manufacturing .....	-	17	14	g	D	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	-	15	12	g	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	-	9	7	g	D	D	D	D	D	D	D	D
322211	Corrugated and solid fiber box manufacturing .....	-	5	4	f	D	D	D	D	D	D	D	D
322215	Nonfolding sanitary food container manufacturing ...	-	2	2	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	2	50	11	f	D	D	D	D	D	D	D	D
3231	Printing and related support activities .....	2	50	11	f	D	D	D	D	D	D	D	D
32311	Printing .....	3	43	9	f	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	-	23	10	g	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	-	2	1	g	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	20	13	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	19	12	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	16	9	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	16	9	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	-	8	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>KALAMAZOO—Con.</b>												
332	Fabricated metal product manufacturing .....	—	72	19	1 950	68 720	1 319	2 827	37 179	157 243	147 864	305 191	10 712
3329	Other fabricated metal product manufacturing .....	—	8	6	g	D	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	69	22	2 139	99 976	1 270	2 452	50 135	149 939	109 854	258 178	7 229
3335	Metalworking machinery manufacturing .....	1	33	12	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	1	33	12	f	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	—	21	6	1 125	57 680	566	990	22 891	73 902	66 395	139 614	D
33399	All other general purpose machinery manufacturing ....	—	12	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	10	8	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	9	8	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	10	4	f	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	6	40	11	g	D	D	D	D	D	D	D	D
3391	Medical equipment and supplies manufacturing .....	6	20	6	g	D	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	6	20	6	g	D	D	D	D	D	D	D	D
339113	Surgical appliance and supplies manufacturing ....	6	5	3	g	D	D	D	D	D	D	D	D
	<b>KALKASKA</b>												
31-33	Manufacturing .....	—	17	9	790	24 406	608	1 186	15 696	49 276	36 197	85 524	8 733
	<b>KENT</b>												
31-33	Manufacturing .....	1	1 183	507	77 101	3 316 623	53 331	105 074	1 948 482	7 278 648	6 447 924	13 712 152	454 988
311	Food manufacturing .....	3	61	28	h	D	D	D	D	D	D	D	D
3112	Grain and oilseed milling .....	7	4	4	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423	D
311230	Breakfast cereal manufacturing .....	8	3	3	875	35 979	741	1 598	26 872	249 516	56 228	305 423	D
3116	Animal slaughtering and processing .....	—	7	4	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	—	7	4	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	2	27	9	g	D	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	6	23	8	g	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	5	7	4	842	30 212	342	677	13 232	87 625	42 739	130 449	1 991
321	Wood product manufacturing .....	3	37	14	1 098	33 870	850	1 676	22 338	78 072	90 346	168 421	4 834
3219	Other wood product manufacturing .....	3	24	8	649	18 412	487	904	11 203	38 336	45 031	82 981	D
322	Paper manufacturing .....	—	25	18	1 293	52 782	967	1 982	30 521	141 093	195 120	332 671	8 392
3222	Converted paper product manufacturing .....	—	24	18	g	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	15	13	1 031	42 443	779	1 558	24 686	85 950	113 151	198 314	6 470
322211	Corrugated and solid fiber box manufacturing .....	—	12	10	751	30 668	542	1 070	15 729	61 910	88 744	150 297	6 037
323	Printing and related support activities .....	—	128	34	2 930	108 696	1 936	3 461	57 268	248 173	159 952	408 087	15 399
3231	Printing and related support activities .....	—	128	34	2 930	108 696	1 936	3 461	57 268	248 173	159 952	408 087	15 399
32311	Printing .....	—	108	30	2 618	100 365	1 710	3 067	52 370	226 149	149 202	374 992	12 475
323110	Commercial lithographic printing .....	—	45	14	1 319	45 637	908	1 528	25 363	111 944	68 648	180 598	6 355

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>KENT—Con.</b>												
325	Chemical manufacturing .....	1	30	11	h	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, and toilet preparation manufacturing .....	-	9	2	h	D	D	D	D	D	D	D	D
32562	Toilet preparation manufacturing .....	-	2	2	h	D	D	D	D	D	D	D	D
325620	Toilet preparation manufacturing .....	-	2	2	h	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	97	64	i	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	1	86	55	8 128	263 613	6 325	12 627	159 889	626 402	580 034	1 214 678	D
32611	Plastics packaging materials and unlaminated film and sheet manufacturing .....	'4	'7	'5	'779	'23 215	'656	'1 380	'17 032	'56 803	'60 734	'119 079	'4 131
32619	Other plastics product manufacturing .....	-	'60	'38	'6 469	'213 455	'4 968	'9 818	'124 904	'504 448	'445 905	'954 210	D
326199	All other plastics product manufacturing .....	-	'58	'36	i	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing .....	-	11	9	g	D	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	-	5	5	687	27 642	391	656	9 923	61 513	60 029	120 289	D
327	Nonmetallic mineral product manufacturing .....	-	31	15	f	D	D	D	D	D	D	D	6 836
331	Primary metal manufacturing .....	-	28	20	h	D	D	D	D	D	D	D	D
3315	Foundries .....	-	21	17	g	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries .....	-	14	13	g	D	D	D	D	D	D	D	D
331521	Aluminum die-casting foundries .....	1	6	6	1 150	41 244	840	1 914	27 055	92 555	97 787	190 918	D
331522	Nonferrous (except aluminum) die-casting foundries .....	-	6	6	677	23 948	523	1 077	15 324	55 282	48 113	104 039	1 667
332	Fabricated metal product manufacturing .....	1	235	82	7 315	261 064	5 699	11 260	171 745	600 241	409 132	1 009 889	36 735
3325	Hardware manufacturing .....	-	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
33251	Hardware manufacturing .....	-	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
332510	Hardware manufacturing .....	-	9	7	1 826	67 023	1 512	2 819	45 836	147 777	152 062	299 273	9 861
3327	Machining shops; turned product; and screw, nut, and bolt manufacturing .....	1	91	22	1 780	67 864	1 351	2 765	45 832	172 007	84 563	256 475	11 705
33271	Machine shops .....	2	72	10	f	D	D	D	D	D	D	D	D
332710	Machine shops .....	2	72	10	f	D	D	D	D	D	D	D	D
33272	Turned product and screw, nut, and bolt manufacturing .....	1	19	12	f	D	D	D	D	D	D	D	D
332721	Precision turned product manufacturing .....	-	15	9	f	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	-	57	26	1 989	62 328	1 601	3 193	42 698	125 611	52 140	177 539	6 681
33281	Coating, engraving, heat treating, and allied activities .....	-	57	26	1 989	62 328	1 601	3 193	42 698	125 611	52 140	177 539	6 681
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	-	28	12	f	D	D	D	D	D	D	D	D
332813	Electroplating, plating, polishing, anodizing, and coloring .....	-	22	9	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	-	22	9	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	-	216	107	14 149	686 915	7 942	15 984	341 468	1 363 022	1 077 545	2 403 216	66 594
3332	Industrial machinery manufacturing .....	1	29	6	f	D	D	D	D	D	D	D	D
3335	Metalworking machinery manufacturing .....	-	124	64	i	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	-	124	64	i	D	D	D	D	D	D	D	D
333511	Industrial mold manufacturing .....	-	32	17	1 570	86 259	1 203	2 523	62 719	168 730	73 892	240 747	9 061
333514	Special die and tool, die set, jig, and fixture manufacturing .....	-	71	41	h	D	D	D	D	D	D	D	D
333515	Cutting tool and machine tool accessory manufacturing .....	-	16	5	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>KENT—Con.</b>												
333 3339	Machinery manufacturing—Con. Other general purpose machinery manufacturing .....	—	39	25	i	D	D	D	D	D	D	D	D
33392	Material handling equipment manufacturing .....	—	15	10	h	D	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing .....	—	12	8	h	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	—	23	14	g	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	31	13	h	D	D	D	D	D	D	D	D
3343	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33431	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
334310	Audio and video equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	19	7	12 304	140 587	1 415	3 211	82 126	297 041	87 022	380 043	33 569
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	19	7	12 304	140 587	1 415	3 211	82 126	297 041	87 022	380 043	33 569
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	12	17	15	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	7	3	f	D	D	D	D	D	D	D	2 053
336	Transportation equipment manufacturing .....	—	57	34	j	D	D	D	D	D	D	D	62 450
3363	Motor vehicle parts manufacturing .....	—	43	28	i	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	1	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	1	2	2	f	D	D	D	D	D	D	D	D
336367	Motor vehicle metal stamping .....	—	18	10	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	18	10	h	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	1	14	10	h	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	1	13	9	h	D	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	—	4	1	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	—	4	1	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	1	66	26	10 231	502 663	6 161	12 022	225 125	787 618	606 911	1 402 409	61 873
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	30	9	1 140	42 780	827	1 766	24 700	80 917	62 274	144 140	D
33712	Household and institutional furniture manufacturing .....	—	20	9	g	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	1	13	7	f	D	D	D	D	D	D	D	6 780
3372	Office furniture (including fixtures) manufacturing .....	1	31	14	i	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	1	31	14	i	D	D	D	D	D	D	D	D
337211	Wood office furniture manufacturing .....	—	6	3	g	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	1	8	3	i	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>KENT—Con.</b>												
339	Miscellaneous manufacturing .....	—	89	21	1 944	75 516	1 371	2 696	44 855	242 975	103 680	347 879	8 733
3391	Medical equipment and supplies manufacturing .....	—	37	11	1 207	47 516	821	1 636	26 836	192 979	49 609	243 440	6 328
33911	Medical equipment and supplies manufacturing .....	—	37	11	1 207	47 516	821	1 636	26 836	192 979	49 609	243 440	6 328
3399	Other miscellaneous manufacturing .....	1	52	10	737	28 000	550	1 060	18 019	49 996	54 071	104 439	2 405
	<b>LAPEER</b>												
31-33	Manufacturing .....	—	133	39	5 276	187 935	3 896	8 101	116 253	516 432	490 224	1 007 045	45 948
326	Plastics and rubber products manufacturing .....	—	11	8	1 511	51 027	1 196	2 632	32 699	129 504	121 728	253 020	4 387
3261	Plastics product manufacturing ..	—	10	8	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	8	7	1 457	49 151	1 158	2 559	31 696	125 612	117 398	244 781	4 312
326199	All other plastics product manufacturing .....	—	7	6	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	38	12	946	37 309	632	1 369	22 297	104 268	104 551	208 144	6 871
336	Transportation equipment manufacturing .....	—	17	10	1 768	66 930	1 283	2 519	39 997	184 349	143 252	326 227	28 777
3363	Motor vehicle parts manufacturing .....	—	13	9	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	5	4	739	30 886	470	997	13 310	66 170	70 959	136 197	D
336370	Motor vehicle metal stamping .....	—	5	4	739	30 886	470	997	13 310	66 170	70 959	136 197	D
	<b>LENAWEE</b>												
31-33	Manufacturing .....	—	170	64	8 044	320 334	5 954	11 721	209 024	980 385	999 238	1 982 032	62 371
325	Chemical manufacturing .....	—	10	8	901	52 365	415	867	18 689	173 952	166 200	335 030	16 102
3251	Basic chemical manufacturing ..	—	4	3	569	35 013	229	432	11 116	121 531	135 047	252 316	10 052
32519	Other basic organic chemical manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing ....	—	3	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	19	7	1 076	45 669	840	1 707	34 379	173 971	181 657	355 580	6 044
3261	Plastics product manufacturing ..	—	18	7	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	12	5	923	39 772	725	1 489	30 633	158 509	170 271	328 879	5 235
326199	All other plastics product manufacturing .....	—	12	5	923	39 772	725	1 489	30 633	158 509	170 271	328 879	5 235
327	Nonmetallic mineral product manufacturing .....	—	10	4	552	20 987	474	827	16 614	54 415	77 910	132 030	1 164
332	Fabricated metal product manufacturing .....	—	32	9	779	30 267	569	1 192	19 632	62 534	46 690	109 177	7 930
333	Machinery manufacturing .....	—	33	9	1 146	43 925	904	1 743	31 000	73 120	89 571	169 714	3 074
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	5	3	762	26 986	643	1 248	21 201	42 997	70 044	120 724	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	5	3	762	26 986	643	1 248	21 201	42 997	70 044	120 724	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	10	7	1 061	38 697	800	1 654	27 303	161 900	173 006	333 580	11 926
3363	Motor vehicle parts manufacturing .....	—	8	7	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	3	3	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	3	3	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	7	2	g	D	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	—	5	1	f	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet and countertop manufacturing ..	—	3	1	f	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet and countertop manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>LIVINGSTON</b>												
31-33	Manufacturing .....	'1	272	101	10 236	410 531	6 918	14 013	251 367	'1 364 089	'1 518 013	'2 884 263	89 636
326	Plastics and rubber products manufacturing .....	1	18	10	1 172	39 410	880	1 627	23 995	144 055	108 137	252 235	6 040
3261	Plastics product manufacturing .....	-	16	9	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	13	9	1 027	34 675	774	1 401	21 455	131 025	94 466	225 551	5 495
326199	All other plastics product manufacturing .....	-	12	9	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	59	23	2 170	77 356	1 633	3 367	52 946	'206 355	'159 330	'364 070	12 197
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	'5	36	11	1 100	40 350	911	1 891	31 804	'88 338	'80 136	'167 992	8 767
332710	Machine shops .....	6	30	7	811	31 650	658	1 370	24 544	68 167	51 702	120 291	D
332710	Machine shops .....	6	30	7	811	31 650	658	1 370	24 544	68 167	51 702	120 291	D
333	Machinery manufacturing .....	2	42	16	909	39 998	592	1 144	23 109	80 383	43 200	123 183	D
336	Transportation equipment manufacturing .....	-	27	18	3 633	163 428	2 498	5 522	112 527	563 949	796 584	1 368 841	50 278
3363	Motor vehicle parts manufacturing .....	-	26	18	h	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	-	4	3	f	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	-	4	3	f	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	1	9	6	745	38 587	533	1 129	31 891	91 184	138 230	229 231	8 607
336370	Motor vehicle metal stamping .....	1	9	6	745	38 587	533	1 129	31 891	91 184	138 230	229 231	8 607
33639	Other motor vehicle parts manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
	<b>MACOMB</b>												
31-33	Manufacturing .....	-	'1 959	637	'84 332	'4 074 359	'65 215	'129 916	'2 958 980	'9 707 782	'15 758 193	'25 485 976	'617 353
311	Food manufacturing .....	4	54	9	582	15 993	378	746	9 551	37 382	43 032	82 029	2 385
314	Textile product mills .....	-	26	2	589	16 699	329	612	6 551	29 387	20 293	50 501	D
3149	Other textile product mills .....	-	15	2	f	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	1	26	8	533	16 958	362	696	8 941	41 174	35 280	77 851	1 189
323	Printing and related support activities .....	2	93	14	1 442	61 054	919	1 737	29 645	123 176	73 144	195 614	4 200
3231	Printing and related support activities .....	2	93	14	1 442	61 054	919	1 737	29 645	123 176	73 144	195 614	4 200
323111	Printing .....	2	84	13	g	D	D	D	D	D	D	D	4 124
323110	Commercial lithographic printing .....	1	41	8	939	42 200	584	1 103	19 776	76 791	51 416	127 154	3 063
325	Chemical manufacturing .....	1	23	13	1 591	78 884	1 017	2 103	43 555	483 874	314 568	818 296	14 761
3255	Paint, coating, and adhesive manufacturing .....	1	10	5	g	D	D	D	D	D	D	D	D
32551	Paint and coating manufacturing .....	-	7	2	f	D	D	D	D	D	D	D	D
325510	Paint and coating manufacturing .....	-	7	2	f	D	D	D	D	D	D	D	D
32552	Adhesive manufacturing .....	6	3	3	f	D	D	D	D	D	D	D	D
325520	Adhesive manufacturing .....	6	3	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	'91	57	'8 236	'272 229	'6 230	'12 421	'163 973	'768 884	'501 120	'1 266 572	'68 737
3261	Plastics product manufacturing .....	-	'83	52	'7 693	'256 628	'5 828	'11 805	'156 234	'722 961	'460 292	'1 180 181	D
32619	Other plastics product manufacturing .....	-	'70	46	'7 092	'237 565	'5 348	'10 856	'143 623	'669 801	'408 226	'1 075 725	'48 620
326199	All other plastics product manufacturing .....	-	'68	46	i	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing .....	-	8	5	543	15 601	402	616	7 739	45 923	40 828	86 391	D
32629	Other rubber product manufacturing .....	-	7	5	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	2	40	13	1 344	49 532	1 118	1 254	36 672	89 868	100 867	185 551	3 374
3273	Cement and concrete product manufacturing .....	3	22	9	1 135	42 043	973	946	32 669	70 452	80 878	145 696	2 150
32739	Other concrete product manufacturing .....	-	6	2	f	D	D	D	D	D	D	D	142
327390	Other concrete product manufacturing .....	-	6	2	f	D	D	D	D	D	D	D	142

See footnotes at end of table.

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	<b>MACOMB—Con.</b>												
331	Primary metal manufacturing .....	2	31	14	1 096	39 284	957	1 969	31 398	96 780	96 065	193 675	3 408
3312	Steel product manufacturing from purchased steel .....	1	6	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	588	151	12 222	471 218	9 005	18 375	312 762	1 029 171	679 282	1 716 368	101 349
3323	Architectural and structural metals manufacturing .....	1	76	19	1 694	58 723	1 015	2 128	37 176	118 286	108 819	233 121	16 481
33231	Plate work and fabricated structural product manufacturing .....	—	44	13	1 347	46 452	792	1 664	30 548	90 728	90 965	187 452	D
332313	Plate work manufacturing .....	—	14	7	791	24 328	425	937	17 907	44 545	48 854	94 834	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	3	289	60	5 337	211 246	3 953	8 023	139 138	472 415	354 908	829 353	63 857
33271	Machine shops .....	2	240	35	3 323	126 831	2 442	4 795	81 786	254 048	150 667	406 415	51 442
332710	Machine shops .....	2	240	35	3 323	126 831	2 442	4 795	81 786	254 048	150 667	406 415	51 442
33272	Turned product and screw, nut, and bolt manufacturing .....	3	49	25	2 014	84 415	1 511	3 228	57 352	218 367	204 241	422 938	12 415
332721	Precision turned product manufacturing .....	2	33	17	1 226	46 007	941	2 038	30 404	102 949	43 539	147 746	6 354
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	4	16	8	788	38 408	570	1 190	26 948	115 418	160 702	275 192	6 061
3328	Coating, engraving, heat treating, and allied activities .....	1	82	35	2 458	83 712	1 937	3 926	56 888	196 549	57 099	252 510	10 721
33281	Coating, engraving, heat treating, and allied activities ..	1	82	35	2 458	83 712	1 937	3 926	56 888	196 549	57 099	252 510	10 721
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers ..	—	35	16	1 005	32 479	770	1 470	20 947	76 676	21 425	96 837	2 849
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	22	9	f	D	D	D	D	D	D	D	2 147
3329	Other fabricated metal product manufacturing .....	1	71	24	1 859	81 157	1 442	2 931	56 267	160 062	88 763	248 381	D
33299	All other fabricated metal product manufacturing .....	1	64	23	1 759	77 452	1 373	2 793	54 411	152 878	85 065	237 524	D
332997	Industrial pattern manufacturing .....	—	8	4	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product manufacturing .....	1	43	10	695	24 390	528	997	15 317	57 197	26 393	82 605	D
333	Machinery manufacturing .....	1	532	188	13 813	693 031	9 003	18 741	409 573	1 562 486	885 494	2 519 052	54 831
3332	Industrial machinery manufacturing .....	1	31	8	501	27 121	258	528	11 082	55 391	33 256	86 983	D
3335	Metalworking machinery manufacturing .....	2	401	137	10 255	513 038	6 764	14 144	312 160	1 039 451	566 150	1 675 231	39 952
33351	Metalworking machinery manufacturing .....	2	401	137	10 255	513 038	6 764	14 144	312 160	1 039 451	566 150	1 675 231	39 952
333511	Industrial mold manufacturing .....	2	76	25	1 651	85 793	1 203	2 553	58 555	161 220	54 807	219 380	5 124
333512	Machine tool (metal cutting types) manufacturing .....	—	26	15	f	D	D	D	D	D	D	D	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	183	56	4 203	225 504	2 812	6 094	143 249	377 339	207 757	616 228	19 322
333515	Cutting tool and machine tool accessory manufacturing .....	1	82	25	1 647	70 023	1 129	2 224	43 525	166 474	85 437	255 929	7 709
333518	Other metalworking machinery manufacturing .....	3	26	14	1 901	91 859	1 051	2 193	45 440	273 818	163 280	460 252	5 142
3339	Other general purpose machinery manufacturing .....	1	68	28	2 233	117 251	1 431	2 945	66 091	247 029	169 800	415 344	D
33392	Material handling equipment manufacturing .....	—	18	8	f	D	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing .....	—	11	5	528	33 047	325	705	18 414	69 742	38 356	111 686	D
33399	All other general purpose machinery manufacturing .....	2	47	19	1 495	74 978	1 017	2 062	44 656	159 796	117 113	271 395	D
333992	Welding and soldering equipment manufacturing .....	2	14	11	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	2	30	10	970	40 156	666	1 061	20 749	74 570	57 060	131 675	1 977
3353	Electrical equipment manufacturing .....	1	18	6	719	31 077	464	596	14 919	54 392	40 684	95 102	1 054
33531	Electrical equipment manufacturing .....	1	18	6	719	31 077	464	596	14 919	54 392	40 684	95 102	1 054
335314	Relay and industrial control manufacturing .....	1	11	6	663	28 948	420	505	13 397	48 164	35 215	83 405	543

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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<b>MACOMB—Con.</b>													
336	Transportation equipment manufacturing .....	-	183	114	38 319	2 195 258	32 720	65 568	1 812 953	5 108 456	12 731 687	17 767 491	349 913
3361	Motor vehicle manufacturing .....	-	3	3	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	-	3	3	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	-	2	2	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	159	103	k	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	9	3	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	9	3	g	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	3 017
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	3 017
33635	Motor vehicle transmission and power train parts manufacturing .....	-	13	12	i	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	-	13	12	i	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	-	8	6	h	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	-	8	6	h	D	D	D	D	D	D	D	D
336367	Motor vehicle metal stamping .....	1	77	52	11 168	627 615	8 968	18 479	488 218	1 483 201	1 408 183	2 880 443	69 076
336370	Motor vehicle metal stamping .....	1	77	52	11 168	627 615	8 968	18 479	488 218	1 483 201	1 408 183	2 880 443	69 076
33639	Other motor vehicle parts manufacturing .....	-	41	23	3 777	144 227	3 000	5 094	95 887	449 681	352 626	794 556	19 584
336399	All other motor vehicle parts manufacturing .....	-	41	23	3 777	144 227	3 000	5 094	95 887	449 681	352 626	794 556	19 584
337	Furniture and related product manufacturing .....	-	54	13	1 171	37 517	887	1 537	25 054	71 596	51 819	122 911	1 634
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	43	9	648	18 722	512	993	13 175	33 340	25 585	60 818	D
339	Miscellaneous manufacturing .....	2	103	16	1 297	43 314	888	1 596	25 564	87 272	49 257	135 128	4 184
3399	Other miscellaneous manufacturing .....	3	69	10	820	27 820	552	1 030	16 082	53 390	35 265	87 579	1 295
33999	All other miscellaneous manufacturing .....	1	41	6	531	16 218	374	674	9 078	32 427	21 574	53 065	587
<b>MANISTEE</b>													
31-33	Manufacturing .....	3	30	10	993	43 779	744	1 475	30 307	158 315	89 607	247 022	14 610
<b>MARQUETTE</b>													
31-33	Manufacturing .....	-	47	7	884	27 479	551	1 091	15 097	60 897	80 573	140 690	D
<b>MASON</b>													
31-33	Manufacturing .....	-	42	19	2 484	82 774	1 919	3 863	55 027	236 102	184 711	411 713	10 270
332	Fabricated metal product manufacturing .....	1	10	5	775	22 396	611	1 300	14 912	45 898	38 790	84 238	1 485
<b>MECOSTA</b>													
31-33	Manufacturing .....	-	34	15	1 770	53 749	1 490	2 897	40 659	195 274	224 238	418 818	11 652
332	Fabricated metal product manufacturing .....	-	6	4	535	20 701	414	835	15 304	66 588	76 647	142 770	6 380
<b>MENOMINEE</b>													
31-33	Manufacturing .....	1	62	22	2 462	77 969	1 915	3 779	53 559	246 803	228 298	481 981	13 284
333	Machinery manufacturing .....	-	6	3	563	14 003	463	872	10 250	79 579	85 399	167 321	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>MIDLAND</b>													
31-33	Manufacturing .....	3	69	20	5 742	284 574	4 265	7 826	206 993	651 105	1 580 566	2 177 629	D
323	Printing and related support activities .....	-	13	3	969	28 018	718	806	17 462	58 286	43 205	98 088	D
3231	Printing and related support activities .....	-	13	3	969	28 018	718	806	17 462	58 286	43 205	98 088	D
32311	Printing .....	-	12	3	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	-	5	2	f	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	3	6	4	h	D	D	D	D	D	D	D	D
3251	Basic chemical manufacturing ...	4	4	2	h	D	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	4	3	2	h	D	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing....	4	3	2	h	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	4	4	3	512	20 900	373	743	14 352	48 164	43 031	90 803	5 523
<b>MONROE</b>													
31-33	Manufacturing .....	-	151	56	9 025	431 357	7 079	11 751	305 472	1 142 085	2 056 368	3 191 278	136 842
322	Paper manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942	1 966
3222	Converted paper product manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942	1 966
32221	Paperboard container manufacturing .....	5	8	6	747	23 043	566	987	13 214	55 372	54 333	109 942	1 966
322211	Corrugated and solid fiber box manufacturing .....	5	7	5	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	-	14	6	f	D	D	D	D	D	D	D	D
3272	Glass and glass product manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
327211	Flat glass manufacturing ....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	42	16	1 592	66 809	1 210	2 282	43 850	166 587	166 004	328 638	8 026
3328	Coating, engraving, heat treating, and allied activities .....	-	8	6	674	23 154	558	878	16 148	66 764	32 830	100 392	1 559
33281	Coating, engraving, heat treating, and allied activities ..	-	8	6	674	23 154	558	878	16 148	66 764	32 830	100 392	1 559
336	Transportation equipment manufacturing .....	-	12	8	h	D	D	D	D	D	D	D	66 047
3363	Motor vehicle parts manufacturing .....	-	10	8	h	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	-	6	6	h	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	-	6	6	h	D	D	D	D	D	D	D	D
<b>MONTCALM</b>													
31-33	Manufacturing .....	-	80	25	5 199	172 162	4 500	8 606	138 201	433 588	560 964	1 004 250	28 915
332	Fabricated metal product manufacturing .....	-	14	5	743	24 279	561	1 133	16 481	52 073	35 552	96 241	1 728
335	Electrical equipment, appliance, and component manufacturing.....	-	3	2	g	D	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing. Household refrigerator and home freezer manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	4	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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	<b>MUSKEGON</b>												
31-33	Manufacturing .....	—	332	124	14 344	575 192	10 566	22 301	368 164	1 554 642	1 285 184	2 852 258	96 486
322	Paper manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, and 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
325	Chemical manufacturing .....	—	10	5	652	30 120	369	655	14 266	116 793	120 291	239 227	11 331
3251	Basic chemical manufacturing ...	—	4	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	11	5	f	D	D	D	D	D	D	D	4 756
3261	Plastics product manufacturing ..	—	10	5	f	D	D	D	D	D	D	D	4 756
32619	Other plastics product manufacturing .....	—	9	5	718	17 088	631	1 437	13 395	40 088	48 469	87 945	D
326199	All other plastics product manufacturing .....	—	9	5	718	17 088	631	1 437	13 395	40 088	48 469	87 945	D
331	Primary metal manufacturing .....	—	37	28	3 903	143 899	3 124	7 018	103 672	441 267	298 508	741 424	21 912
3315	Foundries .....	—	30	23	3 528	128 746	2 880	6 534	94 639	400 151	198 632	595 607	15 268
33151	Ferrous metal foundries .....	—	11	11	2 353	89 278	1 983	4 604	68 685	272 979	135 774	407 113	11 573
331511	Iron foundries .....	—	4	4	707	33 711	579	1 311	24 998	73 237	36 731	109 709	2 471
331512	Steel investment foundries ..	—	4	4	g	D	D	D	D	D	D	D	8 076
33152	Nonferrous metal foundries .....	—	19	12	1 175	39 468	897	1 930	25 954	127 172	62 858	188 494	3 695
332	Fabricated metal product manufacturing .....	—	98	29	2 277	91 054	1 588	3 240	55 302	204 929	140 086	345 202	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	42	9	639	23 911	493	917	15 946	49 122	27 105	75 959	D
33271	Machine shops .....	1	39	8	561	21 353	418	776	13 535	44 708	24 992	69 358	2 332
332710	Machine shops .....	1	39	8	561	21 353	418	776	13 535	44 708	24 992	69 358	2 332
3328	Coating, engraving, heat treating, and allied activities .....	—	14	6	553	22 894	345	755	13 808	56 147	48 759	104 433	2 472
33281	Coating, engraving, heat treating, and allied activities ..	—	14	6	553	22 894	345	755	13 808	56 147	48 759	104 433	2 472
333	Machinery manufacturing .....	1	60	17	1 804	85 836	1 109	2 364	40 199	169 091	164 375	337 128	6 954
3335	Metalworking machinery manufacturing .....	2	37	7	501	24 356	374	724	16 657	39 994	17 675	59 733	1 841
33351	Metalworking machinery manufacturing .....	2	37	7	501	24 356	374	724	16 657	39 994	17 675	59 733	1 841
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	1	10	5	637	26 255	400	862	10 859	52 871	63 394	114 877	1 679
336	Transportation equipment manufacturing .....	—	19	8	1 946	83 619	1 519	2 952	61 520	164 932	226 936	384 759	27 558
3363	Motor vehicle parts manufacturing .....	—	14	6	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	9	13	5	793	27 527	668	1 375	21 339	98 265	57 766	153 849	2 216
3372	Office furniture (including fixtures) manufacturing .....	9	8	5	784	27 335	660	1 362	21 197	97 870	57 406	153 094	2 203
33721	Office furniture (including fixtures) manufacturing .....	9	8	5	784	27 335	660	1 362	21 197	97 870	57 406	153 094	2 203
337214	Office furniture (including fixtures) manufacturing .....	9	3	2	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>NEWAYGO</b>													
31-33	Manufacturing .....	2	39	9	1 428	42 973	1 152	2 400	29 472	136 857	224 331	361 145	12 116
336	Transportation equipment manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
<b>OAKLAND</b>													
31-33	Manufacturing .....	-	12 160	702	79 167	73 745 799	55 078	109 173	2 294 539	12 578 604	14 472 382	27 022 148	423 028
311	Food manufacturing .....	2	85	16	1 185	33 300	515	900	11 173	93 683	73 663	164 572	2 239
3118	Bakeries and tortilla manufacturing .....	2	53	8	625	12 813	250	391	4 902	34 225	15 338	49 567	677
31181	Bread and bakery product manufacturing .....	3	50	7	f	D	D	D	D	D	D	D	D
316	Leather and allied product manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing .....	-	2	1	f	D	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing .....	-	2	1	f	D	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing .....	-	2	1	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	2	218	33	2 644	102 700	1 801	3 573	59 073	209 866	122 784	330 270	12 466
3231	Printing and related support activities .....	2	218	33	2 644	102 700	1 801	3 573	59 073	209 866	122 784	330 270	12 466
323111	Printing .....	2	196	32	2 558	98 437	1 746	3 481	56 874	201 852	121 167	320 874	11 602
323110	Commercial lithographic printing .....	2	67	15	932	38 666	659	1 325	24 079	81 295	51 479	132 763	6 230
323113	Commercial screen printing .....	-	25	4	f	D	D	D	D	D	D	D	2 113
325	Chemical manufacturing .....	2	63	29	2 688	129 834	1 518	3 038	56 479	378 904	404 911	781 589	49 408
3254	Pharmaceutical and medicine manufacturing .....	-	9	4	g	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	-	9	4	g	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	1	14	9	831	40 336	445	886	15 818	102 900	108 749	209 945	D
32551	Paint and coating manufacturing .....	1	10	7	f	D	D	D	D	D	D	D	D
325510	Paint and coating manufacturing .....	1	10	7	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	4	104	48	14 350	144 049	3 110	6 139	81 666	342 377	284 080	628 259	123 145
3261	Plastics product manufacturing ..	4	87	43	h	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	5	65	37	2 866	95 152	2 144	4 364	57 018	246 943	169 781	416 408	14 485
326199	All other plastics product manufacturing .....	5	61	35	2 771	91 808	2 070	4 212	54 867	240 664	165 678	406 017	D
3262	Rubber product manufacturing ..	1	17	5	f	D	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	1	15	5	f	D	D	D	D	D	D	D	D
326291	Rubber product manufacturing for mechanical use .....	-	7	3	537	15 044	403	659	9 216	34 712	31 583	67 157	D
327	Nonmetallic mineral product manufacturing .....	1	62	21	1 075	45 441	764	1 576	28 089	108 970	87 618	196 983	7 991
3273	Cement and concrete product manufacturing .....	-	26	13	508	24 936	344	703	15 466	64 683	51 015	115 999	5 548
331	Primary metal manufacturing .....	4	25	8	686	26 999	520	1 136	18 504	65 833	81 406	151 526	3 256

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>OAKLAND—Con.</b>													
332	Fabricated metal product manufacturing .....	1	471	161	14 887	565 375	11 308	22 658	368 191	1 191 969	796 715	1 990 852	54 522
3321	Forging and stamping.....	1	25	12	1 155	51 354	824	1 748	30 833	172 279	178 592	351 160	4 448
33211	Forging and stamping.....	1	25	12	1 155	51 354	824	1 748	30 833	172 279	178 592	351 160	4 448
332111	Iron and steel forging .....	—	9	6	798	38 728	535	1 160	22 096	136 981	157 257	292 482	2 859
3322	Cutlery and handtool manufacturing .....	2	26	9	718	22 017	454	708	11 351	47 249	27 224	73 859	3 163
33221	Cutlery and handtool manufacturing .....	2	26	9	718	22 017	454	708	11 351	47 249	27 224	73 859	3 163
332212	Hand and edge tool manufacturing .....	2	24	8	f	D	D	D	D	D	D	D	D
3323	Architectural and structural metals manufacturing .....	1	56	18	1 257	47 029	866	1 782	26 516	85 349	70 936	157 537	4 141
33232	Ornamental and architectural metal products manufacturing .....	—	39	15	1 074	39 447	724	1 493	21 423	70 591	54 041	125 630	D
332322	Sheet metal work manufacturing .....	—	23	10	848	30 411	572	1 170	16 918	55 238	42 711	99 030	3 051
3325	Hardware manufacturing .....	—	7	3	3 249	94 105	2 799	5 392	72 574	97 847	67 114	164 639	D
33251	Hardware manufacturing .....	—	7	3	3 249	94 105	2 799	5 392	72 574	97 847	67 114	164 639	D
332510	Hardware manufacturing .....	—	7	3	3 249	94 105	2 799	5 392	72 574	97 847	67 114	164 639	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	220	63	4 527	202 953	3 298	6 845	126 123	439 556	265 837	708 128	26 263
33271	Machine shops .....	2	168	36	2 553	120 990	1 825	3 726	73 049	248 837	127 029	376 565	14 300
332710	Machine shops .....	2	168	36	2 553	120 990	1 825	3 726	73 049	248 837	127 029	376 565	14 300
33272	Turned product and screw, nut, and bolt manufacturing .....	1	52	27	1 974	81 963	1 473	3 119	53 074	190 719	138 808	331 563	11 963
332721	Precision turned product manufacturing .....	2	41	18	1 290	51 867	988	2 133	34 454	114 751	70 306	186 907	8 790
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	—	11	9	684	30 096	485	986	18 620	75 968	68 502	144 656	3 173
3328	Coating, engraving, heat treating, and allied activities .....	1	65	28	1 904	69 150	1 441	2 983	43 958	161 863	76 470	241 040	6 794
33281	Coating, engraving, heat treating, and allied activities .....	1	65	28	1 904	69 150	1 441	2 983	43 958	161 863	76 470	241 040	6 794
332811	Metal heat treating .....	—	18	13	769	31 911	558	1 182	19 538	60 310	45 121	106 592	D
332813	Electroplating, plating, polishing, anodizing, and coloring .....	2	23	7	716	21 071	564	1 154	13 684	48 136	15 376	63 525	D
3329	Other fabricated metal product manufacturing .....	1	53	19	1 694	64 513	1 341	2 631	47 559	152 709	85 236	234 453	5 129
33291	Metal valve manufacturing .....	—	13	5	f	D	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	9	4	879	31 946	723	1 381	24 594	70 681	41 061	111 412	D
33299	All other fabricated metal product manufacturing .....	2	40	14	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	402	163	15 719	865 986	8 359	17 386	379 652	1 764 054	1 738 858	3 465 089	60 482
3332	Industrial machinery manufacturing .....	—	30	13	1 160	69 773	511	1 099	25 009	135 743	185 456	323 581	D
33329	Other industrial machinery manufacturing .....	—	19	7	830	55 196	318	698	18 331	92 054	157 501	252 420	1 688
333298	All other industrial machinery manufacturing .....	—	17	7	f	D	D	D	D	D	D	D	1 688
3335	Metalworking machinery manufacturing .....	3	255	99	7 464	383 407	4 840	10 164	223 563	731 746	493 500	1 238 738	28 880
33351	Metalworking machinery manufacturing .....	3	255	99	7 464	383 407	4 840	10 164	223 563	731 746	493 500	1 238 738	28 880
333511	Industrial mold manufacturing .....	1	33	15	1 141	64 077	840	1 801	43 576	119 591	59 710	171 397	5 529
333512	Machine tool (metal cutting types) manufacturing .....	2	14	10	501	26 877	273	609	12 613	37 271	65 703	112 910	3 214
333514	Special die and tool, die set, jig, and fixture manufacturing .....	4	116	42	3 098	149 594	2 363	4 933	104 341	263 961	117 571	402 003	12 021
333515	Cutting tool and machine tool accessory manufacturing....	1	65	15	9	D	D	D	D	D	D	D	3 921
333518	Other metalworking machinery manufacturing .....	3	19	12	1 486	90 156	650	1 435	34 367	213 000	195 905	393 804	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	10	6	545	22 323	375	784	11 888	55 950	49 609	104 987	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	10	6	545	22 323	375	784	11 888	55 950	49 609	104 987	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>OAKLAND—Con.</b>												
333	Machinery manufacturing—Con.												
3339	Other general purpose machinery manufacturing .....	—	81	37	5 843	356 143	2 236	4 524	107 319	763 878	935 179	1 647 381	D
33392	Material handling equipment manufacturing .....	—	16	12	688	36 859	381	765	16 918	126 233	91 182	214 775	D
333922	Conveyor and conveying equipment manufacturing .....	—	12	9	f	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	—	60	22	4 886	300 037	1 794	3 624	86 338	578 374	821 014	1 349 545	10 627
333992	Welding and soldering equipment manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	—	33	13	2 524	146 949	852	1 765	33 309	256 605	436 965	710 226	4 349
334	Computer and electronic product manufacturing .....	1	109	39	3 384	151 631	1 529	3 018	48 699	301 032	335 392	650 459	15 408
3344	Semiconductor and other electronic component manufacturing .....	—	33	16	1 933	79 033	886	1 756	27 254	157 452	247 104	420 036	D
33441	Semiconductor and other electronic component manufacturing .....	—	33	16	1 933	79 033	886	1 756	27 254	157 452	247 104	420 036	D
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	6	5	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	2	44	14	931	45 196	444	880	15 104	87 932	40 825	126 978	3 067
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	2	44	14	931	45 196	444	880	15 104	87 932	40 825	126 978	3 067
335	Electrical equipment, appliance, and component manufacturing .....	1	57	17	1 355	52 925	810	1 625	23 049	124 520	120 995	241 219	9 558
3353	Electrical equipment manufacturing .....	1	36	7	563	25 108	318	621	10 867	50 561	36 390	84 023	D
33531	Electrical equipment manufacturing .....	1	36	7	563	25 108	318	621	10 867	50 561	36 390	84 023	D
3359	Other electrical equipment and component manufacturing .....	1	16	9	f	D	D	D	D	D	D	D	8 194
336	Transportation equipment manufacturing .....	—	159	99	25 247	1 401 999	20 895	40 246	1 098 776	7 538 512	10 076 462	17 610 484	168 020
3361	Motor vehicle manufacturing .....	—	8	4	j	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	7	4	j	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	6	3	i	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	1	132	88	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	1	14	7	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	1	13	6	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	3	14	8	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	3	12	7	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	1	9	7	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	1	9	7	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	1	12	8	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	41	31	4 355	251 103	3 554	7 131	196 715	484 464	574 376	1 057 073	4 269
33637	Motor vehicle metal stamping .....	1	41	31	4 355	251 103	3 554	7 131	196 715	484 464	574 376	1 057 073	26 002
336370	Motor vehicle metal stamping .....	1	31	23	2 941	124 832	2 098	4 024	65 526	333 209	623 538	953 086	29 113
33639	Other motor vehicle parts manufacturing .....	1	28	20	2 603	104 023	1 857	3 527	52 427	261 025	380 570	637 450	19 591
3364	Aerospace product and parts manufacturing .....	—	7	3	f	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	7	3	f	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>OAKLAND—Con.</b>												
337	Furniture and related product manufacturing .....	2	95	15	1 044	34 974	710	1 399	19 462	65 970	54 591	120 115	2 507
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	3	70	10	664	20 591	484	944	12 430	43 532	34 234	77 495	D
339	Miscellaneous manufacturing .....	2	188	33	3 045	124 116	1 885	3 832	61 055	232 089	140 062	374 741	9 309
3391	Medical equipment and supplies manufacturing .....	2	75	7	637	22 371	442	893	14 288	52 100	13 775	65 583	1 325
33911	Medical equipment and supplies manufacturing .....	2	75	7	637	22 371	442	893	14 288	52 100	13 775	65 583	1 325
3399	Other miscellaneous manufacturing .....	1	113	26	2 408	101 745	1 443	2 939	46 767	179 989	126 287	309 158	7 984
33995	Sign manufacturing .....	—	41	9	1 079	54 215	553	1 167	22 039	84 539	50 652	139 093	D
339950	Sign manufacturing .....	—	41	9	1 079	54 215	553	1 167	22 039	84 539	50 652	139 093	D
33999	All other miscellaneous manufacturing .....	3	48	12	948	34 511	678	1 370	19 774	74 022	48 507	120 644	3 511
339991	Gasket, packing, and sealing device manufacturing .....	4	12	7	545	20 128	406	838	12 200	45 547	25 401	71 062	1 006
	<b>OCEANA</b>												
31-33	Manufacturing .....	—	42	10	1 417	36 713	1 160	2 165	24 890	124 170	131 786	258 881	6 545
311	Food manufacturing .....	—	7	4	708	15 661	621	1 145	10 998	69 176	63 024	135 269	3 776
	<b>OGEMAW</b>												
31-33	Manufacturing .....	3	34	10	1 040	31 182	713	1 085	19 476	61 517	36 827	101 540	4 155
	<b>OSCEOLA</b>												
31-33	Manufacturing .....	—	49	18	3 062	96 296	2 377	4 980	66 602	335 341	337 719	678 100	33 269
311	Food manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	4	3	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
	<b>OTSEGO</b>												
31-33	Manufacturing .....	—	44	16	1 504	49 725	1 240	2 382	33 336	87 754	117 975	202 937	5 458
	<b>OTTAWA</b>												
31-33	Manufacturing .....	1	616	216	135 521	1 339 157	1 26 234	152 140	1790 874	14 672 629	14 049 810	18 653 850	1224 845
311	Food manufacturing .....	—	33	15	3 806	129 955	3 069	6 086	92 865	847 836	847 361	1 721 774	57 494
3114	Fruit and vegetable preserving and specialty food manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	4	4	915	41 444	547	1 192	25 414	599 472	317 117	920 958	8 993
31151	Dairy product (except frozen) manufacturing .....	—	4	4	915	41 444	547	1 192	25 414	599 472	317 117	920 958	8 993
3116	Animal slaughtering and processing .....	—	5	3	1 256	39 097	1 152	2 302	32 456	38 478	353 208	415 990	27 338
31161	Animal slaughtering and processing .....	—	5	3	1 256	39 097	1 152	2 302	32 456	38 478	353 208	415 990	27 338
311615	Poultry processing .....	—	2	2	g	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	1	28	12	621	17 972	1463	871	10 874	139 150	148 414	186 897	1 955
322	Paper manufacturing .....	1	7	6	562	19 825	362	734	11 284	44 195	44 277	88 296	D
3222	Converted paper product manufacturing .....	1	7	6	562	19 825	362	734	11 284	44 195	44 277	88 296	D
325	Chemical manufacturing .....	2	16	8	1 060	54 567	655	1 361	25 582	228 501	196 110	390 185	12 356
3254	Pharmaceutical and medicine manufacturing .....	—	5	3	705	37 954	418	832	15 729	156 822	120 475	241 015	9 536
32541	Pharmaceutical and medicine manufacturing .....	—	5	3	705	37 954	418	832	15 729	156 822	120 475	241 015	9 536

See footnotes at end of table.

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>OTTAWA—Con.</b>												
326	Plastics and rubber products manufacturing .....	-	27	16	3 795	130 441	2 851	5 790	77 172	383 841	306 555	688 148	18 643
3261	Plastics product manufacturing .....	-	26	16	h	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	18	12	3 565	122 417	2 683	5 404	72 120	367 589	290 086	655 540	12 748
326199	All other plastics product manufacturing .....	-	17	11	h	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	-	18	10	3 344	134 835	2 432	5 121	72 951	416 268	370 407	783 969	25 899
3272	Glass and glass product manufacturing .....	-	6	5	h	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	-	6	5	h	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	-	6	5	h	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	152	38	3 494	123 903	2 641	5 182	81 007	250 085	180 760	430 636	17 946
3323	Architectural and structural metals manufacturing .....	1	22	6	1 227	46 234	912	1 811	30 038	92 205	72 525	163 061	5 936
33232	Ornamental and architectural metal products manufacturing .....	-	14	4	1 066	40 665	801	1 636	26 896	80 451	60 784	139 576	5 575
332323	Ornamental and architectural metal work manufacturing ..	-	3	1	f	D	D	D	D	D	D	D	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	68	10	776	28 993	615	1 217	20 306	58 382	32 295	90 452	2 848
333	Machinery manufacturing .....	4	93	23	2 475	103 941	1 665	3 040	59 590	211 526	172 147	368 675	9 972
3335	Metalworking machinery manufacturing .....	1	53	12	1 154	51 858	783	1 562	31 542	99 409	57 850	150 587	6 949
33351	Metalworking machinery manufacturing .....	1	53	12	1 154	51 858	783	1 562	31 542	99 409	57 850	150 587	6 949
333514	Special die and tool, die set, jig, and fixture manufacturing .....	1	25	6	532	22 930	429	889	16 960	38 136	22 122	60 455	3 805
3339	Other general purpose machinery manufacturing .....	4	18	6	640	26 861	422	740	13 610	55 762	41 172	93 138	1 400
334	Computer and electronic product manufacturing .....	-	19	11	1 704	63 958	1 273	2 504	39 066	212 805	127 651	332 968	3 111
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	-	10	4	1 058	39 570	822	1 540	26 498	116 308	92 222	200 761	1 669
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	-	10	4	1 058	39 570	822	1 540	26 498	116 308	92 222	200 761	1 669
334518	Watch, clock, and part manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	2	44	28	5 268	218 314	4 114	8 255	148 043	589 598	549 476	1 140 275	23 976
3363	Motor vehicle parts manufacturing .....	2	34	24	h	D	D	D	D	D	D	D	22 434
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	6	4	1 203	52 394	1 052	2 091	43 356	229 078	94 537	323 584	3 282
336312	Gasoline engine and engine parts manufacturing .....	-	6	4	1 203	52 394	1 052	2 091	43 356	229 078	94 537	323 584	3 282
33636	Motor vehicle seating and interior trim manufacturing .....	-	2	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	-	2	1	f	D	D	D	D	D	D	D	D
336367	Motor vehicle metal stamping .....	5	14	11	1 872	78 682	1 544	3 210	56 522	159 642	143 938	303 420	9 570
336370	Motor vehicle metal stamping .....	5	14	11	1 872	78 682	1 544	3 210	56 522	159 642	143 938	303 420	9 570
33639	Other motor vehicle parts manufacturing .....	3	6	3	571	26 462	358	774	12 410	51 214	62 700	112 721	2 583
336399	All other motor vehicle parts manufacturing .....	3	6	3	571	26 462	358	774	12 410	51 214	62 700	112 721	2 583
337	Furniture and related product manufacturing .....	4	57	28	6 974	256 202	5 270	10 398	130 134	1 210 740	751 235	1 929 104	39 899
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	-	26	9	981	31 274	733	1 429	18 624	96 244	76 306	174 998	D
33712	Household and institutional furniture manufacturing .....	-	16	7	825	26 866	604	1 158	15 413	87 958	65 125	155 623	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>OTTAWA—Con.</b>												
337	Furniture and related product manufacturing—Con.												
3372	Office furniture (including fixtures) manufacturing .....	4	28	19	5 983	224 684	4 529	8 959	111 380	1 114 018	674 561	1 753 261	27 252
33721	Office furniture (including fixtures) manufacturing .....	4	28	19	5 983	224 684	4 529	8 959	111 380	1 114 018	674 561	1 753 261	27 252
337214	Office furniture (except wood) manufacturing .....	4	9	8	i	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	46	5	690	24 778	354	718	10 399	49 673	27 530	81 994	954
	<b>SAGINAW</b>												
31-33	Manufacturing .....	—	'241	'77	'17 637	'1 057 545	'13 530	'27 923	'765 497	'2 768 531	'2 241 082	'5 026 134	'186 038
331	Primary metal manufacturing .....	—	7	4	h	D	D	D	D	D	D	D	D
3315	Foundries .....	—	5	2	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	4	2	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	3	2	h	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	67	18	1 522	48 449	1 239	2 455	37 344	131 621	59 168	194 661	5 455
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	35	8	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	—	34	8	658	18 273	516	1 012	14 609	60 562	22 023	86 664	2 554
332710	Machine shops .....	—	34	8	658	18 273	516	1 012	14 609	60 562	22 023	86 664	2 554
333	Machinery manufacturing .....	3	41	23	1 928	72 304	1 145	2 364	42 391	131 918	96 458	235 939	5 280
3335	Metalworking machinery manufacturing .....	4	30	16	1 402	44 785	812	1 683	26 397	78 412	25 619	106 901	3 728
33351	Metalworking machinery manufacturing .....	4	30	16	1 402	44 785	812	1 683	26 397	78 412	25 619	106 901	3 728
333515	Cutting tool and machine tool accessory manufacturing .....	4	12	7	618	21 248	488	1 100	15 865	39 134	8 502	48 639	1 951
336	Transportation equipment manufacturing .....	—	14	8	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	12	7	i	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	—	3	1	i	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
	<b>ST. CLAIR</b>												
31-33	Manufacturing .....	1	282	102	10 294	402 525	7 497	15 014	252 162	1 059 083	1 179 178	2 255 932	46 638
322	Paper manufacturing .....	—	3	3	800	44 090	530	1 204	27 103	119 726	154 525	275 076	D
3221	Pulp, paper, and paperboard mills .....	—	2	2	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	—	2	2	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	2	2	f	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	—	11	5	618	33 401	373	848	16 988	86 883	111 056	198 939	9 070
326	Plastics and rubber products manufacturing .....	—	28	20	2 110	63 862	1 779	3 228	45 211	156 341	137 267	294 180	5 110
3261	Plastics product manufacturing ..	—	28	20	2 110	63 862	1 779	3 228	45 211	156 341	137 267	294 180	5 110
32619	Other plastics product manufacturing .....	—	25	17	1 710	52 654	1 444	2 600	37 625	121 645	102 999	225 200	4 417
326199	All other plastics product manufacturing .....	—	25	17	1 710	52 654	1 444	2 600	37 625	121 645	102 999	225 200	4 417
331	Primary metal manufacturing .....	—	6	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	73	23	1 685	62 397	1 262	2 548	39 088	148 322	124 678	277 401	5 675
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	—	38	11	751	29 479	477	1 008	15 432	74 936	59 869	136 506	3 328
333	Machinery manufacturing .....	2	52	20	1 251	57 677	802	1 570	30 966	112 924	94 138	222 006	7 676
3335	Metalworking machinery manufacturing .....	2	37	14	820	43 836	530	1 134	24 613	79 064	72 503	166 433	6 680
33351	Metalworking machinery manufacturing .....	2	37	14	820	43 836	530	1 134	24 613	79 064	72 503	166 433	6 680

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>ST. CLAIR—Con.</b>												
336	Transportation equipment manufacturing .....	—	23	16	2 437	92 240	1 723	3 545	59 909	293 283	338 106	632 753	11 971
3363	Motor vehicle parts manufacturing .....	—	18	15	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	5	5	1 114	41 145	750	1 515	26 196	106 241	146 651	253 488	D
336399	All other motor vehicle parts manufacturing .....	—	5	5	1 114	41 145	750	1 515	26 196	106 241	146 651	253 488	D
	<b>ST. JOSEPH</b>												
31-33	Manufacturing .....	—	157	70	8 977	386 645	6 919	14 613	274 681	1 294 691	1 068 653	2 341 397	100 110
311	Food manufacturing .....	—	7	2	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
311514	Dry, condensed, and evaporated dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	11	9	811	32 760	639	1 435	23 413	96 938	194 865	290 955	D
3222	Converted paper product manufacturing .....	—	9	7	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	24	15	1 952	65 296	1 668	3 556	48 760	173 941	127 888	299 956	12 219
3261	Plastics product manufacturing ..	—	20	13	1 831	61 557	1 573	3 349	46 337	165 829	121 437	285 391	11 982
32619	Other plastics product manufacturing .....	—	17	12	1 799	60 619	1 546	3 306	45 626	162 817	119 106	280 118	D
326199	All other plastics product manufacturing .....	—	16	11	9	D	D	D	D	D	D	D	11 371
332	Fabricated metal product manufacturing .....	—	35	14	1 075	39 588	769	1 526	23 783	88 110	52 616	140 742	D
3329	Other fabricated metal product manufacturing .....	—	9	5	514	20 149	353	665	11 099	49 354	28 719	77 898	D
333	Machinery manufacturing .....	—	27	11	939	42 024	650	1 380	26 525	81 532	46 791	130 323	6 663
3335	Metalworking machinery manufacturing .....	—	19	8	574	28 045	452	979	21 634	48 631	23 328	75 328	6 109
33351	Metalworking machinery manufacturing .....	—	19	8	574	28 045	452	979	21 634	48 631	23 328	75 328	6 109
336	Transportation equipment manufacturing .....	—	15	12	2 957	153 490	2 315	4 925	117 972	295 448	420 229	711 028	59 032
3362	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D	D
336214	Travel trailer and camper manufacturing .....	2	8	7	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	4	3	1 951	120 736	1 522	3 403	95 766	233 162	330 985	561 004	58 215
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>SANILAC</b>												
31-33	Manufacturing .....	1	83	30	3 342	103 526	2 454	4 455	66 204	260 862	244 276	507 696	20 856
326	Plastics and rubber products manufacturing .....	—	12	9	1 201	30 273	982	1 871	21 730	87 182	76 400	163 994	3 616
3261	Plastics product manufacturing ..	—	11	8	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	8	7	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	8	7	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	22	10	1 007	34 013	685	1 258	19 568	98 619	65 386	166 243	4 035

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>SHIAWASSEE</b>												
31-33	Manufacturing .....	1	82	31	3 500	98 700	2 708	5 186	63 706	275 895	270 211	543 775	10 290
326	Plastics and rubber products manufacturing .....	-	7	5	975	16 313	794	1 372	10 760	61 645	38 592	99 952	1 145
3261	Plastics product manufacturing ..	-	7	5	975	16 313	794	1 372	10 760	61 645	38 592	99 952	1 145
32619	Other plastics product manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	-	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
3353	Electrical equipment manufacturing .....	-	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
33531	Electrical equipment manufacturing .....	-	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
335312	Motor and generator manufacturing .....	-	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
	<b>TUSCOLA</b>												
31-33	Manufacturing .....	-	56	17	2 008	61 319	1 599	2 651	41 494	173 806	154 033	328 756	11 215
336	Transportation equipment manufacturing .....	-	10	6	770	23 983	634	976	17 530	81 661	92 202	175 942	4 983
3363	Motor vehicle parts manufacturing .....	-	8	6	f	D	D	D	D	D	D	D	D
	<b>VAN BUREN</b>												
31-33	Manufacturing .....	-	104	37	4 209	137 967	3 209	6 411	89 427	762 247	448 982	1 205 049	48 210
311	Food manufacturing .....	3	15	8	519	11 864	445	861	9 335	38 471	46 750	85 339	2 706
312	Beverage and tobacco product manufacturing .....	-	5	4	f	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	-	5	4	f	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	7	5	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	6	5	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	5	4	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	5	4	g	D	D	D	D	D	D	D	D
	<b>WASHTENAW</b>												
31-33	Manufacturing .....	-	393	131	27 975	1 510 617	20 895	42 589	1 102 360	3 333 991	4 302 443	7 622 597	117 071
311	Food manufacturing .....	1	24	6	665	122 532	486	874	15 029	73 027	58 211	131 552	D
323	Printing and related support activities .....	2	51	15	2 482	86 296	1 849	3 746	58 927	177 994	106 430	285 199	11 550
3231	Printing and related support activities .....	2	51	15	2 482	86 296	1 849	3 746	58 927	177 994	106 430	285 199	11 550
32311	Printing .....	2	47	14	g	D	D	D	D	D	D	D	11 498
323117	Books printing .....	2	9	6	1 694	58 842	1 275	2 520	42 529	107 788	77 040	185 915	9 525
325	Chemical manufacturing .....	2	14	7	595	26 154	215	420	8 381	56 666	71 498	127 462	4 406
326	Plastics and rubber products manufacturing .....	2	14	7	1 230	44 366	860	1 767	26 117	116 403	87 984	204 673	5 643
3261	Plastics product manufacturing ..	2	13	7	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	2	11	5	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	1	10	4	867	31 380	583	1 212	17 358	62 970	71 197	134 427	2 462
332	Fabricated metal product manufacturing .....	-	85	25	g	D	D	D	D	D	D	D	13 076
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	-	46	10	814	34 577	641	1 372	24 299	102 610	78 152	181 653	5 513
33272	Turned product and screw, nut, and bolt manufacturing .....	-	9	6	583	25 002	471	1 025	17 773	83 020	71 372	155 706	4 491
3329	Other fabricated metal product manufacturing .....	-	11	5	f	D	D	D	D	D	D	D	2 235

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WASHTENAW—Con.</b>												
333	Machinery manufacturing .....	2	41	13	2 223	106 857	1 061	2 054	45 052	237 487	157 002	388 907	8 474
3335	Metalworking machinery manufacturing .....	1	21	6	544	30 489	367	817	19 141	62 041	33 165	96 768	1 141
33351	Metalworking machinery manufacturing .....	1	21	6	544	30 489	367	817	19 141	62 041	33 165	96 768	1 141
3339	Other general purpose machinery manufacturing .....	3	10	4	g	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing ....	3	9	4	g	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	4	5	2	g	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	47	18	4 238	207 405	3 057	5 659	135 373	628 682	1 360 417	1 964 341	15 800
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	20	8	h	D	D	D	D	D	D	D	13 829
33451	Navigational, measuring, electromedical, and control instruments manufacturing ....	—	20	8	h	D	D	D	D	D	D	D	13 829
334514	Totalizing fluid meter and counting device manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	25	19	12 946	862 890	10 886	22 913	723 763	1 704 545	2 114 469	3 825 398	49 431
3363	Motor vehicle parts manufacturing .....	—	23	18	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	5	5	3 557	237 705	2 840	6 045	190 481	458 232	576 735	1 042 158	D
336312	Gasoline engine and engine parts manufacturing .....	—	4	4	h	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	7	5	f	D	D	D	D	D	D	D	4 547
336370	Motor vehicle metal stamping .....	—	7	5	f	D	D	D	D	D	D	D	4 547
33639	Other motor vehicle parts manufacturing .....	—	5	5	2 704	143 301	2 358	4 481	120 161	528 336	617 750	1 144 606	9 189
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	2	4	4	f	D	D	D	D	D	D	D	D
	<b>WAYNE</b>												
31-33	Manufacturing .....	—	2 059	645	118 362	6 164 828	92 972	179 378	4 620 418	18 890 667	33 596 911	52 401 486	1 275 878
311	Food manufacturing .....	2	180	43	5 652	163 917	4 224	8 281	103 498	638 612	871 609	1 501 478	30 551
3115	Dairy product manufacturing....	—	7	5	575	22 240	425	831	12 593	76 230	186 823	261 503	D
3116	Animal slaughtering and processing .....	2	22	14	2 450	63 026	1 910	3 943	40 772	255 280	512 837	762 866	14 005
31161	Animal slaughtering and processing .....	2	22	14	2 450	63 026	1 910	3 943	40 772	255 280	512 837	762 866	14 005
311612	Meat processed from carcasses .....	2	13	10	1 484	f	41 010	1 044	D	22 806	236 003	490 549	720 731
311615	Poultry processing .....	9	2	2	2	D	D	D	D	D	D	D	13 060
3118	Bakeries and tortilla manufacturing .....	7	114	14	1 380	40 968	925	1 718	26 535	98 436	53 660	150 055	5 667
31181	Bread and bakery product manufacturing .....	7	107	13	g	D	D	D	D	D	D	D	D
311811	Retail bakeries .....	5	84	6	f	D	D	D	D	D	D	D	D
3119	Other food manufacturing .....	1	21	7	1 010	30 971	759	1 411	18 418	182 207	95 030	277 335	6 229
31191	Snack food manufacturing....	1	6	4	f	D	D	D	D	D	D	D	D
311919	Other snack food manufacturing .....	1	6	4	f	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	—	12	4	f	D	D	D	D	D	D	D	11 939
3121	Beverage manufacturing .....	—	11	4	f	D	D	D	D	D	D	D	D
312111	Soft drink and ice manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WAYNE—Con.</b>												
322	Paper manufacturing .....	2	35	18	1 481	51 191	1 147	2 470	31 580	109 972	180 415	292 190	6 334
3222	Converted paper product manufacturing .....	3	34	17	9	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	1	19	9	688	22 684	526	1 134	12 587	48 671	95 526	144 372	D
323	Printing and related support activities .....	1	179	27	2 210	89 530	1 515	2 874	55 455	285 809	199 530	486 541	6 534
3231	Printing and related support activities .....	1	179	27	2 210	89 530	1 515	2 874	55 455	285 809	199 530	486 541	6 534
323111	Printing .....	1	155	24	2 004	80 058	1 389	2 642	49 855	268 821	196 471	466 543	6 067
323110	Commercial lithographic printing .....	1	84	16	1 376	59 713	960	1 825	37 619	222 007	170 117	392 771	4 483
324	Petroleum and coal products manufacturing .....	—	23	9	1 130	57 106	579	1 064	25 327	290 628	919 245	1 169 831	33 078
3241	Petroleum and coal products manufacturing .....	—	23	9	1 130	57 106	579	1 064	25 327	290 628	919 245	1 169 831	33 078
325	Chemical manufacturing .....	2	80	29	2 595	145 236	1 317	2 621	59 729	425 387	564 112	987 979	66 951
3251	Basic chemical manufacturing ...	2	15	8	f	D	D	D	D	D	D	D	D
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
32521	Resin and synthetic rubber manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	1	83	39	4 670	164 760	3 662	6 970	113 196	466 138	443 439	911 424	20 935
3261	Plastics product manufacturing ..	1	68	36	4 541	160 365	3 582	6 800	110 949	457 546	437 601	896 467	19 757
32619	Other plastics product manufacturing .....	1	45	26	3 235	97 898	2 619	4 715	67 455	260 449	271 581	530 444	13 541
326199	All other plastics product manufacturing .....	2	44	25	h	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	2	60	29	2 928	155 861	2 368	4 820	119 948	400 281	315 211	713 083	15 955
3272	Glass and glass product manufacturing .....	1	7	3	1 327	86 934	1 156	2 300	73 332	179 618	116 907	298 027	3 397
32721	Glass and glass product manufacturing .....	1	7	3	1 327	86 934	1 156	2 300	73 332	179 618	116 907	298 027	3 397
327215	Glass product manufacturing made of purchased glass ..	—	6	2	g	D	D	D	D	D	D	D	3 397
3273	Cement and concrete product manufacturing .....	2	27	16	828	41 608	633	1 376	29 173	97 606	127 799	224 742	5 656
3279	Other nonmetallic mineral product manufacturing .....	5	18	8	691	25 297	537	1 071	16 202	116 799	67 270	180 827	D
331	Primary metal manufacturing .....	—	44	27	8 019	437 969	5 945	12 996	319 040	688 726	2 242 471	2 963 218	52 967
3311	Iron and steel mills and ferroalloy manufacturing .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D
331111	Iron and steel mills .....	—	4	4	6 290	359 691	4 781	10 628	274 789	485 345	1 815 319	2 329 245	D
3312	Steel product manufacturing from purchased steel .....	—	15	11	1 010	45 051	670	1 338	25 516	111 757	215 967	330 214	5 684
33122	Rolling and drawing of purchased steel .....	—	12	8	567	28 039	408	841	18 809	70 787	163 182	237 207	D
331221	Rolled steel shape manufacturing .....	—	11	8	f	D	D	D	D	D	D	D	D
3315	Foundries .....	1	17	8	518	22 442	367	742	13 023	49 697	80 061	131 111	3 322
332	Fabricated metal product manufacturing .....	4	544	162	12 679	501 437	9 316	18 855	322 630	1 237 425	967 510	2 197 503	67 465
3321	Forging and stamping .....	3	32	18	1 222	51 493	950	1 792	35 060	98 332	106 310	201 192	4 616
33211	Forging and stamping .....	3	32	18	1 222	51 493	950	1 792	35 060	98 332	106 310	201 192	4 616
332111	Iron and steel forging .....	3	10	8	529	21 951	426	743	16 697	34 621	51 274	83 169	2 118
3322	Cutlery and handtool manufacturing .....	1	18	8	722	31 459	472	940	19 658	53 430	35 173	80 618	D
33221	Cutlery and handtool manufacturing .....	1	18	8	722	31 459	472	940	19 658	53 430	35 173	80 618	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WAYNE—Con.</b>												
332	Fabricated metal product manufacturing—Con.												
3323	Architectural and structural metals manufacturing .....	4	79	19	1 915	78 055	1 202	2 440	41 288	135 802	244 199	391 837	6 098
33231	Plate work and fabricated structural product manufacturing .....	6	33	7	1 060	44 800	720	1 454	24 610	73 095	191 851	276 485	4 249
332312	Fabricated structural metal manufacturing .....	4	24	5	736	31 571	475	940	15 852	62 121	97 926	168 648	D
33232	Ornamental and architectural metal products manufacturing .....	1	46	12	855	33 255	482	986	16 678	62 707	52 348	115 352	1 849
332322	Sheet metal work manufacturing .....	1	26	6	530	21 452	319	645	11 620	36 256	27 816	64 430	968
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	5	222	55	4 314	175 921	3 306	6 919	120 023	516 373	362 613	872 973	31 046
33271	Machine shops .....	5	151	19	1 756	74 880	1 367	2 809	52 800	157 928	81 475	239 938	9 480
332710	Machine shops .....	5	151	19	1 756	74 880	1 367	2 809	52 800	157 928	81 475	239 938	9 480
33272	Turned product and screw, nut, and bolt manufacturing .....	5	71	36	2 558	101 041	1 939	4 110	67 223	358 445	281 138	633 035	21 566
332721	Precision turned product manufacturing .....	3	39	18	1 146	43 609	942	1 993	31 252	93 593	47 746	141 313	6 580
332722	Bolt, nut, screw, rivet, and washer manufacturing .....	6	32	18	1 412	57 432	997	2 117	35 971	264 852	233 392	491 722	14 986
3328	Coating, engraving, heat treating, and allied activities .....	1	104	40	3 025	107 747	2 281	4 452	68 735	257 899	98 292	355 525	18 041
33281	Coating, engraving, heat treating, and allied activities .....	1	104	40	3 025	107 747	2 281	4 452	68 735	257 899	98 292	355 525	18 041
332811	Metal heat treating .....	1	30	17	865	33 607	608	1 219	19 543	88 191	22 284	110 492	8 335
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers .....	3	27	10	846	28 430	687	1 215	19 994	79 405	46 729	124 872	2 644
332813	Electroplating, plating, polishing, anodizing, and coloring .....	—	47	13	1 314	45 710	986	2 018	29 198	90 303	29 279	120 161	7 062
3329	Other fabricated metal product manufacturing .....	2	56	12	774	32 924	578	1 235	22 725	115 917	78 478	193 244	1 625
33299	All other fabricated metal product manufacturing .....	2	49	11	568	23 560	426	882	15 932	66 321	31 734	95 565	1 087
333	Machinery manufacturing .....	1	298	90	10 170	517 581	6 756	12 772	290 593	1 201 826	1 344 880	2 585 121	124 324
3332	Industrial machinery manufacturing .....	1	25	8	828	44 556	449	686	18 263	56 898	156 012	253 234	D
33329	Other industrial machinery manufacturing .....	1	22	7	783	42 346	421	650	17 343	54 379	153 000	247 557	D
333298	All other industrial machinery manufacturing .....	1	18	6	744	40 567	395	603	16 379	51 492	151 144	242 822	D
3335	Metalworking machinery manufacturing .....	2	184	62	1'5 069	1'240 320	1'3 819	1'6 789	1'162 503	1'483 591	1'185 763	1'661 722	1'32 614
33351	Metalworking machinery manufacturing .....	2	184	62	1'5 069	1'240 320	1'3 819	1'6 789	1'162 503	1'483 591	1'185 763	1'661 722	1'32 614
333514	Special die and tool, die set, jig, and fixture manufacturing .....	2	98	31	3 289	155 504	2 652	4 498	115 321	315 224	101 769	413 135	27 288
333515	Cutting tool and machine tool accessory manufacturing...	2	47	14	712	33 341	501	1 054	20 335	67 675	31 693	98 996	2 484
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	9	5	h	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	9	5	h	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	4	4	h	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	2	165	10	1'1 076	1'43 607	1'687	1'1 400	1'23 007	1'118 138	1'94 475	1'210 928	D
33392	Material handling equipment manufacturing .....	1	120	5	f	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	1	45	16	3 565	147 064	2 311	4 384	66 559	341 957	205 606	554 323	10 170
3341	Computer and peripheral equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
33411	Computer and peripheral equipment manufacturing ....	—	4	2	f	D	D	D	D	D	D	D	D
334111	Electronic computer manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	5	21	7	819	51 807	316	655	13 449	100 123	49 782	156 447	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	5	21	7	819	51 807	316	655	13 449	100 123	49 782	156 447	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WAYNE—Con.</b>												
334	Computer and electronic product manufacturing—Con.												
3346	Manufacturing and reproducing magnetic and optical media.....	—	4	3	g	D	D	D	D	D	D	D	D
33461	Manufacturing and reproducing magnetic and optical media...	—	4	3	g	D	D	D	D	D	D	D	D
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	—	4	3	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	1	28	8	768	36 294	384	864	12 891	89 228	56 739	142 960	2 729
336	Transportation equipment manufacturing .....	—	164	95	57 497	3 516 396	50 220	94 717	3 006 955	12 261 799	24 749 254	36 916 434	816 873
3361	Motor vehicle manufacturing.....	—	9	9	j	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	8	8	j	D	D	D	D	D	D	D	D
336111	Automobile manufacturing...	—	6	6	j	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	132	79	k	D	D	D	D	D	D	D	425 226
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	25	11	12 082	767 861	10 566	19 464	655 383	1 613 210	4 352 650	5 938 437	134 667
336312	Gasoline engine and engine parts manufacturing .....	—	24	11	j	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	6	3	h	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	6	3	h	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	15	9	7 392	517 489	6 538	14 604	458 392	1 360 003	1 588 360	2 934 377	145 152
336350	Motor vehicle transmission and power train parts manufacturing .....	—	15	9	7 392	517 489	6 538	14 604	458 392	1 360 003	1 588 360	2 934 377	145 152
33636	Motor vehicle seating and interior trim manufacturing.....	—	12	10	2 872	130 008	2 070	4 309	81 473	305 384	1 022 710	1 331 193	7 212
336360	Motor vehicle seating and interior trim manufacturing...	—	12	10	2 872	130 008	2 070	4 309	81 473	305 384	1 022 710	1 331 193	7 212
33637	Motor vehicle metal stamping .....	—	42	28	11 907	439 182	10 580	13 144	363 142	738 082	1 023 945	1 751 439	106 128
336370	Motor vehicle metal stamping.....	—	42	28	11 907	439 182	10 580	13 144	363 142	738 082	1 023 945	1 751 439	106 128
33639	Other motor vehicle parts manufacturing .....	3	22	14	1 426	52 656	1 069	2 100	32 342	166 092	176 330	344 772	12 082
336399	All other motor vehicle parts manufacturing .....	3	22	14	1 426	52 656	1 069	2 100	32 342	166 092	176 330	344 772	12 082
337	Furniture and related product manufacturing .....	4	65	18	1 745	53 652	1 286	1 801	33 436	122 599	106 265	227 409	2 965
3372	Office furniture (including fixtures) manufacturing .....	2	25	11	1 064	35 854	726	837	20 118	76 221	70 565	145 441	1 495
33721	Office furniture (including fixtures) manufacturing .....	2	25	11	1 064	35 854	726	837	20 118	76 221	70 565	145 441	1 495
337215	Showcase, partition, shelving, and locker manufacturing .....	2	12	7	882	28 234	607	625	15 444	61 304	64 902	124 875	1 211
339	Miscellaneous manufacturing .....	2	146	21	1 770	70 497	1 100	2 165	37 390	193 526	107 974	294 963	4 407
3391	Medical equipment and supplies manufacturing .....	1	56	8	757	28 820	453	890	14 623	96 746	43 879	137 437	1 852
33911	Medical equipment and supplies manufacturing .....	1	56	8	757	28 820	453	890	14 623	96 746	43 879	137 437	1 852
3399	Other miscellaneous manufacturing .....	3	90	13	1 013	41 677	647	1 275	22 767	96 780	64 095	157 526	2 555
33999	All other miscellaneous manufacturing .....	3	34	6	505	24 352	327	660	14 656	60 706	37 756	95 536	1 021
	<b>WEXFORD</b>												
31-33	Manufacturing .....	1	62	23	h	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	6	5	g	D	D	D	D	D	D	D	D
3262	Rubber product manufacturing....	—	5	4	g	D	D	D	D	D	D	D	D
32622	Rubber and plastics hoses and belting manufacturing.....	—	3	2	f	D	D	D	D	D	D	D	D
326220	Rubber and plastics hoses and belting manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326291	Rubber product manufacturing for mechanical use .....	—	2	2	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 3. Industry Statistics for Counties: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WEXFORD—Con.</b>												
336	Transportation equipment manufacturing .....	—	6	4	959	32 466	787	1 698	23 020	125 773	148 831	274 969	D
3366	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D	D
33661	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D	D
336612	Boat building .....	—	1	1	f	D	D	D	D	D	D	D	D

<sup>1</sup>Some 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.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Industries 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: 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.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 4. Industry Statistics for Places: 2002**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>ADRIAN</b>												
31-33	Manufacturing .....	-	36	17	2 257	87 326	1 709	3 450	58 587	307 473	271 064	576 014	10 408
337	Furniture and related product manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33711	Wood kitchen cabinet and countertop manufacturing ....	-	1	1	f	D	D	D	D	D	D	D	D
337110	Wood kitchen cabinet and countertop manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>ALBION</b>												
31-33	Manufacturing .....	3	21	9	1 039	39 305	762	1 585	26 166	102 002	80 085	182 977	4 059
	<b>ALLEGAN</b>												
31-33	Manufacturing .....	-	12	4	h	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
	<b>ALLENDALE</b>												
31-33	Manufacturing .....	-	14	5	612	19 757	440	854	12 554	54 655	117 754	171 862	2 314
	<b>ALLEN PARK</b>												
31-33	Manufacturing .....	-	18	2	f	D	D	D	D	D	D	D	D
	<b>ALMA</b>												
31-33	Manufacturing .....	-	19	7	1 575	53 283	1 286	2 313	33 421	120 391	132 377	251 819	5 463
336	Transportation equipment manufacturing .....	-	4	4	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>ALPENA</b>												
31-33	Manufacturing .....	4	29	12	1 590	69 155	1 079	2 112	40 807	205 654	158 589	369 123	7 344
333	Machinery manufacturing .....	-	10	4	f	D	D	D	D	D	D	D	D
	<b>ALPINE</b>												
31-33	Manufacturing .....	-	27	11	1 255	45 198	986	2 069	31 489	87 190	54 740	139 577	3 351
336	Transportation equipment manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
3369	Other transportation equipment manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33699	Other transportation equipment manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336999	All other transportation equipment manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>ANN ARBOR</b>												
31-33	Manufacturing .....	3	75	16	2 440	198 795	1 493	2 962	148 838	227 197	182 431	415 750	11 635
323	Printing and related support activities .....	7	15	4	653	21 812	435	905	13 834	45 213	27 162	72 762	2 044
3231	Printing and related support activities .....	7	15	4	653	21 812	435	905	13 834	45 213	27 162	72 762	2 044
32311	Printing .....	7	14	4	f	D	D	D	D	D	D	D	2 044

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>AUBURN HILLS</b>												
31-33	Manufacturing .....	—	97	55	8 492	439 257	3 963	7 705	153 570	885 755	1 243 878	2 156 754	32 170
326	Plastics and rubber products manufacturing .....	—	12	6	520	19 354	296	594	7 968	31 062	34 129	64 329	6 107
3261	Plastics product manufacturing .....	—	10	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	14	7	703	24 738	454	747	11 033	58 906	43 426	101 371	2 961
333	Machinery manufacturing .....	1	27	17	3 479	227 771	1 091	2 472	60 767	447 142	629 458	1 088 704	8 965
3335	Metalworking machinery manufacturing .....	3	14	10	1 196	71 282	563	1 258	28 899	171 315	168 822	338 776	6 039
33351	Metalworking machinery manufacturing .....	3	14	10	1 196	71 282	563	1 258	28 899	171 315	168 822	338 776	6 039
333518	Other metalworking machinery manufacturing .....	4	5	5	774	46 621	292	623	14 820	121 991	146 653	270 983	2 524
3339	Other general purpose machinery manufacturing .....	—	10	5	g	D	D	D	D	D	D	D	2 373
33399	All other general purpose machinery manufacturing .....	—	6	2	g	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	8	6	g	D	D	D	D	D	D	D	D
3344	Semiconductor and other electronic component manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
33441	Semiconductor and other electronic component manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
334418	Printed circuit assembly (electronic assembly) manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	10	10	1 607	66 699	1 061	1 596	31 897	159 550	267 075	427 282	5 147
3363	Motor vehicle parts manufacturing .....	—	10	10	1 607	66 699	1 061	1 596	31 897	159 550	267 075	427 282	5 147
33636	Motor vehicle seating and interior trim manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	4	4	510	25 468	265	618	7 997	72 712	106 291	178 700	D
	<b>BAD AXE</b>												
31-33	Manufacturing .....	—	14	8	875	26 268	662	1 414	18 571	101 114	82 964	185 865	11 311
	<b>BATTLE CREEK</b>												
31-33	Manufacturing .....	—	80	38	7 850	350 234	5 967	11 958	240 276	1 529 903	1 274 723	2 793 291	165 662
311	Food manufacturing .....	—	10	4	g	D	D	D	D	D	D	D	D
3112	Grain and oilseed milling .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
31123	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
311230	Breakfast cereal manufacturing .....	—	4	3	1 479	102 481	1 190	2 584	81 976	615 589	280 670	888 530	D
333	Machinery manufacturing .....	—	10	4	626	20 012	429	720	9 756	45 301	37 693	82 285	D
3339	Other general purpose machinery manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33593	Wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	8	7	2 935	120 930	2 439	4 662	85 841	614 586	637 380	1 250 344	73 052
3363	Motor vehicle parts manufacturing .....	—	7	6	h	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336321	Vehicular lighting equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BAY CITY</b>												
31-33	Manufacturing .....	—	57	24	3 211	177 395	2 533	5 143	134 879	292 738	384 868	685 281	31 351
336	Transportation equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
	<b>BEDFORD</b>												
31-33	Manufacturing .....	1	34	14	1 163	54 636	796	1 800	32 347	103 227	71 064	169 434	6 527
	<b>BELDING</b>												
31-33	Manufacturing .....	—	21	10	f	D	D	D	D	D	D	D	5 737
	<b>BENTON</b>												
31-33	Manufacturing .....	3	56	26	2 686	95 573	2 175	4 434	65 425	230 596	271 407	500 829	10 191
336	Transportation equipment manufacturing .....	6	3	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	6	3	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	6	2	2	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	6	2	2	g	D	D	D	D	D	D	D	D
	<b>BENTON HARBOR</b>												
31-33	Manufacturing .....	1	34	13	1 336	50 445	1 049	2 171	34 905	131 380	143 279	273 527	5 440
	<b>BIG RAPIDS</b>												
31-33	Manufacturing .....	—	18	9	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D
	<b>BIRMINGHAM</b>												
31-33	Manufacturing .....	4	40	8	751	25 708	508	1 005	13 649	77 504	72 996	151 991	2 192
	<b>BLACKMAN</b>												
31-33	Manufacturing .....	—	64	31	3 272	128 270	2 339	4 705	83 800	331 367	276 961	621 580	17 529
332	Fabricated metal product manufacturing .....	—	26	12	843	30 395	650	1 159	20 788	73 025	62 060	135 854	D
336	Transportation equipment manufacturing .....	—	5	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	5	5	g	D	D	D	D	D	D	D	D
	<b>BLISSFIELD</b>												
31-33	Manufacturing .....	—	13	5	656	24 491	469	981	15 801	70 819	79 362	148 797	3 170
	<b>BOYNE CITY</b>												
31-33	Manufacturing .....	2	9	5	739	28 984	576	1 226	19 586	76 050	42 310	118 664	11 257
	<b>BRIDGEPORT</b>												
31-33	Manufacturing .....	—	21	9	f	D	D	D	D	D	D	D	3 815
	<b>BRIGHTON CITY</b>												
31-33	Manufacturing .....	1	35	11	1 134	43 651	742	1 527	28 602	111 057	105 355	214 296	5 228
336	Transportation equipment manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	1 819
3363	Motor vehicle parts manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	1 819
33636	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>BRIGHTON TOWNSHIP</b>												
31-33	Manufacturing .....	1	24	9	546	22 987	289	538	9 557	57 446	37 102	95 588	952
	<b>BROWNSTOWN</b>												
31-33	Manufacturing .....	1	17	3	f	D	D	D	D	D	D	D	2 110

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BUENA VISTA</b>												
31-33	Manufacturing .....	—	22	8	i	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	4	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	4	1	i	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
	<b>BYRON</b>												
31-33	Manufacturing .....	3	34	11	1 078	47 651	861	1 776	35 630	91 914	88 147	180 843	9 842
	<b>CADILLAC</b>												
31-33	Manufacturing .....	1	39	19	3 581	120 683	2 746	5 502	76 242	351 275	352 739	708 876	15 264
326	Plastics and rubber products manufacturing .....	—	4	3	1 092	33 935	829	1 553	20 016	72 571	64 488	137 975	2 030
3262	Rubber product manufacturing ...	—	4	3	1 092	33 935	829	1 553	20 016	72 571	64 488	137 975	2 030
32622	Rubber and plastics hoses and belting manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
326220	Rubber and plastics hoses and belting manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
32629	Other rubber product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326291	Rubber product manufacturing for mechanical use .....	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	6	4	959	32 466	787	1 698	23 020	125 773	148 831	274 969	D
3366	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D	D
33661	Ship and boat building .....	—	1	1	f	D	D	D	D	D	D	D	D
336612	Boat building .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>CANTON</b>												
31-33	Manufacturing .....	2	68	29	2 565	97 988	1 842	3 718	59 964	252 240	251 130	494 148	15 137
332	Fabricated metal product manufacturing .....	3	22	13	1 061	41 672	778	1 617	26 653	93 796	85 281	170 650	9 985
	<b>CASCADE</b>												
31-33	Manufacturing .....	1	57	31	5 375	253 324	3 731	8 058	153 593	544 691	334 248	877 133	49 621
326	Plastics and rubber products manufacturing .....	—	11	8	1 508	58 600	993	1 987	27 772	132 812	118 036	252 939	9 428
3261	Plastics product manufacturing ...	—	8	6	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	5	5	1 253	49 392	809	1 618	22 384	113 780	98 147	213 081	D
326199	All other plastics product manufacturing .....	—	5	5	1 253	49 392	809	1 618	22 384	113 780	98 147	213 081	D
331	Primary metal manufacturing .....	3	3	2	f	D	D	D	D	D	D	D	D
3315	Foundries .....	3	2	2	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries ....	3	2	2	f	D	D	D	D	D	D	D	D
331521	Aluminum die-casting foundries.....	3	2	2	f	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	4	2	g	D	D	D	D	D	D	D	D
334511	Search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
31-33	<b>CENTER LINE</b>												
31-33	Manufacturing .....	6	20	9	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	7	4	3	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	7	4	3	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	7	3	2	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	7	3	2	g	D	D	D	D	D	D	D	D
	<b>CHARLEVOIX</b>												
31-33	Manufacturing .....	7	17	6	555	17 028	447	913	10 343	54 141	64 077	118 783	2 014
	<b>CHARLOTTE</b>												
31-33	Manufacturing .....	—	18	10	1 335	51 227	918	3 214	31 950	128 307	231 682	361 002	D
	<b>CHELSEA</b>												
31-33	Manufacturing .....	—	18	8	1 282	53 482	950	1 844	34 409	168 180	115 595	290 498	3 963
	<b>CHESTERFIELD</b>												
31-33	Manufacturing .....	—	121	53	6 469	276 465	5 087	10 220	197 088	525 248	756 607	1 281 601	50 007
326	Plastics and rubber products manufacturing .....	—	14	9	808	26 040	631	1 243	17 639	59 318	50 340	109 836	26 494
3261	Plastics product manufacturing ..	—	13	8	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	12	7	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	11	7	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	3	34	10	725	25 972	563	1 160	17 772	49 624	50 536	103 052	2 278
333	Machinery manufacturing .....	—	32	15	1 003	52 324	601	1 250	27 166	106 248	63 081	180 411	4 623
3335	Metalworking machinery manufacturing .....	—	23	10	633	34 495	409	895	20 398	48 956	39 388	97 434	2 913
33351	Metalworking machinery manufacturing .....	—	23	10	633	34 495	409	895	20 398	48 956	39 388	97 434	2 913
336	Transportation equipment manufacturing .....	—	24	14	3 627	160 621	3 083	6 152	128 485	282 429	559 896	828 279	14 991
3363	Motor vehicle parts manufacturing .....	—	21	13	h	D	D	D	D	D	D	D	14 885
33636	Motor vehicle seating and interior trim manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	13	8	1 014	35 646	892	1 952	27 315	105 207	99 201	197 364	4 009
336370	Motor vehicle metal stamping .....	—	13	8	1 014	35 646	892	1 952	27 315	105 207	99 201	197 364	4 009
	<b>CLAWSON</b>												
31-33	Manufacturing .....	1	30	7	f	D	D	D	D	D	D	D	2 141
	<b>CLINTON TOWNSHIP</b>												
31-33	Manufacturing .....	2	223	64	4 991	215 599	3 274	6 565	121 255	431 689	317 289	744 653	17 738
323	Printing and related support activities .....	1	16	4	526	28 417	263	461	10 368	57 306	26 416	81 942	1 806
3231	Printing and related support activities .....	1	16	4	526	28 417	263	461	10 368	57 306	26 416	81 942	1 806
332	Fabricated metal product manufacturing .....	—	69	17	1 222	49 903	848	1 716	29 012	102 360	43 565	145 299	3 580
333	Machinery manufacturing .....	1	60	17	1 354	61 405	907	1 926	38 323	95 835	66 828	161 108	5 178
3335	Metalworking machinery manufacturing .....	1	46	12	1 054	46 640	711	1 479	30 074	68 982	40 831	108 178	2 975
33351	Metalworking machinery manufacturing .....	1	46	12	1 054	46 640	711	1 479	30 074	68 982	40 831	108 178	2 975
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	26	7	560	23 120	405	855	17 140	34 915	23 988	57 326	2 189
336	Transportation equipment manufacturing .....	3	15	8	734	35 622	447	914	19 389	88 775	108 996	196 103	2 916
3363	Motor vehicle parts manufacturing .....	3	15	8	734	35 622	447	914	19 389	88 775	108 996	196 103	2 916
	<b>COLDWATER</b>												
31-33	Manufacturing .....	—	45	26	2 416	85 829	1 765	3 569	56 433	229 035	303 173	533 519	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>COMMERCE (BALANCE)</b>													
31-33	Manufacturing .....	4	72	20	1 581	59 883	1 167	2 317	36 059	130 667	96 048	227 050	4 577
326	Plastics and rubber products manufacturing .....	6	7	4	555	19 643	433	870	11 902	45 940	38 579	85 509	2 542
3261	Plastics product manufacturing ..	6	6	3	f	D	D	D	D	D	D	D	D
<b>COMSTOCK</b>													
31-33	Manufacturing .....	—	23	10	g	D	D	D	D	D	D	D	5 017
332	Fabricated metal product manufacturing .....	—	7	1	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33299	All other fabricated metal product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
332999	All other miscellaneous fabricated metal product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>COOPERSVILLE</b>													
31-33	Manufacturing .....	—	16	5	1 262	52 223	1 044	1 973	39 815	251 967	120 301	366 879	4 988
336	Transportation equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>DEARBORN</b>													
31-33	Manufacturing .....	—	104	37	13 848	664 045	11 775	17 987	529 342	1 218 197	3 658 682	4 886 426	105 551
331	Primary metal manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
3311	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	1	1	h	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	5	18	8	583	22 882	450	725	15 975	42 514	67 649	107 595	3 094
333	Machinery manufacturing .....	1	15	5	1 392	60 310	1 213	1 336	48 848	119 356	31 499	152 258	2 584
3335	Metalworking machinery manufacturing .....	—	7	3	g	D	D	D	D	D	D	D	1 558
33351	Metalworking machinery manufacturing .....	—	7	3	g	D	D	D	D	D	D	D	1 558
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	5	3	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	9	5	i	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	8	4	i	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	2	1	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	2	1	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	3	2	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	3	2	h	D	D	D	D	D	D	D	D
<b>DELHI</b>													
31-33	Manufacturing .....	—	31	13	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>DETROIT</b>												
31-33	Manufacturing .....	—	647	187	38 019	2 054 042	30 079	62 244	1 564 994	8 696 333	14 123 468	22 796 829	383 626
311	Food manufacturing .....	2	74	23	3 013	81 441	2 292	4 708	50 859	317 784	577 469	888 069	16 083
3116	Animal slaughtering and processing .....	2	14	9	1 991	48 834	1 627	3 373	33 985	218 182	481 769	694 452	12 237
31161	Animal slaughtering and processing .....	2	14	9	1 991	48 834	1 627	3 373	33 985	218 182	481 769	694 452	12 237
311612	Meat processed from carcasses .....	2	9	6	g f	D	D	D	D	D	D	D	D
311615	Poultry processing .....	9	2	2	g f	D	D	D	D	D	D	D	D
312	Beverage and tobacco product manufacturing .....	—	7	4	f	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	4	4	f	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	1	15	7	643	23 264	501	1 110	14 619	43 911	105 342	151 248	D
323	Printing and related support activities .....	3	62	8	666	28 903	454	856	17 029	56 756	24 405	81 540	3 248
3231	Printing and related support activities .....	3	62	8	666	28 903	454	856	17 029	56 756	24 405	81 540	3 248
32311	Printing .....	3	49	6	533	21 831	380	699	13 101	44 215	22 121	66 883	2 834
324	Petroleum and coal products manufacturing .....	—	14	6	778	42 210	511	950	22 728	232 732	828 482	1 021 333	29 958
3241	Petroleum and coal products manufacturing .....	—	14	6	778	42 210	511	950	22 728	232 732	828 482	1 021 333	29 958
325	Chemical manufacturing .....	4	40	12	718	31 418	439	856	17 673	95 712	108 377	208 027	16 330
326	Plastics and rubber products manufacturing .....	—	22	7	674	22 813	469	1 043	13 218	72 724	140 764	215 196	3 384
3261	Plastics product manufacturing ..	—	16	7	659	22 378	458	1 022	12 933	72 109	140 270	213 909	D
32619	Other plastics product manufacturing .....	—	9	5	576	19 314	403	898	11 009	53 478	126 700	180 554	2 421
326199	All other plastics product manufacturing .....	—	9	5	576	19 314	403	898	11 009	53 478	126 700	180 554	2 421
327	Nonmetallic mineral product manufacturing .....	3	22	11	1 800	107 748	1 514	3 034	87 790	278 555	186 549	464 241	7 162
3272	Glass and glass product manufacturing .....	1	2	2	g	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	1	2	2	g	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	1	1	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	18	9	716	27 964	476	1 003	16 022	78 274	158 075	237 085	D
332	Fabricated metal product manufacturing .....	6	167	37	3 341	124 601	2 551	5 240	83 884	377 581	356 159	735 587	15 488
3323	Architectural and structural metals manufacturing .....	6	30	6	587	23 085	414	836	14 866	29 132	121 256	154 361	2 353
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	7	48	8	968	35 925	794	1 662	27 392	207 552	157 367	363 253	9 219
33272	Turned product and screw, nut, and bolt manufacturing .....	7	17	6	626	22 343	523	1 102	17 156	176 395	135 244	309 811	7 842
3328	Coating, engraving, heat treating, and allied activities .....	3	50	16	1 318	48 257	995	2 027	30 831	104 259	50 161	153 822	2 866
33281	Coating, engraving, heat treating, and allied activities ..	3	50	16	1 318	48 257	995	2 027	30 831	104 259	50 161	153 822	2 866
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers ..	4	15	6	502	18 992	376	726	12 312	49 176	33 900	81 644	1 589
332813	Electroplating, plating, polishing, anodizing, and coloring .....	1	25	7	592	19 452	464	955	12 887	34 857	9 495	45 196	1 099
333	Machinery manufacturing .....	—	59	15	3 404	202 588	1 940	4 168	96 575	535 992	920 334	1 498 003	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	3	1	h	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	3	1	h	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D

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<b>DETROIT—Con.</b>													
336	Transportation equipment manufacturing .....	—	48	28	20 172	1 278 785	17 769	36 890	1 111 397	6 409 049	10 372 738	16 757 484	194 929
3361	Motor vehicle manufacturing .....	—	4	4	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	3	3	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	2	2	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	40	24	j	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	9	3	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	8	3	h	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	4	3	i	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	4	3	i	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	4	10	8	1 967	89 946	1 751	3 223	76 858	156 786	220 795	376 877	9 822
336370	Motor vehicle metal stamping .....	4	10	8	1 967	89 946	1 751	3 223	76 858	156 786	220 795	376 877	9 822
33639	Other motor vehicle parts manufacturing .....	8	7	5	700	25 208	552	1 175	16 785	58 876	67 393	126 674	D
336399	All other motor vehicle parts manufacturing .....	8	7	5	700	25 208	552	1 175	16 785	58 876	67 393	126 674	D
339	Miscellaneous manufacturing .....	4	35	7	545	20 325	300	615	8 099	37 619	25 058	62 011	D
<b>DOWAGIAC</b>													
31-33	Manufacturing .....	2	23	9	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	9	2	1	f	D	D	D	D	D	D	D	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
337122	Nonupholstered wood household furniture manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
<b>EAST JORDAN</b>													
31-33	Manufacturing .....	—	8	4	820	35 256	589	1 219	21 705	114 702	58 702	171 419	7 771
331	Primary metal manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3315	Foundries .....	—	1	1	f	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	1	1	f	D	D	D	D	D	D	D	D
331511	Iron foundries .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>EATON RAPIDS</b>													
31-33	Manufacturing .....	—	11	5	964	36 227	699	1 467	21 095	74 326	125 403	200 259	7 837
<b>ECORSE</b>													
31-33	Manufacturing .....	—	10	5	h	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	2	1	h	D	D	D	D	D	D	D	D
3311	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33111	Iron and steel mills and ferroalloy manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
331111	Iron and steel mills .....	—	1	1	h	D	D	D	D	D	D	D	D
<b>ESCANABA</b>													
31-33	Manufacturing .....	—	27	8	737	27 542	483	1 029	15 085	64 990	60 632	119 553	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>FARMINGTON HILLS</b>													
31-33	Manufacturing .....	1	123	41	3 551	156 585	2 118	4 277	71 479	346 582	265 873	596 628	15 708
332	Fabricated metal product manufacturing .....	-	23	9	725	28 912	524	1 130	16 253	61 916	39 922	102 541	3 993
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	-	11	6	540	20 303	404	871	11 648	46 768	31 557	79 339	2 991
333	Machinery manufacturing .....	-	25	15	1 385	73 524	707	1 410	28 832	171 992	147 836	301 955	D
3335	Metalworking machinery manufacturing .....	-	16	8	605	36 596	268	602	14 184	88 897	52 666	123 656	D
33351	Metalworking machinery manufacturing .....	-	16	8	605	36 596	268	602	14 184	88 897	52 666	123 656	D
3339	Other general purpose machinery manufacturing .....	1	5	5	517	18 857	357	632	10 169	37 288	42 763	80 416	D
339	Miscellaneous manufacturing .....	-	19	4	531	21 064	300	604	9 150	42 744	31 251	74 294	1 118
<b>FENTON CITY</b>													
31-33	Manufacturing .....	-	27	12	g	D	D	D	D	D	D	D	2 692
336	Transportation equipment manufacturing .....	-	2	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing....	-	1	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing...	-	1	1	f	D	D	D	D	D	D	D	D
<b>FERNDALE</b>													
31-33	Manufacturing .....	1	76	19	1 491	64 477	1 000	2 032	36 593	180 137	159 687	362 521	3 366
<b>FLAT ROCK</b>													
31-33	Manufacturing .....	-	8	3	h	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing.....	-	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
336111	Automobile manufacturing...	-	1	1	h	D	D	D	D	D	D	D	D
<b>FLINT CITY</b>													
31-33	Manufacturing .....	-	88	30	j	D	D	D	D	D	D	D	117 590
322	Paper manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
3222	Converted paper product manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	-	3	3	f	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	-	1	1	g	D	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D

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	<b>FLINT CITY—Con.</b>												
336	Transportation equipment manufacturing .....	—	8	7	j	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	6	6	i	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	3	3	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	3	3	h	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	3	3	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	1	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	1	1	g	D	D	D	D	D	D	D	D
	<b>FOWLERVILLE</b>												
31-33	Manufacturing .....	—	12	5	821	36 126	560	1 184	20 546	232 741	309 867	546 524	23 912
	<b>FRASER</b>												
31-33	Manufacturing .....	1	158	59	4 467	188 152	3 106	6 366	114 954	396 649	269 361	674 706	21 622
326	Plastics and rubber products manufacturing .....	—	5	4	914	32 291	585	1 146	15 339	72 309	58 195	129 831	D
3261	Plastics product manufacturing ..	—	5	4	914	32 291	585	1 146	15 339	72 309	58 195	129 831	D
32619	Other plastics product manufacturing .....	—	5	4	914	32 291	585	1 146	15 339	72 309	58 195	129 831	D
326199	All other plastics product manufacturing .....	—	5	4	914	32 291	585	1 146	15 339	72 309	58 195	129 831	D
332	Fabricated metal product manufacturing .....	1	48	14	927	36 063	613	1 316	22 985	84 609	51 798	138 403	5 874
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	27	7	583	20 602	363	811	12 352	47 264	20 115	68 873	1 460
333	Machinery manufacturing .....	1	58	23	1 481	76 560	1 044	2 115	48 967	136 415	72 251	214 475	3 264
3335	Metalworking machinery manufacturing .....	1	47	18	1 067	52 134	784	1 576	33 948	95 547	39 850	134 908	D
33351	Metalworking machinery manufacturing .....	1	47	18	1 067	52 134	784	1 576	33 948	95 547	39 850	134 908	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	1	21	9	538	29 624	404	866	20 256	51 741	16 371	66 869	978
336	Transportation equipment manufacturing .....	2	18	9	626	25 788	467	1 000	16 842	62 953	60 821	125 001	4 241
3363	Motor vehicle parts manufacturing .....	2	15	9	f	D	D	D	D	D	D	D	D
	<b>FREMONT</b>												
31-33	Manufacturing .....	4	9	3	f	D	D	D	D	D	D	D	D
	<b>FRENCHTOWN</b>												
31-33	Manufacturing .....	3	12	3	f	D	D	D	D	D	D	D	3 356
	<b>GAINES</b>												
31-33	Manufacturing .....	2	24	8	1 826	53 715	1 511	2 582	37 385	97 513	77 164	177 319	1 632
337	Furniture and related product manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
337211	Wood office furniture manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D

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<b>GARFIELD</b>													
31-33	Manufacturing .....	—	78	20	2 820	100 020	2 201	4 534	69 401	307 379	315 113	620 825	10 648
311	Food manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
311813	Frozen cakes, pies, and other pastries manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33593	Wiring device manufacturing...	—	1	1	f	D	D	D	D	D	D	D	D
335931	Current-carrying wiring device manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	7	4	f	D	D	D	D	D	D	D	3 549
3363	Motor vehicle parts manufacturing .....	—	7	4	f	D	D	D	D	D	D	D	3 549
<b>GAYLORD</b>													
31-33	Manufacturing .....	—	30	12	1 189	41 334	955	1 914	27 675	70 918	98 802	167 471	4 547
<b>GEORGETOWN</b>													
31-33	Manufacturing .....	3	51	13	844	30 662	596	1 149	17 590	65 158	52 689	116 643	2 415
<b>GRAND BLANC CITY</b>													
31-33	Manufacturing .....	—	10	3	g	D	D	D	D	D	D	D	5 698
326	Plastics and rubber products manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	1	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping...	—	1	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	1	1	g	D	D	D	D	D	D	D	D
<b>GRAND BLANC TOWNSHIP</b>													
31-33	Manufacturing .....	4	29	12	g	D	D	D	D	D	D	D	D
<b>GRAND HAVEN CITY</b>													
31-33	Manufacturing .....	—	63	28	2 777	108 534	1 990	4 068	63 429	293 275	519 716	809 055	14 402
336	Transportation equipment manufacturing .....	1	7	5	800	36 865	553	1 171	20 011	70 586	71 307	143 649	2 884
3363	Motor vehicle parts manufacturing .....	1	6	4	f	D	D	D	D	D	D	D	D
<b>GRAND HAVEN TOWNSHIP</b>													
31-33	Manufacturing .....	7	41	13	1 851	68 941	1 546	3 149	48 248	128 143	132 103	260 450	13 242
336	Transportation equipment manufacturing .....	8	5	4	1 301	51 090	1 129	2 309	36 662	86 045	102 762	189 027	D
3363	Motor vehicle parts manufacturing .....	8	5	4	1 301	51 090	1 129	2 309	36 662	86 045	102 762	189 027	D
33637	Motor vehicle metal stamping...	9	2	2	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	9	2	2	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>GRAND RAPIDS CITY</b>													
31-33	Manufacturing .....	1	1'382	1'159	1'28 760	1'1 280 824	1'17 172	1'34 328	1'617 222	1'2 710 557	1'2 235 650	1'4 960 254	1'158 494
311	Food manufacturing .....	5	29	14	2 684	103 306	1 904	3 966	71 291	446 347	247 822	693 794	29 484
3112	Grain and oilseed milling .....	7	2	2	f	D	D	D	D	D	D	D	D
31123	Breakfast cereal manufacturing .....	7	2	2	f	D	D	D	D	D	D	D	D
311230	Breakfast cereal manufacturing .....	7	2	2	f	D	D	D	D	D	D	D	D
3118	Bakeries and tortilla manufacturing .....	2	15	7	1 379	52 749	815	1 627	32 682	208 221	113 965	322 050	7 714
31181	Bread and bakery product manufacturing .....	6	13	6	f	D	D	D	D	D	D	D	D
311812	Commercial bakeries .....	6	3	3	f	D	D	D	D	D	D	D	D
321	Wood product manufacturing .....	2	18	5	547	15 395	407	753	9 344	32 522	37 988	70 084	2 424
3219	Other wood product manufacturing .....	2	17	5	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	-	58	15	1 146	45 837	698	1 184	22 693	84 725	62 226	147 843	4 739
3231	Printing and related support activities .....	-	58	15	1 146	45 837	698	1 184	22 693	84 725	62 226	147 843	4 739
32311	Printing .....	-	50	15	1 089	44 034	665	1 124	21 676	82 135	61 771	144 777	D
323110	Commercial lithographic printing .....	-	23	8	548	18 085	367	510	9 798	38 589	22 796	61 876	2 442
326	Plastics and rubber products manufacturing .....	-	25	14	2 663	88 052	1 995	4 199	53 048	181 590	174 723	358 734	8 387
3261	Plastics product manufacturing ..	1	21	11	2 007	63 494	1 669	3 627	45 251	128 225	125 060	256 520	6 690
32619	Other plastics product manufacturing .....	-	16	7	1 734	55 001	1 451	3 144	39 661	105 314	94 231	202 671	5 865
326199	All other plastics product manufacturing .....	-	16	7	1 734	55 001	1 451	3 144	39 661	105 314	94 231	202 671	5 865
3262	Rubber product manufacturing ...	-	4	3	656	24 558	326	572	7 797	53 365	49 663	102 214	1 697
332	Fabricated metal product manufacturing .....	-	75	34	3 216	118 385	2 458	5 108	74 982	254 613	139 598	396 746	13 836
3325	Hardware manufacturing .....	-	4	3	g	D	D	D	D	D	D	D	D
33251	Hardware manufacturing .....	-	4	3	g	D	D	D	D	D	D	D	D
332510	Hardware manufacturing ....	-	4	3	g	D	D	D	D	D	D	D	D
3328	Coating, engraving, heat treating, and allied activities .....	1	24	15	1 111	34 860	905	1 855	24 744	65 812	26 342	91 707	4 935
33281	Coating, engraving, heat treating, and allied activities ..	1	24	15	1 111	34 860	905	1 855	24 744	65 812	26 342	91 707	4 935
332812	Metal coating, engraving (except jewelry and silverware), and allied services to manufacturers ..	-	9	8	582	17 672	477	940	12 688	37 620	15 695	53 205	1 603
333	Machinery manufacturing .....	-	42	22	6 358	318 266	2 506	4 630	115 644	621 517	610 618	1 237 773	24 502
3335	Metalworking machinery manufacturing .....	-	22	9	955	62 212	687	1 505	44 442	111 666	49 292	156 734	D
33351	Metalworking machinery manufacturing .....	-	22	9	955	62 212	687	1 505	44 442	111 666	49 292	156 734	D
3339	Other general purpose machinery manufacturing .....	-	13	11	5 268	251 819	1 711	2 933	68 448	500 602	554 663	1 065 105	17 839
33392	Material handling equipment manufacturing .....	-	4	3	h	D	D	D	D	D	D	D	D
333922	Conveyor and conveying equipment manufacturing ..	-	4	3	h	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing ....	-	8	7	f	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	-	6	4	607	19 789	360	511	7 893	66 018	58 344	122 825	D
3343	Audio and video equipment manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
33431	Audio and video equipment manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
334310	Audio and video equipment manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>GRAND RAPIDS CITY—Con.</b>												
336	Transportation equipment manufacturing .....	2	15	10	2 293	96 689	1 799	3 822	67 247	223 420	242 493	464 586	10 070
3363	Motor vehicle parts manufacturing .....	2	12	9	g	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	—	3	3	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping ..	—	3	3	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	7	5	4	670	25 067	588	1 173	20 214	68 828	53 754	122 868	3 260
336399	All other motor vehicle parts manufacturing .....	8	4	3	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	29	13	7 063	395 640	3 605	7 298	152 392	541 383	442 857	990 969	D
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	1	11	5	f	D	D	D	D	D	D	D	4 563
3372	Office furniture (including fixtures) manufacturing .....	—	15	5	i	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	15	5	i	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	—	3	2	i	D	D	D	D	D	D	D	D
339	Miscellaneous manufacturing .....	—	31	8	630	24 331	397	783	12 973	102 764	30 375	133 940	3 830
	<b>GRANDVILLE</b>												
31-33	Manufacturing .....	—	53	20	1 957	82 357	1 225	2 440	39 885	213 892	164 386	376 296	13 463
	<b>GREEN OAK</b>												
31-33	Manufacturing .....	1	59	28	1 894	78 942	1 271	2 452	44 576	203 967	226 502	427 468	16 175
	<b>GREENVILLE</b>												
31-33	Manufacturing .....	—	28	14	4 145	138 787	3 666	7 115	114 628	355 923	498 895	855 727	20 298
335	Electrical equipment, appliance, and component manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing. Household refrigerator and home freezer manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
335222	Major appliance manufacturing. Household refrigerator and home freezer manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>HAMBURG</b>												
31-33	Manufacturing .....	—	12	7	f	D	D	D	D	D	D	D	4 148
	<b>HARRISON</b>												
31-33	Manufacturing .....	2	68	16	1 128	45 133	817	1 717	27 762	77 427	64 682	140 609	6 066
	<b>HASTINGS</b>												
31-33	Manufacturing .....	3	27	7	1 549	54 125	1 188	2 390	33 952	128 127	84 758	212 398	3 515
326	Plastics and rubber products manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
	<b>HILLSDALE</b>												
31-33	Manufacturing .....	—	25	14	1 767	62 408	1 322	2 540	40 642	169 045	245 787	411 647	9 482

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>HOLLAND CITY</b>												
31-33	Manufacturing .....	1	111	59	13 310	472 465	9 297	19 069	291 106	1 983 567	1 618 690	3 596 636	75 781
311	Food manufacturing .....	-	8	3	943	30 474	834	1 690	23 872	494 536	172 701	666 261	4 929
312	Beverage and tobacco product manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	7	4	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	-	9	6	1 886	61 576	1 332	2 939	34 083	213 922	212 005	422 265	6 600
3261	Plastics product manufacturing ..	-	9	6	1 886	61 576	1 332	2 939	34 083	213 922	212 005	422 265	6 600
32619	Other plastics product manufacturing .....	-	5	2	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	4	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	-	21	8	674	22 751	502	904	14 177	65 028	31 930	96 893	829
336	Transportation equipment manufacturing .....	1	10	9	h	D	D	D	D	D	D	D	12 897
3363	Motor vehicle parts manufacturing .....	-	7	7	h	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing ..	-	3	3	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	-	3	3	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	3	3	f	D	D	D	D	D	D	D	D
3366	Ship and boat building .....	9	2	1	f	D	D	D	D	D	D	D	D
33661	Ship and boat building .....	9	2	1	f	D	D	D	D	D	D	D	D
336612	Boat building .....	9	2	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	2	14	9	2 477	94 942	2 142	4 485	73 854	610 240	337 670	948 979	34 596
3371	Household and institutional furniture and kitchen cabinet manufacturing .....	-	8	5	f	D	D	D	D	D	D	D	D
33712	Household and institutional furniture manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	2	5	4	g	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	2	5	4	g	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	2	2	2	g	D	D	D	D	D	D	D	D
	<b>HOLLAND TOWNSHIP</b>												
31-33	Manufacturing .....	1	131	46	8 433	306 088	6 238	11 937	188 646	920 193	1 023 900	1 903 618	59 937
311	Food manufacturing .....	-	9	5	1 195	44 675	899	1 825	28 338	148 290	242 003	389 997	D
325	Chemical manufacturing .....	-	5	3	832	43 300	521	1 078	19 942	176 269	143 071	283 388	9 821
3254	Pharmaceutical and medicine manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	-	6	5	g	D	D	D	D	D	D	D	D
3272	Glass and glass product manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass .....	-	3	3	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	35	7	1 317	47 935	1 014	2 034	31 606	90 478	65 309	158 184	5 641
3323	Architectural and structural metals manufacturing .....	1	5	2	f	D	D	D	D	D	D	D	D
33232	Ornamental and architectural metal products manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
332323	Ornamental and architectural metal work manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	7	21	5	796	29 570	537	781	16 480	68 883	72 790	137 957	1 600
334	Computer and electronic product manufacturing .....	-	4	3	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>HOLLAND TOWNSHIP—Con.</b>												
336	Transportation equipment manufacturing .....	1	6	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	1	4	2	f	D	D	D	D	D	D	D	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	8	11	7	1 126	29 569	885	1 747	19 980	119 390	82 005	199 287	5 128
3372	Office furniture (including fixtures) manufacturing .....	9	6	5	969	24 712	760	1 481	16 700	109 542	69 016	176 573	D
33721	Office furniture (including fixtures) manufacturing .....	9	6	5	969	24 712	760	1 481	16 700	109 542	69 016	176 573	D
337214	Office furniture (except wood) manufacturing .....	9	3	3	f	D	D	D	D	D	D	D	D
	<b>HOWELL</b>												
31-33	Manufacturing .....	—	28	13	1 801	73 087	1 256	2 563	51 085	1278 984	1357 302	1634 886	14 659
336	Transportation equipment manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	2	2	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>IMLAY CITY</b>												
31-33	Manufacturing .....	—	12	8	1 249	40 485	947	1 946	28 345	150 230	114 556	265 626	8 442
	<b>IONIA</b>												
31-33	Manufacturing .....	—	8	6	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>JACKSON</b>												
31-33	Manufacturing .....	2	118	31	2 944	114 554	2 148	4 318	71 530	363 544	311 880	673 902	15 748
332	Fabricated metal product manufacturing .....	4	52	13	1 536	58 919	1 145	2 400	35 619	164 653	79 265	244 907	6 387
	<b>KALAMAZOO CITY</b>												
31-33	Manufacturing .....	3	134	44	5 679	224 646	3 787	7 557	117 388	744 036	627 004	1 357 079	32 474
322	Paper manufacturing .....	—	10	8	1 722	60 172	1 379	2 777	40 770	270 757	245 944	510 455	7 752
3222	Converted paper product manufacturing .....	—	9	7	g	D	D	D	D	D	D	D	D
32221	Paperboard container manufacturing .....	—	7	5	1 125	35 138	911	1 795	24 587	181 600	151 344	334 047	D
322215	Nonfolding sanitary food container manufacturing ...	—	2	2	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	20	7	1 191	58 878	622	1 156	25 165	68 830	64 886	133 687	4 260
3339	Other general purpose machinery manufacturing .....	—	7	3	900	47 518	457	797	19 183	49 586	50 950	101 020	3 066
339	Miscellaneous manufacturing .....	9	13	2	f	D	D	D	D	D	D	D	D
3391	Medical equipment and supplies manufacturing .....	9	6	1	f	D	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	9	6	1	f	D	D	D	D	D	D	D	D
339113	Surgical appliance and supplies manufacturing ....	9	1	1	f	D	D	D	D	D	D	D	D
	<b>KALAMAZOO TOWNSHIP</b>												
31-33	Manufacturing .....	2	32	13	1 814	69 466	1 220	2 229	36 362	166 928	143 743	304 475	11 996

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>KENTWOOD</b>												
31-33	Manufacturing .....	1	123	68	10 110	393 908	7 362	14 441	227 984	1 011 065	863 524	1 871 505	63 207
326	Plastics and rubber products manufacturing .....	-	20	18	2 403	70 780	1 887	3 387	40 366	187 444	184 791	371 541	13 689
3261	Plastics product manufacturing ..	-	18	16	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	15	13	2 011	58 858	1 597	2 839	33 080	156 756	145 414	301 684	12 150
326199	All other plastics product manufacturing .....	-	13	11	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	-	17	8	1 147	37 805	906	1 568	27 323	106 600	122 870	228 053	7 145
333	Machinery manufacturing .....	-	26	15	2 423	126 494	1 407	3 051	59 809	233 381	169 755	402 228	18 546
3336	Engine, turbine, and power transmission equipment manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	-	3	3	g	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	8	6	1 153	46 433	861	1 685	26 753	139 895	157 882	301 055	5 121
3363	Motor vehicle parts manufacturing .....	-	6	4	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	9	5	2	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
	<b>KINGSFORD</b>												
31-33	Manufacturing .....	-	18	9	969	31 772	771	1 412	23 054	66 903	49 680	116 534	D
	<b>LANSING</b>												
31-33	Manufacturing .....	-	111	45	j	D	D	D	D	D	D	D	102 255
311	Food manufacturing .....	1	11	6	f	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	8	30	8	1 245	48 794	860	1 672	27 077	86 059	61 842	148 290	D
3231	Printing and related support activities .....	8	30	8	1 245	48 794	860	1 672	27 077	86 059	61 842	148 290	D
32311	Printing .....	8	26	6	1 103	45 838	746	1 489	25 565	79 995	60 994	141 374	D
323110	Commercial lithographic printing .....	8	16	5	861	39 226	554	1 115	20 984	66 936	53 202	120 447	D
332	Fabricated metal product manufacturing .....	-	19	7	861	36 556	713	1 518	28 356	109 819	35 049	143 882	8 652
3321	Forging and stamping .....	-	3	3	f	D	D	D	D	D	D	D	D
33211	Forging and stamping .....	-	3	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	9	8	i	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	-	3	3	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	-	3	3	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	-	3	3	i	D	D	D	D	D	D	D	D
	<b>LAPEER</b>												
31-33	Manufacturing .....	-	38	15	1 866	69 245	1 302	2 756	38 776	169 942	180 154	349 681	5 207
326	Plastics and rubber products manufacturing .....	-	5	4	616	19 489	482	1 055	13 689	41 315	42 111	83 651	676
3261	Plastics product manufacturing ..	-	5	4	616	19 489	482	1 055	13 689	41 315	42 111	83 651	676
32619	Other plastics product manufacturing .....	-	4	3	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	6	3	585	26 784	403	821	13 026	57 779	56 669	113 252	1 654
3363	Motor vehicle parts manufacturing .....	-	5	3	f	D	D	D	D	D	D	D	D
	<b>LEONI</b>												
31-33	Manufacturing .....	1	33	10	863	36 126	536	1 119	18 442	87 085	70 737	161 846	3 970

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>LINCOLN</b>												
31-33	Manufacturing .....	1	33	14	2 287	109 625	1 860	4 100	82 783	290 373	243 322	531 515	25 378
336	Transportation equipment manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
	<b>LIVONIA</b>												
31-33	Manufacturing .....	-	296	93	13 295	692 175	9 936	20 207	490 670	1 617 954	1 947 564	3 529 730	113 883
311	Food manufacturing .....	3	20	5	940	36 182	712	1 436	24 072	102 366	174 087	274 387	5 894
3118	Bakeries and tortilla manufacturing .....	9	17	3	f	D	D	D	D	D	D	D	D
31181	Bread and bakery product manufacturing .....	9	17	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	2	7	5	670	18 590	519	914	12 175	64 612	26 033	91 345	1 467
3261	Plastics product manufacturing ..	2	6	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	70	17	1 178	49 873	796	1 527	30 359	108 951	41 151	149 362	7 593
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	2	34	7	500	20 709	379	713	13 599	49 485	16 182	65 267	5 977
333	Machinery manufacturing .....	2	67	23	1 783	85 243	1 140	2 251	44 983	151 885	86 584	235 042	25 247
3335	Metalworking machinery manufacturing .....	2	46	20	1 308	67 063	837	1 640	35 505	114 742	48 050	159 050	21 129
33351	Metalworking machinery manufacturing .....	2	46	20	1 308	67 063	837	1 640	35 505	114 742	48 050	159 050	21 129
334	Computer and electronic product manufacturing .....	2	18	6	1 923	61 244	1 495	2 938	35 388	187 223	132 773	323 857	5 511
3346	Manufacturing and reproducing magnetic and optical media .....	-	3	3	g	D	D	D	D	D	D	D	D
33461	Manufacturing and reproducing magnetic and optical media .....	-	3	3	g	D	D	D	D	D	D	D	D
334612	Prerecorded compact disc (except software), tape, and record reproducing .....	-	3	3	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	19	11	4 335	339 759	3 592	8 396	286 757	696 497	1 120 534	1 777 623	61 844
3363	Motor vehicle parts manufacturing .....	-	18	10	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	-	2	1	h	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	-	2	1	h	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	2	10	7	834	26 315	566	525	14 401	56 835	62 229	117 713	1 084
3372	Office furniture (including fixtures) manufacturing .....	2	6	6	801	25 451	544	503	13 819	55 247	60 773	114 679	1 067
33721	Office furniture (including fixtures) manufacturing .....	2	6	6	801	25 451	544	503	13 819	55 247	60 773	114 679	1 067
337215	Showcase, partition, shelving, and locker manufacturing .....	2	5	5	f	D	D	D	D	D	D	D	D
	<b>LOWELL</b>												
31-33	Manufacturing .....	2	12	8	996	33 541	757	1 331	19 138	100 984	91 145	190 961	6 041
	<b>LUDINGTON</b>												
31-33	Manufacturing .....	-	26	15	2 043	72 945	1 515	3 169	46 768	197 472	148 333	336 434	8 505
332	Fabricated metal product manufacturing .....	-	8	5	f	D	D	D	D	D	D	D	D
	<b>LYON</b>												
31-33	Manufacturing .....	-	39	13	846	42 169	529	1 113	21 085	93 472	130 968	225 077	3 239

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MACOMB</b>												
31-33	Manufacturing .....	1	38	19	1 586	70 547	1 121	2 342	43 778	142 608	68 104	212 031	9 095
333	Machinery manufacturing .....	2	15	9	587	29 168	374	769	16 951	59 733	20 451	79 986	5 198
3335	Metalworking machinery manufacturing .....	2	14	9	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	2	14	9	f	D	D	D	D	D	D	D	D
	<b>MADISON HEIGHTS</b>												
31-33	Manufacturing .....	2	183	74	5 360	221 936	3 698	7 678	130 342	479 211	408 693	888 300	18 847
332	Fabricated metal product manufacturing .....	2	61	25	1 737	65 095	1 355	2 840	44 300	159 394	93 927	251 429	6 950
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	3	30	9	564	23 077	437	919	15 467	65 277	51 697	116 849	2 572
3328	Coating, engraving, heat treating, and allied activities .....	2	14	7	691	22 794	526	1 095	14 049	49 543	13 145	62 698	2 243
33281	Coating, engraving, heat treating, and allied activities ..	2	14	7	691	22 794	526	1 095	14 049	49 543	13 145	62 698	2 243
333	Machinery manufacturing .....	3	47	20	1 449	71 373	1 019	2 056	46 353	130 397	77 350	209 744	5 090
3335	Metalworking machinery manufacturing .....	4	37	16	1 093	53 829	818	1 625	38 343	95 541	55 281	152 890	3 225
33351	Metalworking machinery manufacturing .....	4	37	16	1 093	53 829	818	1 625	38 343	95 541	55 281	152 890	3 225
336	Transportation equipment manufacturing .....	—	9	8	1 020	37 520	718	1 643	20 215	87 387	142 160	229 638	2 050
3363	Motor vehicle parts manufacturing .....	—	9	8	1 020	37 520	718	1 643	20 215	87 387	142 160	229 638	2 050
	<b>MANISTEE</b>												
31-33	Manufacturing .....	6	15	6	582	23 120	416	806	15 081	101 750	36 927	138 258	D
	<b>MARINE CITY</b>												
31-33	Manufacturing .....	2	23	8	502	17 301	390	752	10 587	36 113	24 165	60 756	1 949
	<b>MARSHALL</b>												
31-33	Manufacturing .....	—	34	15	2 619	104 334	1 942	4 284	70 619	367 595	303 408	670 340	18 707
326	Plastics and rubber products manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	3	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>MARYSVILLE</b>												
31-33	Manufacturing .....	—	23	12	1 914	74 113	1 300	2 776	46 585	227 403	220 719	449 812	6 629
336	Transportation equipment manufacturing .....	—	3	3	1 001	37 498	683	1 512	25 495	114 453	112 958	228 661	D
3363	Motor vehicle parts manufacturing .....	—	3	3	1 001	37 498	683	1 512	25 495	114 453	112 958	228 661	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>MASON</b>												
31-33	Manufacturing .....	—	16	8	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D

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**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>MATTAWAN</b>													
31-33	Manufacturing .....	—	6	3	841	25 571	625	1 380	14 625	119 466	50 635	170 267	D
326	Plastics and rubber products manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	1	1	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>MENOMINEE</b>													
31-33	Manufacturing .....	1	29	12	1 861	60 418	1 431	2 856	41 950	194 863	194 051	394 917	11 960
333	Machinery manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
<b>MIDDLEVILLE</b>													
31-33	Manufacturing .....	—	9	2	g	D	D	D	D	D	D	D	D
335	Electrical equipment, appliance, and component manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
3352	Household appliance manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
33522	Major appliance manufacturing ..	—	1	1	g	D	D	D	D	D	D	D	D
335228	Other major household appliance manufacturing ...	—	1	1	g	D	D	D	D	D	D	D	D
<b>MIDLAND</b>													
31-33	Manufacturing .....	3	42	13	i	D	D	D	D	D	D	D	D
323	Printing and related support activities .....	—	11	3	f	D	D	D	D	D	D	D	D
3231	Printing and related support activities .....	—	11	3	f	D	D	D	D	D	D	D	D
32311	Printing .....	—	10	3	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	—	3	2	f	D	D	D	D	D	D	D	D
325	Chemical manufacturing .....	3	6	4	h	D	D	D	D	D	D	D	D
3251	Basic chemical manufacturing ...	4	4	2	h	D	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	4	3	2	h	D	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing ....	4	3	2	h	D	D	D	D	D	D	D	D
<b>MILAN</b>													
31-33	Manufacturing .....	—	8	6	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
<b>MONITOR</b>													
31-33	Manufacturing .....	—	15	8	890	30 168	738	1 485	20 912	78 945	111 048	193 624	8 022
<b>MONROE CITY</b>													
31-33	Manufacturing .....	—	35	16	3 760	188 183	3 012	3 649	137 049	524 692	1 429 722	1 938 381	55 488
336	Transportation equipment manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>MOUNT CLEMENS</b>												
31-33	Manufacturing .....	—	59	15	3 717	146 153	2 744	5 918	93 562	725 674	495 791	1 248 303	12 113
325	Chemical manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3255	Paint, coating, and adhesive manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
32551	Paint and coating manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
325510	Paint and coating manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	3	2	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	6	4	544	21 983	374	759	13 747	52 629	157 344	209 714	2 494
3363	Motor vehicle parts manufacturing .....	—	6	4	544	21 983	374	759	13 747	52 629	157 344	209 714	2 494
	<b>MOUNT PLEASANT</b>												
31-33	Manufacturing .....	—	23	5	805	22 973	648	1 147	17 849	51 022	116 742	168 105	D
336	Transportation equipment manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
	<b>MUNISING</b>												
31-33	Manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
	<b>MUSKEGON CITY</b>												
31-33	Manufacturing .....	—	110	49	5 374	215 950	3 977	8 318	146 027	598 372	533 765	1 136 505	31 236
322	Paper manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, and 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
331	Primary metal manufacturing .....	2	18	15	1 144	40 278	924	2 029	31 448	100 240	91 219	189 020	6 607
3315	Foundries .....	2	15	12	g	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries ....	1	12	9	727	22 428	589	1 306	17 319	65 381	40 756	104 754	2 550
332	Fabricated metal product manufacturing .....	—	24	8	654	23 425	445	930	13 704	56 605	46 942	101 272	2 480
336	Transportation equipment manufacturing .....	—	10	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	6	3	f	D	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>MUSKEGON TOWNSHIP</b>												
31-33	Manufacturing .....	—	20	6	689	35 422	372	833	13 984	71 137	80 643	154 510	3 681
333	Machinery manufacturing .....	—	5	1	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333618	Other engine equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>MUSKEGON HEIGHTS</b>												
31-33	Manufacturing .....	—	41	14	1 261	57 407	928	2 002	34 395	105 672	74 601	181 562	5 613
333	Machinery manufacturing .....	—	8	3	509	24 235	342	750	12 038	40 066	38 395	79 903	D
	<b>NEW BALTIMORE</b>												
31-33	Manufacturing .....	—	18	9	713	20 645	594	1 251	15 119	152 803	34 959	186 651	1 749

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
31-33	<b>NILES CITY</b>												
31-33	Manufacturing .....	2	28	14	1 751	63 001	1 233	2 324	36 869	130 433	121 439	250 462	3 509
333	Machinery manufacturing .....	3	3	3	764	29 297	478	818	14 787	48 252	45 116	93 828	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	3	2	2	f	D	D	D	D	D	D	D	D
		—	1	1	f	D	D	D	D	D	D	D	D
	<b>NILES TOWNSHIP</b>												
31-33	Manufacturing .....	7	26	6	655	24 166	514	1 007	16 002	48 482	51 209	99 117	2 278
	<b>NORTON SHORES</b>												
31-33	Manufacturing .....	4	49	24	1 874	71 389	1 412	2 735	44 331	206 329	158 991	365 420	9 024
337	Furniture and related product manufacturing .....	9	3	2	f	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	9	2	2	f	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	9	2	2	f	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	9	1	1	f	D	D	D	D	D	D	D	D
	<b>NOVI</b>												
31-33	Manufacturing .....	1	90	31	3 151	129 509	2 040	4 078	67 494	301 335	252 326	547 140	13 125
333	Machinery manufacturing .....	3	21	8	547	25 144	340	688	13 251	55 646	40 745	95 159	1 050
336	Transportation equipment manufacturing .....	1	9	6	1 154	40 921	876	1 788	27 242	102 710	115 098	213 300	4 821
3363	Motor vehicle parts manufacturing .....	1	6	4	f	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>OAK PARK</b>												
31-33	Manufacturing .....	2	65	21	1 315	53 644	778	1 496	31 096	117 316	67 691	182 709	3 264
	<b>ORION (BALANCE)</b>												
31-33	Manufacturing .....	—	32	12	h	D	D	D	D	D	D	D	9 268
336	Transportation equipment manufacturing .....	—	4	2	h	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336111	Automobile manufacturing...	—	1	1	h	D	D	D	D	D	D	D	D
	<b>OTSEGO</b>												
31-33	Manufacturing .....	1	13	7	1 224	57 585	852	1 734	34 850	164 041	87 488	253 203	10 251
332	Fabricated metal product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33291	Metal valve manufacturing ....	—	2	2	f	D	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>OWOSSO</b>												
31-33	Manufacturing .....	—	35	14	1 444	43 249	1 064	2 074	26 575	128 087	108 978	235 051	4 452
335	Electrical equipment, appliance, and component manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
3353	Electrical equipment manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
33531	Electrical equipment manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615
335312	Motor and generator manufacturing .....	—	3	3	559	16 102	456	930	11 878	39 871	24 868	62 938	2 615

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**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>OXFORD TOWNSHIP (BALANCE)</b>												
31-33	Manufacturing .....	2	32	16	1 110	46 155	866	1 804	32 402	110 519	98 853	208 009	11 060
332	Fabricated metal product manufacturing .....	1	13	8	593	26 785	475	1 000	19 757	61 338	48 064	108 092	4 148
	<b>PETOSKEY</b>												
31-33	Manufacturing .....	—	20	6	743	24 044	565	1 056	16 409	81 106	87 814	169 870	2 278
	<b>PITTSFIELD</b>												
31-33	Manufacturing .....	—	62	22	4 216	194 698	3 241	5 924	141 986	589 885	1 344 236	1 917 529	15 827
334	Computer and electronic product manufacturing .....	—	12	6	h	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	7	4	h	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	7	4	h	D	D	D	D	D	D	D	D
334514	Totalizing fluid meter and counting device manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
	<b>PLAINFIELD</b>												
31-33	Manufacturing .....	—	54	12	1 458	59 208	1 075	2 257	36 700	153 047	58 816	210 677	9 584
	<b>PLYMOUTH CITY</b>												
31-33	Manufacturing .....	2	40	15	2 148	96 257	1 340	2 568	46 147	205 973	110 255	313 300	9 305
334	Computer and electronic product manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
3341	Computer and peripheral equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33411	Computer and peripheral equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
334111	Electronic computer manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>PLYMOUTH TOWNSHIP</b>												
31-33	Manufacturing .....	—	72	44	3 775	178 349	2 486	4 693	95 349	410 360	529 348	941 411	19 647
326	Plastics and rubber products manufacturing .....	—	4	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	3	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	19	14	1 022	56 064	593	1 129	26 348	142 586	184 067	328 214	9 652
336	Transportation equipment manufacturing .....	—	11	11	1 110	48 364	794	1 425	28 147	85 380	236 248	325 428	5 217
3363	Motor vehicle parts manufacturing .....	—	9	9	f	D	D	D	D	D	D	D	D
	<b>PONTIAC</b>												
31-33	Manufacturing .....	—	63	19	i	D	D	D	D	D	D	D	48 668
336	Transportation equipment manufacturing .....	—	6	6	i	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	5	5	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping ..	—	2	2	g	D	D	D	D	D	D	D	D
	Motor vehicle metal stamping .....	—	2	2	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

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<b>PORTAGE</b>													
31-33	Manufacturing .....	—	78	31	4 805	211 703	2 950	6 157	102 728	2 955 345	458 212	3 392 430	100 114
325	Chemical manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
325412	Pharmaceutical preparation manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	9	6	596	17 766	486	955	11 750	54 447	45 850	99 386	D
3261	Plastics product manufacturing ..	—	9	6	596	17 766	486	955	11 750	54 447	45 850	99 386	D
339	Miscellaneous manufacturing .....	4	8	4	f	D	D	D	D	D	D	D	D
3391	Medical equipment and supplies manufacturing .....	4	6	3	f	D	D	D	D	D	D	D	D
33911	Medical equipment and supplies manufacturing .....	4	6	3	f	D	D	D	D	D	D	D	D
339113	Surgical appliance and supplies manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
<b>PORT HURON</b>													
31-33	Manufacturing .....	—	67	38	4 833	201 134	3 550	7 159	124 915	555 316	713 378	1 287 179	19 011
322	Paper manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	2	2	f	D	D	D	D	D	D	D	D
32212	Paper mills .....	—	2	2	f	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	2	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	6	5	943	27 499	838	1 507	21 577	75 948	72 122	149 009	2 358
3261	Plastics product manufacturing ..	—	6	5	943	27 499	838	1 507	21 577	75 948	72 122	149 009	2 358
32619	Other plastics product manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	16	9	905	32 775	708	1 482	21 085	87 199	83 761	174 396	2 979
336	Transportation equipment manufacturing .....	—	8	8	1 152	43 847	779	1 501	25 431	154 259	200 096	354 199	6 427
3363	Motor vehicle parts manufacturing .....	—	8	8	1 152	43 847	779	1 501	25 431	154 259	200 096	354 199	6 427
<b>REDFORD</b>													
31-33	Manufacturing .....	6	106	28	2 306	94 176	1 694	3 391	61 467	185 314	118 788	303 235	12 172
332	Fabricated metal product manufacturing .....	6	31	12	679	26 689	490	972	17 808	57 747	37 313	94 788	7 272
<b>ROCHESTER</b>													
31-33	Manufacturing .....	2	33	8	1 370	57 879	843	1 670	28 134	111 748	123 382	233 329	18 790
325	Chemical manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3254	Pharmaceutical and medicine manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
32541	Pharmaceutical and medicine manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D

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	<b>ROCHESTER HILLS</b>												
31-33	Manufacturing .....	1	126	57	8 883	330 859	6 995	13 371	207 801	631 487	579 388	1 202 502	61 363
316	Leather and allied product manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
3161	Leather and hide tanning and finishing.....	-	1	1	f	D	D	D	D	D	D	D	D
31611	Leather and hide tanning and finishing.....	-	1	1	f	D	D	D	D	D	D	D	D
316110	Leather and hide tanning and finishing.....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	-	19	13	3 650	110 458	3 083	5 865	83 159	129 164	85 824	215 184	5 304
3325	Hardware manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
33251	Hardware manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
332510	Hardware manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	35	19	1 786	89 678	1 246	2 621	53 547	168 891	87 605	250 504	13 187
3335	Metalworking machinery manufacturing .....	-	23	11	1 271	64 787	956	2 041	44 705	117 778	48 819	161 753	6 237
33351	Metalworking machinery manufacturing .....	-	23	11	1 271	64 787	956	2 041	44 705	117 778	48 819	161 753	6 237
333514	Special die and tool, die set, jig, and fixture manufacturing .....	-	10	6	768	34 344	599	1 213	23 847	62 906	19 623	82 721	5 333
336	Transportation equipment manufacturing .....	-	10	8	1 634	67 783	1 298	2 211	30 851	210 563	324 117	530 150	37 246
3363	Motor vehicle parts manufacturing .....	-	10	8	1 634	67 783	1 298	2 211	30 851	210 563	324 117	530 150	37 246
33636	Motor vehicle seating and interior trim manufacturing....	-	3	2	f	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing...	-	3	2	f	D	D	D	D	D	D	D	D
	<b>ROCKFORD</b>												
31-33	Manufacturing .....	-	21	11	1 356	44 079	1 096	2 222	29 858	123 214	112 570	232 238	5 943
335	Electrical equipment, appliance, and component manufacturing.....	-	2	2	f	D	D	D	D	D	D	D	D
3359	Other electrical equipment and component manufacturing.....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>ROMEO</b>												
31-33	Manufacturing .....	-	38	15	3 064	191 679	2 502	5 385	152 350	426 601	1 211 074	1 655 613	D
326	Plastics and rubber products manufacturing .....	2	5	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	4	3	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	4	3	g	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
	<b>ROMULUS</b>												
31-33	Manufacturing .....	-	86	42	6 592	364 532	5 141	10 420	274 793	857 715	2 411 449	3 257 435	44 496
326	Plastics and rubber products manufacturing .....	1	7	5	646	24 137	517	881	17 475	48 562	58 758	106 434	4 225
3261	Plastics product manufacturing ..	-	6	5	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	5	33	13	971	41 598	659	1 336	23 133	105 330	71 399	176 509	4 599
336	Transportation equipment manufacturing .....	-	10	9	3 689	251 096	3 006	6 235	204 618	537 302	2 184 706	2 715 613	26 410
3363	Motor vehicle parts manufacturing .....	-	8	7	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	2	2	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	2	2	h	D	D	D	D	D	D	D	D

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	<b>ROSEVILLE</b>												
31-33	Manufacturing .....	1	168	51	5 120	220 246	3 952	6 861	153 302	384 286	244 350	615 459	15 672
327	Nonmetallic mineral product manufacturing .....	-	6	2	f	D	D	D	D	D	D	D	421
3273	Cement and concrete product manufacturing .....	-	4	2	f	D	D	D	D	D	D	D	D
32739	Other concrete product manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
327390	Other concrete product manufacturing .....	-	3	2	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	61	14	1 604	67 721	1 285	2 443	50 032	129 247	61 719	192 344	5 291
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	3	37	7	638	23 054	500	895	15 771	45 304	19 638	65 256	2 305
3329	Other fabricated metal product manufacturing .....	-	8	3	622	33 404	529	1 106	27 550	59 615	31 641	92 011	D
33299	All other fabricated metal product manufacturing .....	-	8	3	622	33 404	529	1 106	27 550	59 615	31 641	92 011	D
332997	Industrial pattern manufacturing .....	-	3	1	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	40	15	1 505	81 155	1 043	2 161	54 419	128 962	60 792	181 248	5 233
3335	Metalworking machinery manufacturing .....	1	30	11	1 324	72 847	923	1 977	50 156	114 962	48 015	150 334	D
33351	Metalworking machinery manufacturing .....	1	30	11	1 324	72 847	923	1 977	50 156	114 962	48 015	150 334	D
333514	Special die and tool, die set, jig, and fixture manufacturing .....	-	15	5	709	38 734	499	1 104	28 037	69 707	18 654	77 761	2 610
	<b>ROYAL OAK</b>												
31-33	Manufacturing .....	2	85	17	1 979	82 356	1 410	2 611	50 518	219 067	241 522	459 202	6 806
332	Fabricated metal product manufacturing .....	1	15	3	535	27 141	366	812	15 611	101 464	123 642	223 606	1 930
336	Transportation equipment manufacturing .....	5	6	4	664	25 879	541	765	19 342	55 282	62 200	117 141	3 367
3363	Motor vehicle parts manufacturing .....	5	6	4	664	25 879	541	765	19 342	55 282	62 200	117 141	3 367
	<b>SAGINAW CITY</b>												
31-33	Manufacturing .....	-	69	32	7 331	400 548	5 887	11 843	329 253	1 414 785	1 133 982	2 551 170	131 025
331	Primary metal manufacturing .....	-	3	2	h	D	D	D	D	D	D	D	D
3315	Foundries .....	-	3	2	h	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	-	3	2	h	D	D	D	D	D	D	D	D
331511	Iron foundries .....	-	3	2	h	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	-	17	7	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	4	11	9	g	D	D	D	D	D	D	D	3 091
3335	Metalworking machinery manufacturing .....	6	5	4	f	D	D	D	D	D	D	D	D
33351	Metalworking machinery manufacturing .....	6	5	4	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	6	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	6	5	g	D	D	D	D	D	D	D	D
33634	Motor vehicle brake system manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
336340	Motor vehicle brake system manufacturing .....	-	2	2	g	D	D	D	D	D	D	D	D
	<b>ST. CLAIR</b>												
31-33	Manufacturing .....	2	20	14	1 286	44 714	1 037	2 033	31 267	102 320	113 768	213 667	8 934
326	Plastics and rubber products manufacturing .....	-	7	7	770	25 036	612	1 101	16 010	55 524	45 485	100 735	D
3261	Plastics product manufacturing ..	-	7	7	770	25 036	612	1 101	16 010	55 524	45 485	100 735	D
32619	Other plastics product manufacturing .....	-	7	7	770	25 036	612	1 101	16 010	55 524	45 485	100 735	D
326199	All other plastics product manufacturing .....	-	7	7	770	25 036	612	1 101	16 010	55 524	45 485	100 735	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>ST. CLAIR SHORES</b>												
31-33	Manufacturing .....	—	52	9	2 599	87 012	2 023	2 820	55 004	283 247	199 522	483 267	12 948
336	Transportation equipment manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
	<b>ST. JOHNS</b>												
31-33	Manufacturing .....	1	16	6	g	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	7	4	f	D	D	D	D	D	D	D	D
3336	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33361	Engine, turbine, and power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333613	Mechanical power transmission equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>ST. JOSEPH CITY</b>												
31-33	Manufacturing .....	—	29	13	2 122	80 288	1 391	2 796	44 452	172 249	114 224	292 764	11 463
323	Printing and related support activities .....	—	6	1	f	D	D	D	D	D	D	D	D
3231	Printing and related support activities .....	—	6	1	f	D	D	D	D	D	D	D	D
32311	Printing .....	—	5	1	f	D	D	D	D	D	D	D	D
323110	Commercial lithographic printing .....	—	3	1	f	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
334516	Analytical laboratory instrument manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>SALINE</b>												
31-33	Manufacturing .....	—	23	12	1 377	57 963	893	1 901	29 062	109 209	125 538	235 422	4 573
	<b>SANDUSKY</b>												
31-33	Manufacturing .....	—	11	3	504	13 659	460	959	11 038	62 313	61 232	123 015	3 300
	<b>SAULT STE. MARIE</b>												
31-33	Manufacturing .....	5	13	6	552	15 852	454	791	10 951	39 783	28 426	67 705	5 236
	<b>SCIO</b>												
31-33	Manufacturing .....	2	95	39	4 631	196 152	2 670	5 468	87 544	438 625	355 825	782 910	25 179
323	Printing and related support activities .....	—	10	4	636	23 341	448	887	14 973	44 629	23 000	67 447	D
3231	Printing and related support activities .....	—	10	4	636	23 341	448	887	14 973	44 629	23 000	67 447	D
332	Fabricated metal product manufacturing .....	—	17	7	520	25 110	383	897	16 396	58 801	55 170	112 505	5 097
333	Machinery manufacturing .....	3	12	5	1 391	62 571	546	1 153	16 336	149 131	106 121	250 321	6 750
3339	Other general purpose machinery manufacturing .....	4	5	3	g	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	4	5	3	g	D	D	D	D	D	D	D	D
333999	All other miscellaneous general purpose machinery manufacturing .....	4	4	2	g	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	1	17	6	563	26 585	299	573	7 208	56 966	46 094	98 609	1 300
336	Transportation equipment manufacturing .....	1	7	5	598	24 101	446	896	16 412	42 743	69 463	112 157	1 176
3363	Motor vehicle parts manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D

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	<b>SHELBY</b>												
31-33	Manufacturing .....	—	133	48	6 005	225 221	4 769	7 313	153 316	615 655	465 164	1 065 815	29 674
326	Plastics and rubber products manufacturing .....	3	7	5	625	122 305	507	1 096	14 544	60 845	49 191	109 153	9 506
3261	Plastics product manufacturing ..	3	7	5	625	122 305	507	1 096	14 544	60 845	49 191	109 153	9 506
332	Fabricated metal product manufacturing .....	2	26	8	573	19 075	409	829	11 495	49 023	26 706	76 225	4 542
333	Machinery manufacturing .....	—	44	18	1 163	163 982	790	1 636	40 753	131 737	81 573	210 210	3 827
336	Transportation equipment manufacturing .....	—	11	6	3 014	99 406	2 567	2 789	72 425	332 166	265 385	586 001	9 519
3363	Motor vehicle parts manufacturing .....	—	8	5	2 974	97 342	2 545	2 732	71 641	323 805	260 296	572 357	D
33636	Motor vehicle seating and interior trim manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
336360	Motor vehicle seating and interior trim manufacturing .....	—	2	1	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	5	4	f	D	D	D	D	D	D	D	D
	<b>SOUTHFIELD</b>												
31-33	Manufacturing .....	1	103	25	3 717	190 806	2 132	4 161	81 218	395 607	547 775	878 302	15 873
333	Machinery manufacturing .....	—	12	3	g	D	D	D	D	D	D	D	D
3339	Other general purpose machinery manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
33399	All other general purpose machinery manufacturing .....	—	4	2	g	D	D	D	D	D	D	D	D
333992	Welding and soldering equipment manufacturing ..	—	1	1	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	7	4	831	36 717	694	1 241	20 823	41 798	165 604	206 258	6 338
3363	Motor vehicle parts manufacturing .....	—	7	4	831	36 717	694	1 241	20 823	41 798	165 604	206 258	6 338
	<b>SOUTH HAVEN</b>												
31-33	Manufacturing .....	—	22	8	879	29 505	628	1 349	15 903	84 822	49 338	125 985	6 983
	<b>SPARTA</b>												
31-33	Manufacturing .....	—	23	11	901	32 006	673	1 240	19 999	167 467	144 691	309 747	8 226
	<b>SPRING LAKE TOWN (BALANCE)</b>												
31-33	Manufacturing .....	7	41	21	3 199	105 026	2 548	4 949	72 818	377 012	268 619	644 596	11 899
337	Furniture and related product manufacturing .....	9	11	6	1 998	67 521	1 649	3 152	49 170	277 299	164 374	441 660	7 220
3372	Office furniture (including fixtures) manufacturing .....	9	7	5	g	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	9	7	5	g	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	9	2	2	g	D	D	D	D	D	D	D	D
	<b>STERLING HEIGHTS</b>												
31-33	Manufacturing .....	—	297	101	1 198 536	17 049	36 457	948 507	2 760 117	5 286 532	8 048 876	179 321	
326	Plastics and rubber products manufacturing .....	—	22	14	1 790	64 967	1 375	2 607	38 343	147 701	128 179	275 751	10 795
3261	Plastics product manufacturing ..	—	21	14	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	20	14	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	20	14	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	2	77	19	1 447	59 421	1 065	2 180	37 380	134 307	61 915	196 920	6 347
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	4	36	8	555	22 770	417	837	15 058	56 478	23 101	79 846	2 440

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	<b>STERLING HEIGHTS—Con.</b>												
333	Machinery manufacturing .....	4	89	34	2 853	139 760	1 599	3 300	65 093	301 918	238 136	562 200	8 775
3335	Metalworking machinery manufacturing .....	4	66	24	2 326	115 048	1 273	2 618	52 521	256 944	194 786	473 461	7 262
33351	Metalworking machinery manufacturing .....	4	66	24	2 326	115 048	1 273	2 618	52 521	256 944	194 786	473 461	7 262
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	28	7	756	47 045	407	864	22 042	75 685	88 662	171 387	2 601
333518	Other metalworking machinery manufacturing .....	7	10	6	863	31 373	377	722	9 081	112 976	80 760	204 521	3 312
336	Transportation equipment manufacturing .....	—	31	26	13 684	897 107	12 215	27 121	782 581	2 095 812	4 793 057	6 866 680	151 126
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336111	Automobile manufacturing ...	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	27	23	j	D	D	D	D	D	D	D	D
33633	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336330	Motor vehicle steering and suspension component (except spring) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	6	6	i	D	D	D	D	D	D	D	105 880
336350	Motor vehicle transmission and power train parts manufacturing .....	—	6	6	i	D	D	D	D	D	D	D	105 880
33637	Motor vehicle metal stamping .....	—	14	12	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	14	12	h	D	D	D	D	D	D	D	D
	<b>STURGIS</b>												
31-33	Manufacturing .....	—	44	24	2 616	102 394	1 998	4 391	68 958	660 986	323 281	968 765	17 123
311	Food manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
311514	Dry, condensed, and evaporated dairy product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	7	5	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	6	5	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	5	5	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	5	5	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	—	9	6	559	25 448	449	993	19 520	46 728	23 057	72 370	4 684
	<b>SUMMIT</b>												
31-33	Manufacturing .....	—	20	9	1 171	54 236	865	1 804	35 802	129 965	181 327	309 441	31 388
	<b>TAYLOR</b>												
31-33	Manufacturing .....	1	104	35	3 018	115 767	2 246	4 367	73 065	333 147	424 551	755 953	15 166
332	Fabricated metal product manufacturing .....	2	37	13	796	31 564	606	1 221	19 961	77 061	37 950	114 830	1 678
336	Transportation equipment manufacturing .....	—	11	4	598	25 548	469	911	18 014	94 469	250 320	345 261	3 775
	<b>TECUMSEH</b>												
31-33	Manufacturing .....	—	28	11	1 440	53 322	1 132	2 124	38 752	82 104	125 624	220 870	2 669
333	Machinery manufacturing .....	—	5	2	f	D	D	D	D	D	D	D	797
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D

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	<b>THREE RIVERS</b>												
31-33	Manufacturing .....	—	33	13	2 640	147 902	2 073	4 487	111 500	322 950	363 220	682 796	61 750
336	Transportation equipment manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	2	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
	<b>TRAVERSE CITY</b>												
31-33	Manufacturing .....	1	85	27	2 143	80 635	1 208	2 371	33 904	191 806	126 532	316 823	15 672
333	Machinery manufacturing .....	—	10	7	742	28 639	374	785	11 597	70 996	53 265	123 122	2 064
	<b>TRENTON</b>												
31-33	Manufacturing .....	—	18	7	h	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
	<b>TROY</b>												
31-33	Manufacturing .....	2	1'320	1'20	1'9 211	1'374 546	1'6 367	1'12 436	1'218 366	1'840 392	1'778 081	1'1 620 269	1'63 672
323	Printing and related support activities .....	—	38	9	569	21 802	392	752	12 198	47 152	23 204	70 696	6 321
3231	Printing and related support activities .....	—	38	9	569	21 802	392	752	12 198	47 152	23 204	70 696	6 321
32311	Printing .....	—	33	8	530	19 288	370	710	11 047	42 266	22 590	65 261	D
326	Plastics and rubber products manufacturing .....	1'2	1'16	1'8	1'891	1'26 900	1'610	1'1 082	1'14 414	1'53 381	1'61 245	1'15 692	1'5 465
3261	Plastics product manufacturing ..	1'3	1'15	1'7	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	72	26	1 951	78 611	1 422	2 946	50 830	175 194	93 826	273 102	11 099
3323	Architectural and structural metals manufacturing .....	—	9	4	503	16 174	351	709	8 880	28 415	17 025	45 730	914
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	1	35	14	909	41 315	714	1 542	30 221	76 219	41 139	119 805	8 058
33272	Turned product and screw, nut, and bolt manufacturing .....	—	11	8	586	25 208	464	988	19 105	45 863	30 539	78 920	3 285
333	Machinery manufacturing .....	3	62	27	1 672	81 512	1 174	2 528	49 594	156 307	80 698	239 007	13 252
3335	Metalworking machinery manufacturing .....	5	43	21	1 158	58 551	842	1 819	38 013	103 994	49 238	153 996	6 310
33351	Metalworking machinery manufacturing .....	5	43	21	1 158	58 551	842	1 819	38 013	103 994	49 238	153 996	6 310
333514	Special die and tool, die set, jig, and fixture manufacturing .....	5	22	14	749	37 562	573	1 267	26 880	74 475	30 827	105 005	2 225
334	Computer and electronic product manufacturing .....	2	20	8	509	22 951	221	420	6 338	44 565	24 486	65 526	1 419
336	Transportation equipment manufacturing .....	2	26	15	1 630	63 162	1 297	2 208	44 847	184 322	321 769	506 046	15 692
3363	Motor vehicle parts manufacturing .....	2	21	14	1 541	58 055	1 228	2 065	40 823	177 819	312 363	490 265	15 450
33639	Other motor vehicle parts manufacturing .....	—	7	5	583	27 591	468	758	20 440	91 842	180 674	271 925	10 016
	<b>VAN BUREN</b>												
31-33	Manufacturing .....	—	32	12	1 809	67 503	1 287	2 586	41 627	227 270	270 232	495 925	14 559
336	Transportation equipment manufacturing .....	1	5	5	1 026	36 742	869	1 796	27 767	118 213	74 312	191 435	9 733
3363	Motor vehicle parts manufacturing .....	1	5	5	1 026	36 742	869	1 796	27 767	118 213	74 312	191 435	9 733
33637	Motor vehicle metal stamping .....	—	4	4	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	4	4	f	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>VASSAR</b>												
31-33	Manufacturing .....	—	10	6	760	24 336	637	1 131	18 599	65 843	53 888	119 509	927
	<b>WALKER</b>												
31-33	Manufacturing .....	1	99	53	5 574	248 008	3 995	7 518	157 869	505 115	552 087	1 051 573	36 059
333	Machinery manufacturing .....	—	32	17	1 458	64 280	1 109	2 341	44 766	160 407	101 805	255 787	7 724
3335	Metalworking machinery manufacturing .....	—	19	13	1 170	51 570	980	2 049	39 818	126 506	76 518	199 676	5 345
33351	Metalworking machinery manufacturing .....	—	19	13	1 170	51 570	980	2 049	39 818	126 506	76 518	199 676	5 345
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	16	12	1 123	49 734	945	1 988	38 561	123 780	75 085	195 333	5 284
336	Transportation equipment manufacturing .....	—	6	4	1 996	96 126	1 374	2 252	63 292	138 588	292 129	431 180	D
3363	Motor vehicle parts manufacturing .....	—	6	4	1 996	96 126	1 374	2 252	63 292	138 588	292 129	431 180	D
33637	Motor vehicle metal stamping ..	—	3	1	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	3	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
	<b>WALLED LAKE</b>												
31-33	Manufacturing .....	1	34	9	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	6	2	f	D	D	D	D	D	D	D	D
3364	Aerospace product and parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33641	Aerospace product and parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336412	Aircraft engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>WARREN</b>												
31-33	Manufacturing .....	—	454	145	20 144	1 055 708	15 722	31 705	801 766	2 439 496	6 044 623	8 480 272	141 179
326	Plastics and rubber products manufacturing .....	1	11	8	564	16 490	348	674	7 897	41 199	29 286	70 516	895
3261	Plastics product manufacturing ..	—	8	6	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	3	164	39	3 469	128 121	2 441	4 997	84 937	306 038	252 034	557 800	66 455
3323	Architectural and structural metals manufacturing .....	1	26	8	855	26 175	436	945	16 964	55 109	60 735	117 324	D
33231	Plate work and fabricated structural product manufacturing .....	—	12	4	657	19 647	319	697	13 804	40 767	48 310	90 277	D
332313	Plate work manufacturing .....	—	6	4	632	18 601	305	671	13 395	38 410	45 368	84 978	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	4	80	15	1 589	66 065	1 201	2 423	44 278	158 804	149 951	308 806	47 251
33271	Machine shops .....	1	66	8	897	34 939	688	1 362	22 219	79 596	74 808	153 809	D
332710	Machine shops .....	1	66	8	897	34 939	688	1 362	22 219	79 596	74 808	153 809	D
33272	Turned product and screw, nut, and bolt manufacturing .....	6	14	7	692	31 126	513	1 061	22 059	79 208	75 143	154 997	D
3328	Coating, engraving, heat treating, and allied activities .....	1	34	12	723	23 798	595	1 212	16 974	59 057	18 973	76 537	4 087
33281	Coating, engraving, heat treating, and allied activities ..	1	34	12	723	23 798	595	1 212	16 974	59 057	18 973	76 537	4 087
333	Machinery manufacturing .....	1	114	38	2 879	143 546	1 975	4 203	89 227	415 238	199 997	621 130	15 261
3335	Metalworking machinery manufacturing .....	—	86	28	1 966	95 822	1 396	2 925	63 729	302 992	120 155	431 627	10 300
33351	Metalworking machinery manufacturing .....	—	86	28	1 966	95 822	1 396	2 925	63 729	302 992	120 155	431 627	10 300
333514	Special die and tool, die set, jig, and fixture manufacturing .....	—	36	9	629	33 732	383	849	20 905	73 101	22 418	94 435	4 898
333515	Cutting tool and machine tool accessory manufacturing .....	—	23	6	549	22 093	407	773	14 898	75 722	42 187	120 066	3 685
3339	Other general purpose machinery manufacturing .....	3	16	7	701	36 822	447	1 012	19 904	82 148	61 402	143 827	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WARREN—Con.</b>												
336	Transportation equipment manufacturing .....	—	38	25	10 330	655 711	8 942	17 998	557 090	1 386 683	5 308 485	6 684 626	49 944
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	32	22	i	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	1	16	12	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	1	16	12	h	D	D	D	D	D	D	D	D
	<b>WATERFORD</b>												
31-33	Manufacturing .....	1	54	14	837	33 868	588	1 234	20 409	86 623	57 703	143 478	1 923
	<b>WAYNE</b>												
31-33	Manufacturing .....	—	27	12	i	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	2	2	i	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	2	2	i	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	2	2	i	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336112	Light truck and utility vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
	<b>WESTLAND</b>												
31-33	Manufacturing .....	1	82	22	1 768	74 767	1 355	2 831	50 127	159 296	183 858	342 449	7 061
	<b>WHITEHALL</b>												
31-33	Manufacturing .....	—	12	7	g	D	D	D	D	D	D	D	D
331	Primary metal manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
3315	Foundries .....	—	3	2	g	D	D	D	D	D	D	D	D
33151	Ferrous metal foundries .....	—	1	1	g	D	D	D	D	D	D	D	D
331512	Steel investment foundries ..	—	1	1	g	D	D	D	D	D	D	D	D
	<b>WIXOM</b>												
31-33	Manufacturing .....	—	113	45	6 557	353 512	5 183	9 978	262 814	1 131 599	2 841 439	3 970 753	43 596
332	Fabricated metal product manufacturing .....	1	30	7	f	D	D	D	D	D	D	D	D
3329	Other fabricated metal product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
33291	Metal valve manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
332912	Fluid power valve and hose fitting manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
333	Machinery manufacturing .....	1	33	15	971	51 725	552	1 173	24 113	154 947	156 044	309 074	D
336	Transportation equipment manufacturing .....	—	9	7	h	D	D	D	D	D	D	D	D
3361	Motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33611	Automobile and light duty motor vehicle manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336111	Automobile manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
	<b>WOODHAVEN</b>												
31-33	Manufacturing .....	—	5	2	h	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	2	1	h	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping .....	—	1	1	h	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	—	1	1	h	D	D	D	D	D	D	D	D

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>WYANDOTTE</b>												
31-33	Manufacturing .....	1	43	9	1 567	87 657	712	1 509	31 390	176 409	264 163	443 886	14 486
325	Chemical manufacturing .....	-	5	2	f	D	D	D	D	D	D	D	D
3252	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
32521	Resin and synthetic rubber manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
325211	Plastics material and resin manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	3	14	6	505	18 558	353	789	12 448	42 548	24 195	67 057	D
	<b>WYOMING</b>												
31-33	Manufacturing .....	-	186	82	10 097	472 649	7 896	15 905	342 737	1 218 721	1 027 173	2 211 597	51 237
311	Food manufacturing .....	-	7	5	918	33 814	663	1 446	20 119	93 572	178 220	271 539	12 371
326	Plastics and rubber products manufacturing .....	1	17	8	830	28 880	642	1 436	18 047	60 802	54 596	116 608	3 954
3261	Plastics product manufacturing ..	1	16	7	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	1	11	5	680	23 194	550	1 224	15 199	48 283	40 075	89 311	2 395
326199	All other plastics product manufacturing .....	1	11	5	680	23 194	550	1 224	15 199	48 283	40 075	89 311	2 395
332	Fabricated metal product manufacturing .....	-	45	14	1 021	35 421	797	1 513	22 902	81 053	38 055	119 091	3 472
333	Machinery manufacturing .....	-	36	20	1 813	80 036	1 347	2 708	52 180	159 753	91 140	223 794	6 452
3335	Metalworking machinery manufacturing .....	-	23	12	1 433	64 741	1 091	2 154	43 472	129 486	66 711	168 272	5 671
33351	Metalworking machinery manufacturing .....	-	23	12	1 433	64 741	1 091	2 154	43 472	129 486	66 711	168 272	5 671
333514	Special die and tool, die set, jig, and fixture manufacturing .....	-	11	6	571	33 021	434	925	22 321	69 198	34 238	84 346	4 444
336	Transportation equipment manufacturing .....	-	9	6	3 602	223 993	3 043	6 109	185 869	646 785	490 068	1 130 460	18 061
3363	Motor vehicle parts manufacturing .....	-	6	4	h	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	-	3	2	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping .....	-	3	2	g	D	D	D	D	D	D	D	D
	<b>YPSILANTI CITY</b>												
31-33	Manufacturing .....	-	18	4	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	3	2	g	D	D	D	D	D	D	D	D
33632	Motor vehicle electrical and electronic equipment manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
336322	Other motor vehicle electrical and electronic equipment manufacturing .....	-	1	1	g	D	D	D	D	D	D	D	D
	<b>YPSILANTI TOWNSHIP</b>												
31-33	Manufacturing .....	-	22	5	i	D	D	D	D	D	D	D	19 752
336	Transportation equipment manufacturing .....	-	2	2	i	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	2	2	i	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	h	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>ZEELAND</b>													
31-33	Manufacturing .....	—	50	32	8 369	355 403	6 076	12 385	179 553	1 607 359	1 068 747	2 668 106	74 201
311	Food manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	1	1	f	D	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	—	1	1	f	D	D	D	D	D	D	D	D
311615	Poultry processing .....	—	1	1	f	D	D	D	D	D	D	D	D
327	Nonmetallic mineral product manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
3272	Glass and glass product manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
327215	Glass product manufacturing made of purchased glass ..	—	1	1	g	D	D	D	D	D	D	D	D
334	Computer and electronic product manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3345	Navigational, measuring, electromedical, and control instruments manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
33451	Navigational, measuring, electromedical, and control instruments manufacturing ...	—	3	2	f	D	D	D	D	D	D	D	D
334518	Watch, clock, and part manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	6	6	795	34 629	574	1 097	20 621	106 672	75 985	182 478	3 520
3363	Motor vehicle parts manufacturing .....	—	5	5	f	D	D	D	D	D	D	D	D
337	Furniture and related product manufacturing .....	—	4	4	g	D	D	D	D	D	D	D	D
3372	Office furniture (including fixtures) manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
33721	Office furniture (including fixtures) manufacturing .....	—	3	3	g	D	D	D	D	D	D	D	D
337214	Office furniture (except wood) manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
<b>BALANCE OF ALLEGAN COUNTY</b>													
31-33	Manufacturing .....	1	112	36	3 585	113 827	2 791	5 602	75 928	315 466	594 246	907 077	13 196
311	Food manufacturing .....	—	13	7	g	D	D	D	D	D	D	D	D
3116	Animal slaughtering and processing .....	—	3	2	g	D	D	D	D	D	D	D	D
31161	Animal slaughtering and processing .....	—	3	2	g	D	D	D	D	D	D	D	D
311611	Animal (except poultry) slaughtering .....	—	1	1	g	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	3	33	9	600	17 483	479	935	11 549	31 940	15 884	47 937	1 469
<b>BALANCE OF ANTRIM COUNTY</b>													
31-33	Manufacturing .....	2	55	13	1 218	44 226	799	1 668	26 994	103 212	104 656	202 448	5 261
<b>BALANCE OF ARENAC COUNTY</b>													
31-33	Manufacturing .....	2	32	12	576	17 980	465	903	12 632	43 358	43 279	87 433	3 043
<b>BALANCE OF BARRY COUNTY</b>													
31-33	Manufacturing .....	1	39	6	f	D	D	D	D	D	D	D	D
<b>BALANCE OF BAY COUNTY</b>													
31-33	Manufacturing .....	5	39	6	799	29 208	591	1 276	19 094	101 625	67 104	167 751	3 380

See footnotes at end of table.

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BALANCE OF BERRIEN COUNTY</b>												
31-33	Manufacturing .....	2	137	37	2 971	97 252	2 038	4 025	59 516	196 253	192 527	396 301	18 725
326	Plastics and rubber products manufacturing .....	1	10	4	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	1	9	4	525	8 003	267	549	5 164	17 428	16 064	33 509	536
32619	Other plastics product manufacturing .....	1	9	4	525	8 003	267	549	5 164	17 428	16 064	33 509	536
326199	All other plastics product manufacturing .....	1	9	4	525	8 003	267	549	5 164	17 428	16 064	33 509	536
331	Primary metal manufacturing .....	1	13	11	809	28 665	607	1 307	17 957	64 856	61 019	124 389	8 090
3315	Foundries .....	2	12	10	f	D	D	D	D	D	D	D	D
33152	Nonferrous metal foundries ....	1	10	8	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF BRANCH COUNTY</b>												
31-33	Manufacturing .....	—	49	17	1 561	48 981	1 211	2 096	32 311	118 675	109 913	225 297	D
336	Transportation equipment manufacturing .....	—	7	4	759	23 556	590	889	15 303	37 280	54 001	89 401	D
3363	Motor vehicle parts manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF CALHOUN COUNTY</b>												
31-33	Manufacturing .....	—	34	13	1 725	56 768	1 270	2 563	36 458	131 206	146 969	278 998	21 681
336	Transportation equipment manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF CASS COUNTY</b>												
31-33	Manufacturing .....	—	63	20	2 028	62 941	1 600	3 128	39 823	150 124	217 331	368 826	6 319
326	Plastics and rubber products manufacturing .....	—	9	5	572	15 080	472	881	10 279	39 240	29 555	68 243	1 864
3261	Plastics product manufacturing ..	—	8	5	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF CLINTON COUNTY</b>												
31-33	Manufacturing .....	—	37	12	g	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF CRAWFORD COUNTY</b>												
31-33	Manufacturing .....	1	18	9	641	23 165	470	908	15 356	61 047	87 485	147 024	5 918
	<b>BALANCE OF DELTA COUNTY</b>												
31-33	Manufacturing .....	—	21	6	g	D	D	D	D	D	D	D	D
322	Paper manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D
3221	Pulp, paper, and paperboard mills .....	—	1	1	g	D	D	D	D	D	D	D	D
32212	Paper mills .....	—	1	1	g	D	D	D	D	D	D	D	D
322121	Paper (except newsprint) mills .....	—	1	1	g	D	D	D	D	D	D	D	D
	<b>BALANCE OF DICKINSON COUNTY</b>												
31-33	Manufacturing .....	—	11	6	845	45 039	667	1 407	33 776	233 978	215 787	456 615	11 705
322	Paper manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
3221	Pulp, paper, and 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
	<b>BALANCE OF EATON COUNTY</b>												
31-33	Manufacturing .....	3	36	9	f	D	D	D	D	D	D	D	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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NAICS code	Geographic area and industry	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BALANCE OF EMMET COUNTY</b>												
31-33	Manufacturing .....	1	46	8	1 022	36 981	666	1 307	18 912	87 571	47 445	134 234	3 984
	<b>BALANCE OF GENESEE COUNTY</b>												
31-33	Manufacturing .....	1	35	8	f	D	D	D	D	D	D	D	2 473
	<b>BALANCE OF GLADWIN COUNTY</b>												
31-33	Manufacturing .....	3	32	11	803	29 346	583	1 025	16 952	68 338	46 859	113 648	D
	<b>BALANCE OF GRAND TRAVERSE COUNTY</b>												
31-33	Manufacturing .....	2	43	9	618	19 659	436	857	12 012	45 640	32 735	77 867	3 628
	<b>BALANCE OF HILLSDALE COUNTY</b>												
31-33	Manufacturing .....	-	77	32	4 309	143 499	3 529	7 355	105 707	356 540	663 968	1 019 720	40 295
326	Plastics and rubber products manufacturing .....	-	6	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	5	3	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	3	27	14	831	24 478	651	1 275	16 496	57 018	38 329	96 506	3 504
336	Transportation equipment manufacturing .....	-	10	8	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	10	8	g	D	D	D	D	D	D	D	D
33635	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336350	Motor vehicle transmission and power train parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	-	4	4	1 264	40 894	1 075	2 291	31 898	117 509	416 071	534 877	14 502
336399	All other motor vehicle parts manufacturing .....	-	4	4	1 264	40 894	1 075	2 291	31 898	117 509	416 071	534 877	14 502
	<b>BALANCE OF HOUGHTON COUNTY</b>												
31-33	Manufacturing .....	3	37	8	651	20 397	505	1 011	12 926	52 453	74 824	132 385	D
	<b>BALANCE OF HURON COUNTY</b>												
31-33	Manufacturing .....	1	64	19	2 612	90 509	2 096	4 057	65 269	262 503	229 551	497 212	18 393
336	Transportation equipment manufacturing .....	1	6	5	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	1	5	5	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	-	2	2	f	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping ..	-	2	2	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF INGHAM COUNTY</b>												
31-33	Manufacturing .....	-	66	22	3 699	191 787	2 502	5 060	134 988	305 853	539 143	832 236	24 734
326	Plastics and rubber products manufacturing .....	-	6	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	6	3	f	D	D	D	D	D	D	D	D
32614	Polystyrene foam product manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
326140	Polystyrene foam product manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	7	3	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	4	2	g	D	D	D	D	D	D	D	D
33637	Motor vehicle metal stamping ..	-	2	1	g	D	D	D	D	D	D	D	D
336370	Motor vehicle metal stamping ..	-	2	1	g	D	D	D	D	D	D	D	D
	<b>BALANCE OF IONIA COUNTY</b>												
31-33	Manufacturing .....	-	42	11	969	31 817	730	1 437	19 413	109 554	139 621	247 984	D

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

[Includes data for industry groups and industries with 500 employees or more. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>BALANCE OF IOSCO COUNTY</b>													
31-33	Manufacturing .....	1	36	9	g	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	3	3	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
<b>BALANCE OF ISABELLA COUNTY</b>													
31-33	Manufacturing .....	—	34	8	1 801	63 201	1 169	2 186	34 884	153 138	120 944	274 903	D
333	Machinery manufacturing .....	—	5	3	g	D	D	D	D	D	D	D	D
3332	Industrial machinery manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
33321	Sawmill and woodworking machinery manufacturing ....	—	1	1	f	D	D	D	D	D	D	D	D
333210	Sawmill and woodworking machinery manufacturing ..	—	1	1	f	D	D	D	D	D	D	D	D
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
33341	Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
333415	Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
<b>BALANCE OF JACKSON COUNTY</b>													
31-33	Manufacturing .....	—	82	31	2 625	100 323	1 805	3 554	57 063	265 893	510 379	775 081	48 768
332	Fabricated metal product manufacturing .....	—	37	12	807	28 235	634	1 227	19 108	57 939	27 115	83 916	D
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	2	26	9	617	22 110	498	958	15 525	45 775	17 226	61 701	D
336	Transportation equipment manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	5	4	g	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	2	1	f	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>BALANCE OF KALAMAZOO COUNTY</b>													
31-33	Manufacturing .....	—	103	28	2 643	95 274	1 992	3 974	59 010	242 829	224 217	464 322	13 455
322	Paper manufacturing .....	—	4	4	557	19 380	422	838	11 603	52 602	75 313	126 682	2 489
3222	Converted paper product manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	6	4	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	6	4	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	—	24	6	628	26 065	454	979	15 424	54 422	33 130	87 558	1 865
<b>BALANCE OF KALKASKA COUNTY</b>													
31-33	Manufacturing .....	—	17	9	790	24 406	608	1 186	15 696	49 276	36 197	85 524	8 733

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
<b>BALANCE OF KENT COUNTY</b>													
31-33	Manufacturing .....	—	65	13	5 833	251 144	4 596	8 136	186 772	210 909	619 902	856 085	36 587
325	Chemical manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
3256	Soap, cleaning compound, and toilet preparation manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
32562	Toilet preparation manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
325620	Toilet preparation manufacturing .....	—	1	1	h	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	5	3	835	24 243	661	526	11 821	74 011	56 246	128 893	D
3363	Motor vehicle parts manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
<b>BALANCE OF LAPEER COUNTY</b>													
31-33	Manufacturing .....	—	75	14	2 038	72 349	1 574	3 219	46 349	182 863	185 198	368 154	31 566
326	Plastics and rubber products manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	8	4	761	22 777	570	1 076	14 039	48 063	68 601	115 951	D
3363	Motor vehicle parts manufacturing .....	—	5	3	f	D	D	D	D	D	D	D	D
<b>BALANCE OF LENAWEE COUNTY</b>													
31-33	Manufacturing .....	—	93	31	3 691	155 195	2 644	5 166	95 884	519 989	523 188	1 036 351	46 124
325	Chemical manufacturing .....	—	6	5	633	36 998	265	516	11 871	128 543	142 792	266 648	D
3251	Basic chemical manufacturing .....	—	3	3	f	D	D	D	D	D	D	D	D
32519	Other basic organic chemical manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
325199	All other basic organic chemical manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	10	3	887	38 803	702	1 448	30 212	156 397	169 467	325 961	D
3261	Plastics product manufacturing .....	—	9	3	f	D	D	D	D	D	D	D	5 183
32619	Other plastics product manufacturing .....	—	6	3	849	37 770	669	1 396	29 452	154 325	167 799	322 218	D
326199	All other plastics product manufacturing .....	—	6	3	849	37 770	669	1 396	29 452	154 325	167 799	322 218	D
332	Fabricated metal product manufacturing .....	—	22	7	547	22 856	411	890	14 749	45 077	37 649	82 810	D
<b>BALANCE OF LIVINGSTON COUNTY</b>													
31-33	Manufacturing .....	1	58	17	2 716	109 311	1 841	3 848	67 061	366 849	398 901	769 682	21 780
332	Fabricated metal product manufacturing .....	3	19	5	1 001	37 789	751	1 602	26 776	118 174	91 402	208 779	5 561
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing .....	8	12	3	f	D	D	D	D	D	D	D	D
33271	Machine shops .....	8	11	3	580	22 427	494	1 025	18 773	49 614	41 226	91 052	D
332710	Machine shops .....	8	11	3	580	22 427	494	1 025	18 773	49 614	41 226	91 052	D
336	Transportation equipment manufacturing .....	—	4	3	945	43 551	615	1 353	27 213	191 448	265 114	461 362	D
3363	Motor vehicle parts manufacturing .....	—	4	3	945	43 551	615	1 353	27 213	191 448	265 114	461 362	D
<b>BALANCE OF MACOMB COUNTY</b>													
31-33	Manufacturing .....	1	39	7	855	34 874	563	1 184	20 208	119 011	42 233	160 884	3 229
<b>BALANCE OF MENOMINEE COUNTY</b>													
31-33	Manufacturing .....	1	33	10	601	17 551	484	923	11 609	51 940	34 247	87 064	1 324

See footnotes at end of table.

**Table 4. Industry Statistics for Places: 2002—Con.**

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BALANCE OF MIDLAND COUNTY</b>												
31-33	Manufacturing .....	4	27	7	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF MONROE COUNTY</b>												
31-33	Manufacturing .....	1	48	15	1 480	55 837	1 127	1 949	34 063	164 159	100 016	274 099	28 107
327	Nonmetallic mineral product manufacturing .....	—	7	3	730	34 186	536	1 138	20 990	113 354	58 938	180 993	D
3272	Glass and glass product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
32721	Glass and glass product manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
327211	Flat glass manufacturing ....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF MONTCALM COUNTY</b>												
31-33	Manufacturing .....	1	52	11	1 054	33 375	834	1 491	23 573	77 665	62 069	148 523	8 617
	<b>BALANCE OF MUSKEGON COUNTY</b>												
31-33	Manufacturing .....	—	76	18	2 441	91 423	1 854	3 795	61 157	252 949	243 289	495 994	35 918
331	Primary metal manufacturing .....	—	9	5	550	17 242	442	1 004	11 892	59 333	25 216	84 666	3 414
3315	Foundries .....	—	7	5	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	—	3	1	f	D	D	D	D	D	D	D	D
33631	Motor vehicle gasoline engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
336312	Gasoline engine and engine parts manufacturing .....	—	1	1	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF NEWAYGO COUNTY</b>												
31-33	Manufacturing .....	—	30	6	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF OAKLAND COUNTY</b>												
31-33	Manufacturing .....	3	68	18	1 317	52 238	919	1 888	30 935	128 735	110 485	240 326	6 864
	<b>BALANCE OF OCEANA COUNTY</b>												
31-33	Manufacturing .....	—	42	10	1 417	36 713	1 160	2 165	24 890	124 170	131 786	258 881	6 545
311	Food manufacturing .....	—	7	4	708	15 661	621	1 145	10 998	69 176	63 024	135 269	3 776
	<b>BALANCE OF OGEMAW COUNTY</b>												
31-33	Manufacturing .....	3	34	10	1 040	31 182	713	1 085	19 476	61 517	36 827	101 540	4 155
	<b>BALANCE OF OSCEOLA COUNTY</b>												
31-33	Manufacturing .....	—	49	18	3 062	96 296	2 377	4 980	66 602	335 341	337 719	678 100	33 269
311	Food manufacturing .....	—	4	2	f	D	D	D	D	D	D	D	D
3115	Dairy product manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
31151	Dairy product (except frozen) manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
311511	Fluid milk manufacturing ....	—	2	2	f	D	D	D	D	D	D	D	D
326	Plastics and rubber products manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	4	3	g	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	—	4	3	g	D	D	D	D	D	D	D	D

See footnotes at end of table.

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BALANCE OF OTTAWA COUNTY</b>												
31-33	Manufacturing .....	2	100	18	2 044	70 385	1 610	3 239	47 094	149 020	113 408	257 739	8 616
326	Plastics and rubber products manufacturing .....	3	6	4	982	32 514	809	1 687	20 287	73 386	58 581	129 694	3 186
3261	Plastics product manufacturing ..	3	6	4	982	32 514	809	1 687	20 287	73 386	58 581	129 694	3 186
32619	Other plastics product manufacturing .....	3	4	4	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	3	4	4	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF SAGINAW COUNTY</b>												
31-33	Manufacturing .....	1	79	17	9	D	D	D	D	D	D	D	78 163
	<b>BALANCE OF ST. CLAIR COUNTY</b>												
31-33	Manufacturing .....	4	137	26	1 600	58 885	1 112	2 125	35 656	127 614	101 051	227 976	9 777
333	Machinery manufacturing .....	1	29	9	524	20 642	329	610	10 336	44 138	22 628	65 504	5 824
	<b>BALANCE OF ST. JOSEPH COUNTY</b>												
31-33	Manufacturing .....	-	80	33	3 721	136 349	2 848	5 735	94 223	310 755	382 152	689 836	21 237
326	Plastics and rubber products manufacturing .....	-	12	6	838	29 356	722	1 495	22 741	80 184	72 690	152 411	9 418
3261	Plastics product manufacturing ..	-	12	6	838	29 356	722	1 495	22 741	80 184	72 690	152 411	9 418
32619	Other plastics product manufacturing .....	-	10	5	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	10	5	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	-	12	10	g	D	D	D	D	D	D	D	D
3362	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D	D
33621	Motor vehicle body and trailer manufacturing .....	1	10	9	g	D	D	D	D	D	D	D	D
336214	Travel trailer and camper manufacturing .....	2	8	7	f	D	D	D	D	D	D	D	D
3363	Motor vehicle parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
33639	Other motor vehicle parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
336399	All other motor vehicle parts manufacturing .....	-	1	1	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF SANILAC COUNTY</b>												
31-33	Manufacturing .....	1	72	27	2 838	89 867	1 994	3 496	55 166	198 549	183 044	384 681	17 556
326	Plastics and rubber products manufacturing .....	-	10	8	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	10	8	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	8	7	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	8	7	f	D	D	D	D	D	D	D	D
332	Fabricated metal product manufacturing .....	1	20	8	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF SHIAWASSEE COUNTY</b>												
31-33	Manufacturing .....	-	35	11	g	D	D	D	D	D	D	D	2 431
326	Plastics and rubber products manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	-	2	2	f	D	D	D	D	D	D	D	D
32619	Other plastics product manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
326199	All other plastics product manufacturing .....	-	2	2	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF TUSCOLA COUNTY</b>												
31-33	Manufacturing .....	1	34	6	663	18 859	496	866	11 154	48 977	26 554	75 879	5 455

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			Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
	<b>BALANCE OF VAN BUREN COUNTY</b>												
31-33	Manufacturing .....	—	70	22	2 269	76 358	1 809	3 398	54 877	542 557	327 071	870 007	31 342
312	Beverage and tobacco product manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3121	Beverage manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
31211	Soft drink and ice manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
312111	Soft drink manufacturing .....	—	2	2	f	D	D	D	D	D	D	D	D
	<b>BALANCE OF WASHTENAW COUNTY</b>												
31-33	Manufacturing .....	—	69	22	4 713	231 530	3 534	6 746	171 306	727 430	814 347	1 535 526	28 636
326	Plastics and rubber products manufacturing .....	—	3	2	f	D	D	D	D	D	D	D	D
3261	Plastics product manufacturing ..	—	2	2	f	D	D	D	D	D	D	D	D
336	Transportation equipment manufacturing .....	—	5	5	2 621	147 005	2 124	4 160	117 407	540 599	637 082	1 176 002	18 608
3363	Motor vehicle parts manufacturing .....	—	5	5	2 621	147 005	2 124	4 160	117 407	540 599	637 082	1 176 002	18 608
33639	Other motor vehicle parts manufacturing .....	—	2	2	g	D	D	D	D	D	D	D	D
336391	Motor vehicle air-conditioning manufacturing .....	—	1	1	g	D	D	D	D	D	D	D	D

<sup>1</sup>Some 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.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Industries 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: 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.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 5. Detailed Statistics for the State: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>MICHIGAN</b>	
Companies <sup>1</sup> .....	number.. N
All establishments <sup>2</sup> .....	number.. '15 193
Establishments with 1 to 19 employees .....	number.. '10 047
Establishments with 20 to 99 employees .....	number.. '3 702
Establishments with 100 employees or more .....	number.. '1 444
All employees <sup>3</sup> .....	number.. '736 259
Total compensation .....	\$1,000.. '43 045 917
Annual payroll .....	\$1,000.. '33 171 232
Total fringe benefits .....	\$1,000.. '9 874 685
Production workers, average for year .....	number.. '549 621
Production workers on March 12 .....	number.. '546 002
Production workers on May 12 .....	number.. '553 713
Production workers on August 12 .....	number.. '552 022
Production workers on November 12 .....	number.. '545 799
Production worker hours .....	1,000.. '1 087 100
Production worker wages .....	\$1,000.. '22 571 995
Total cost of materials .....	\$1,000.. '124 086 616
Materials, parts, containers, packaging, etc., used .....	\$1,000.. '115 348 341
Resales .....	\$1,000.. '3 149 048
Purchased fuels .....	\$1,000.. '1 101 833
Purchased electricity .....	\$1,000.. '1 639 125
Contract work .....	\$1,000.. '2 848 269
Quantity of electricity purchased for heat and power .....	1,000 kWh.. '32 393 631
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. 1 843 901
Total value of shipments .....	\$1,000.. '221 433 262
Value of resales .....	\$1,000.. '4 090 697
Value added .....	\$1,000.. '97 575 395
Total inventories, beginning of year .....	\$1,000.. '13 944 556
Finished goods inventories .....	\$1,000.. '14 229 634
Work-in-process inventories .....	\$1,000.. '14 141 369
Materials and supplies inventories .....	\$1,000.. '5 573 553
Total inventories, end of year .....	\$1,000.. '14 207 671
Finished goods inventories .....	\$1,000.. '14 276 378
Work-in-process inventories .....	\$1,000.. '14 307 717
Materials and supplies inventories .....	\$1,000.. '5 623 576
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '88 775 661
Total capital expenditures (new and used) .....	\$1,000.. '5 699 658
Buildings and other structures (new and used) .....	\$1,000.. '644 600
Machinery and equipment (new and used) .....	\$1,000.. '5 055 058
Automobiles, trucks, etc., for highway use .....	\$1,000.. '125 435
Computers and peripheral data processing equipment .....	\$1,000.. '307 759
All other expenditures for machinery and equipment .....	\$1,000.. '4 621 864
Total retirements .....	\$1,000.. '4 124 517
Gross value of depreciable assets at end of year .....	\$1,000.. '90 350 802
Depreciation charges during year .....	\$1,000.. '6 197 676
Total rental payments .....	\$1,000.. '1 826 588
Buildings and other structures .....	\$1,000.. '929 411
Machinery and equipment .....	\$1,000.. '897 177

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

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

# Appendix A.

## Explanation of Terms

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### **COMPANY**

A company or “enterprise” is comprised of all the establishments that operate under the ownership or control of a single organization. A company may be a business, service, or membership organization; consist of one or several establishments; and operate at one or several locations. It includes all subsidiary organizations, all establishments that are majority-owned by the company or any subsidiary, and all the establishments that can be directed or managed by the company or any subsidiary.

A company may have one or many establishments. Examples include product and service sales offices (retail and wholesale), industrial production plants, processing or assembly operations, mines or well sites, and support operations (such as an administrative office, warehouse, customer service center, or regional headquarters). Each establishment should receive, complete, and return a separate census form.

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.

### **Establishment**

An establishment is a single physical location where business is conducted or where services or industrial operations are performed. Data in this sector includes those establishments where manufacturing is performed. A separate report was required for each manufacturing establishment (plant) with one employee or more that was in operation at any time during the year.

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).

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## **TOTAL FRINGE BENEFITS**

This item is the employer's costs for social security tax, unemployment tax, workmen's compensation insurance, state disability insurance pension plans, stock purchase plans, union-negotiated benefits, life insurance premiums, and insurance premiums on hospital and medical plans for employees.

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.

## **NUMBER OF 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 that included the 12th of the months specified on the report form. Included are employees on paid sick leave, paid holidays, and paid vacations; not included are proprietors and partners of unincorporated businesses.

These individuals consist of all full-time and part-time employees who are on the payrolls of establishments who worked or received pay for any part of the pay period including the 12th of March, May, August, and November.

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**

The "production workers" number 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**

The "other employees" 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.

## **PRODUCTION-WORKER HOURS**

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

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## **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.

### **Specific materials consumed**

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials that were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials" Census material code 00970099.

Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind" Census materials code 00971000.

### **QUANTITY OF ELECTRICITY PURCHASED 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.

### **TOTAL VALUE OF SHIPMENTS**

Includes the received or receivable net selling values, "Free on Board" (FOB) 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

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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 bought and sold without further manufacture, processing, or assembly; and
3. other miscellaneous receipts — includes repair work, installation, sales of scrap, etc.

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

1. primary product value of shipments;
2. secondary product value of shipments; and
3. total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio.

### **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 the paper manufacturing 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 that included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

### **Specialization and coverage ratio**

An establishment is classified in a particular industry, if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

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An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.).

Specialization and coverage ratio have been developed to measure the relationship of primary product shipments to the data on shipments for a particular industry.

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

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

### **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.

### **TOTAL END-OF-YEAR INVENTORIES**

This item is comprised of:

- a. Finished products
- b. Work-in-process
- c. Materials, supplies, fuels, etc.

Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method. Therefore, 1982 through 2002 data for inventories are not strictly comparable to prior-year data.

In addition, total beginning-of-year inventories is the sum of several different types of inventory valuations.

Inventory valuations include:

1. Subject to Last-in, first-out (LIFO) costing (including LIFO reserve and value)
2. Not subject to LIFO costing
3. Valuation method not reported, and
4. Amount subject to LIFO reported without associated reserve and value.

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## **GROSS VALUE OF DEPRECIABLE/DEPLETABLE ASSETS AT BEGINNING OF YEAR**

Gross value of depreciable/depletable assets includes all fixed depreciable/depletable assets contained in accounting records of establishments. The values shown (gross book value) represent the actual cost of assets at the time they were acquired. Included are all costs incurred in making the assets usable (such as transportation and installation)

Gross value of depreciable/depletable assets includes:

1. Buildings and other structures (new and used).
2. Machinery and equipment (new and used), including automobiles, trucks, etc. for highway use and computers and peripheral data processing equipment.
3. Retirements.

Excluded are nondepreciable capital assets including inventories and intangible assets.

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.

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.

## **CAPITAL EXPENDITURES FOR NEW AND USED PLANT AND EQUIPMENT**

Represents the total new and used capital expenditures reported by establishments in operation and any known plants under construction.

These data include expenditures for:

1. Permanent additions and major alterations to manufacturing and mining establishments.
2. New and used machinery and equipment used for replacement and additions to plant capacity, if they are of the type for which depreciation, depletion, or (for mining establishments) Office of Minerals Exploration accounts are ordinarily maintained. In addition, for mining establishments, these data include expenditures made during the year for development and exploration of mineral properties. For manufacturing establishments, these data are broken down into three types.
  - a. Automobiles, trucks, etc. for highway use. These include vehicles acquired under a lease-purchase agreement and excludes vehicles leased or normally designed to transport materials, property, or equipment on mining, construction, petroleum development, and similar projects. These vehicles are of such size or weight as to be normally restricted by state laws or regulations from operating on public highways. It also excludes purchases of vehicles that are purchased by a company for highway use.
  - b. Computers and peripheral data processing equipment. This item includes all purchases of computers and related equipment.
  - c. All other expenditures for machinery and equipment excluding automobiles and computer equipment.

Capital expenditures include work done by contract, as well as by the establishment's own work-force.

These data exclude expenditures for land and mineral rights and cost of maintenance and repairs charged as current operating expenses.

## **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.

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## **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.

## **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.

# **Appendix B.**

## **NAICS Codes, Titles, and Descriptions**

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### **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;

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

#### **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.

##### **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.

#### **3112 GRAIN AND OILSEED MILLING**

This industry group comprises establishments primarily engaged in one or more of the following:

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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.

### **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 the following:

1. Milling flour or meal from grains (except rice) or vegetables and/or
2. Milling flour and preparing flour mixes or doughs.

#### **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.

#### **311213 MALT MANUFACTURING**

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

### **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).

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### **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.

### **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.

### **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.

### **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.

### **3113 SUGAR AND CONFECTIONERY PRODUCT MANUFACTURING**

This industry group comprises establishments primarily engaged in one of the following:

1. 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.

#### **311312 CANE SUGAR REFINING**

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

#### **311313 BEET SUGAR MANUFACTURING**

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

### **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.

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### **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.

### **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.

### **31134 NONCHOCOLATE CONFECTIONERY MANUFACTURING**

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

### **3114 FRUIT AND VEGETABLE PRESERVING AND SPECIALTY FOOD MANUFACTURING**

This industry group comprises establishments primarily engaged in the following:

1. Those 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.

### **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.

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## **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, barbecue, and tomato paste; pickles, relishes, jams and jellies, dried soup mixes and bouillons, 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, barbecue, and tomato paste; pickles, relishes, and sauerkraut.

### **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.

### **311423 DRIED AND DEHYDRATED FOOD MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in one of the following:

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.

## **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.

### **311512 CREAMERY BUTTER MANUFACTURING**

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

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### **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.

### **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.

### **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).

### **3116 ANIMAL SLAUGHTERING AND PROCESSING**

This industry group 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.

### **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 primarily engaged in slaughtering animals (except poultry and small game). Establishments that slaughter and prepare meats are included in this industry.

### **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.

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### **311613 RENDERING AND MEAT BYPRODUCT PROCESSING**

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

### **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.

### **3117 SEAFOOD PRODUCT PREPARATION AND PACKAGING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Canning seafood (including soup);
2. Smoking, salting, and drying seafood;
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 also included in this industry group.

### **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 seafood;
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 also included in this industry.

### **311711 SEAFOOD CANNING**

This U.S. industry comprises establishments primarily engaged in one of the following:

1. Canning seafood (including soup) and marine fats and oils and/or
2. Smoking, salting, and drying seafood.

Establishments known as "floating factory ships" that are engaged in the gathering and processing of seafood into canned seafood products are also included in this industry.

### **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;

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3. Manufacturing frozen seafood; and
  4. Processing fresh and frozen marine fats and oils.

## **3118 BAKERIES AND TORTILLA MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Bread and bakery product manufacturing;
2. Cookie, cracker, and pasta manufacturing; and
3. 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.

#### **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.

#### **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.

### **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.

#### **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.

#### **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.

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### **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.

### **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.

### **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.

### **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.

### **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.

### **311919 OTHER SNACK FOOD MANUFACTURING**

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

### **31192 COFFEE AND TEA MANUFACTURING**

This industry comprises establishments primarily engaged in one or more of the following:

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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.

### **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.

### **31194 SEASONING AND DRESSING MANUFACTURING**

This U.S. 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).

### **311942 SPICE AND EXTRACT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in one of the following:

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.

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### **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.

### **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; bakery and tortillas products; 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.

## **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 industry group comprises establishments primarily engaged in manufacturing soft drinks; ice; bottled water; breweries; wineries; and/or distilleries.

### **31211 SOFT DRINK AND ICE MANUFACTURING**

This industry comprises establishments primarily engaged in one or more of the following:

1. Manufacturing soft drinks;

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- 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.

### **312112 BOTTLED WATER MANUFACTURING**

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

### **312113 ICE MANUFACTURING**

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

## **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.

## **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.

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## **3122 TOBACCO MANUFACTURING**

This industry group comprises establishments primarily engaged in the stemming and redrying of tobacco, and in the manufacturing of tobacco products.

### **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.

### **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.

### **312229 OTHER TOBACCO PRODUCT MANUFACTURING**

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

## **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 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 fiber.

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 include 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

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2. manufacturing thread of any fiber
  3. texturizing, throwing, twisting, and winding purchased yarn or manmade fiber filaments
  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.

### **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.

### **313113 THREAD MILLS**

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

## **3132 FABRIC MILLS**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Broadwoven fabric mills;
2. Narrow fabric mills and Schiffli machine embroidery;
3. Nonwoven fabric mills; and
4. 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.

### **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
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.

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### **313222 SCHIFFLI MACHINE EMBROIDERY**

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

### **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
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).

### **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).

### **3133 TEXTILE AND FABRIC FINISHING AND FABRIC COATING MILLS**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Textile and fabric finishing mills and
2. Fabric coating mills.

### **31331 TEXTILE AND FABRIC FINISHING MILLS**

This industry comprises:

1. establishments primarily engaged in finishing of textiles, fabrics, and apparel
2. establishments of converters who buy fabric goods in the grey, have them finished on contract, and sell at wholesale. Finishing operations include:

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- a. bleaching
  - b. dyeing
  - c. printing (e.g., roller, screen, flock, plisse)
  - d. stonewashing
  - e. other mechanical finishing (preshrinking, shrinking, sponging, calendering, 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
- 2. Establishments of converters who buy broadwoven fabrics in the grey, have them finished on contract, and sell at wholesale.

### **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)
- 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.

### **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.

### **314 TEXTILE PRODUCT MILLS**

Industries in the Textile Product Mills subsector group establishments that make 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 industry group comprises establishments primarily engaged in one or more of the following:

- 1. Carpet and rug mills and
- 2. Curtain and linen mills.

### **31411 CARPET AND RUG MILLS**

This industry comprises establishments primarily engaged in one or more of the following:

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1. Manufacturing woven, tufted, and other carpets and rugs, such as art squares, floor mattings, needlepunch carpeting, and door mats and matting, 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 matting, from textile materials or from twisted paper, grasses, reeds, sisal, jute, or rags and/or
2. finishing 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.

### **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.

### **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.

#### **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.

#### **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.

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### **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).

### **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.

### **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 cords and tire fabrics) from purchased materials.

## **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).

#### **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).

#### **31519 OTHER APPAREL KNITTING MILLS**

This industry comprises establishments primarily engaged in one of the following:

1. knitting underwear, outerwear, and/or nightwear;

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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.

### **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.

## **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 one of the following:

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.

#### **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 one of the following:

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.

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### **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.

### **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.

### **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.

### **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.

### **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.

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## **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, over-coats 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 sweatpants 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.

## **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.

## **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.

## **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.

## **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.

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### **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.

### **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.

### **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.

### **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.

### **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

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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.

### **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.

### **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.

### **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, and suspenders.

## **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.

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## **3161 LEATHER AND HIDE TANNING AND FINISHING**

This industry group 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.

### **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.

## **3162 FOOTWEAR MANUFACTURING**

This industry group 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.

### **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.

#### **316212 HOUSE SLIPPER MANUFACTURING**

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

#### **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.

#### **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.

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### **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)).

### **3169 OTHER LEATHER AND ALLIED PRODUCT MANUFACTURING**

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

### **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.

### **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).

### **316993 PERSONAL LEATHER GOOD (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).

### **316999 ALL OTHER LEATHER GOOD MANUFACTURING**

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

## **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.

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## **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.

### **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.

## **3212 VENEER, PLYWOOD, AND ENGINEERED WOOD PRODUCT MANUFACTURING**

This industry group 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.

## **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.

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### **321212 SOFTWOOD VENEER AND PLYWOOD MANUFACTURING**

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

### **321214 TRUSS MANUFACTURING**

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

### **321219 RECONSTITUTED WOOD PRODUCT MANUFACTURING**

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

### **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.

#### **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.

#### **321918 OTHER MILLWORK (INCLUDING FLOORING)**

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

#### **32192 WOOD CONTAINER AND PALLET MANUFACTURING**

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

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## **321920 WOOD CONTAINER AND PALLET MANUFACTURING**

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

## **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.

## **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.

## **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).

## **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.

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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.

#### **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.

#### **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.

#### **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.

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## **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.

#### **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.

#### **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.

#### **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.

#### **322215 NONFOLDING SANITARY FOOD CONTAINER MANUFACTURING**

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

### **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:

1. cutting and coating paper and

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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.

### **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. laminating aluminum and other metal foils for nonpackaging uses from purchased foils.

The products made in this industry are made from purchased sheet materials and may be printed in the same establishment.

### **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.

### **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.

### **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.

### **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.

### **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.

### **322232 ENVELOPE MANUFACTURING**

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

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### **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., looseleaf fillers, notebooks, pads, stationery, and tablets).

### **32229 OTHER CONVERTED PAPER PRODUCT MANUFACTURING**

This industry comprises establishments primarily engaged in one of the following:

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.

### **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.

## **323 PRINTING AND RELATED SUPPORT ACTIVITIES**

Industries in the Printing and Related Support Activities subsector print products, such as newspapers, books, labels, business cards, stationery, business forms, and other materials, and perform support activities, such as data imaging, platemaking services, and bookbinding. 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, film, 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 (except Internet). 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.

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## **3231 PRINTING AND RELATED SUPPORT ACTIVITIES**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Printing on apparel and textile products, paper, metal, glass, plastics, and other materials, except fabric (grey goods) and/or
2. Performing prepress (e.g., platemaking, typesetting) and postpress services (e.g., book binding) in support of printing activities.

### **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 folding, 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.

#### **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.

#### **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.

#### **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.

#### **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.

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### **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.

### **323116 MANIFOLD BUSINESS FORMS PRINTING**

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

### **323117 BOOKS PRINTING**

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

### **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.

### **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.

### **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).

### **323122 PREPRESS SERVICES**

This U.S. industry comprises establishments primarily engaged in one or more of the following:

1. prepress services, such as imagesetting or typesetting, for printers and
2. preparing film or plates for printing purposes.

### **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.

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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 industry group comprises establishments primarily engaged in one or more of the following:

1. Petroleum refineries manufacturing;
2. Asphalt paving, roofing, and saturated materials manufacturing; and/or
3. 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.

#### **32412 ASPHALT PAVING, ROOFING, AND SATURATED MATERIALS MANUFACTURING**

This industry comprises establishments primarily engaged in one or more of the following:

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.

#### **324122 ASPHALT SHINGLE AND COATING MATERIALS MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in one or more of the following:

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.

#### **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.

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## **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.

## **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.

## **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 one of the following:

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 one of the following:

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.

## **32512 INDUSTRIAL GAS MANUFACTURING**

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

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### **325120 INDUSTRIAL GAS MANUFACTURING**

This industry comprises establishments primarily engaged in manufacturing industrial organic and inorganic gases in compressed, liquid, and solid forms.

### **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.

### **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).

### **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.

### **325182 CARBON BLACK MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing carbon black, bone black, and lamp 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).

### **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).

### **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.

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### **325193 ETHYL ALCOHOL MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing nonpotable ethyl alcohol.

### **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).

### **3252 RESIN, SYNTHETIC RUBBER, AND ARTIFICIAL AND SYNTHETIC FIBERS AND FILAMENTS MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Resin and synthetic rubber manufacturing and
2. 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.

### **325212 SYNTHETIC RUBBER MANUFACTURING**

This U.S. industry consists of establishments primarily engaged in manufacturing synthetic rubber.

### **32522 ARTIFICIAL AND SYNTHETIC FIBERS AND FILAMENTS MANUFACTURING**

This industry comprises establishments primarily engaged in one of the following:

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 one of the following:

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 texturizing cellulosic fibers and filaments.

### **325222 NONCELLULOSIC ORGANIC FIBER MANUFACTURING**

This U.S. industry consists of establishments primarily engaged in one of the following:

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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 texturizing noncellulosic fibers and filaments.

## **3253 PESTICIDE, FERTILIZER, AND OTHER AGRICULTURAL CHEMICAL MANUFACTURING**

This industry group includes establishments classified in one of the following:

1. Fertilizer manufacturing and/or
2. 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.

#### **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.

#### **325314 FERTILIZER (MIXING ONLY) MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

### **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).

### **3254 PHARMACEUTICAL AND MEDICINE MANUFACTURING**

This industry group 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;

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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.

### **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 one of the following:

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.

#### **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.

#### **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.

#### **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).

### **3255 PAINT, COATING, AND ADHESIVE MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Paint and coating manufacturing and/or
2. Adhesive manufacturing.

#### **32551 PAINT AND COATING MANUFACTURING**

This industry comprises establishments primarily engaged in one or more of the following:

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

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- 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.

### **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.

### **3256 SOAP, CLEANING COMPOUND, AND TOILET PREPARATION MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

- 1. Soap and cleaning compound manufacturing and/or
- 2. 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.

### **325612 POLISH AND OTHER SANITATION GOOD MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing and packaging polishes and specialty cleaning preparations.

### **325613 SURFACE ACTIVE AGENT MANUFACTURING**

This U.S. industry group comprises establishments primarily engaged in one or more of the following:

- 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.

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## **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.

## **3259 OTHER CHEMICAL PRODUCT AND PREPARATION 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 U.S. 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.

## **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.

## **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 group comprises establishments primarily engaged in one or more of the following:

1. custom mixing and blending plastics resins made elsewhere or
2. reformulating plastics resins from recycled plastics products.

## **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.

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## **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).

## **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 Hoses 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 PLASTICS PACKAGING MATERIALS AND UNLAMINATED FILM AND SHEET MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

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 PLASTICS BAG MANUFACTURING**

This U.S. industry group comprises establishments primarily engaged in one of the following:

1. converting plastics resins into plastics bags or

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- 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.

#### **326112 PLASTICS PACKAGING FILM AND SHEET (INCLUDING LAMINATED) MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in converting plastics resins into plastics packaging (flexible) film and packaging sheet.

#### **326113 UNLAMINATED 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).

#### **32612 PLASTICS PIPE, PIPE FITTING, AND UNLAMINATED 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 UNLAMINATED PLASTICS PROFILE SHAPE 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.

#### **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.

#### **32613 LAMINATED PLASTICS PLATE, SHEET (EXCEPT PACKAGING), 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 (EXCEPT PACKAGING), 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.

#### **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.

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**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).

**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.

**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 fiber-glass plumbing fixtures. Examples of products made by these establishments are plastics or fiber-glass bathtubs, hot tubs, portable toilets, and shower stalls.

**326192 RESILIENT FLOOR COVERING MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing resilient floor coverings for permanent installation.

**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).

**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.

**326212 TIRE RETREADING**

This U.S. industry comprises establishments primarily engaged in retreading or rebuilding tires.

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## **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.

## **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.

## **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.

## **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 beneficiate 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.

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## **3271 CLAY PRODUCT AND REFRactory MANUFACTURING**

This industry group 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 and/or shaping, molding, baking, burning, or hardening clay refractories, non-clay refractories, ceramic tile, structural clay tile, brick, and other structural clay building materials.

### **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.

#### **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.

#### **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.

### **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.

#### **327122 CERAMIC WALL AND FLOOR TILE MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing ceramic wall and floor tiles.

#### **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.

#### **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.

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## **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.

## **3272 GLASS AND GLASS PRODUCT MANUFACTURING**

This industry group 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.

### **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.

#### **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).

#### **327213 GLASS CONTAINER MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing glass packaging containers.

#### **327215 GLASS PRODUCT MANUFACTURING MADE OF PURCHASED GLASS**

This U.S. industry comprises establishments primarily engaged in coating, laminating, tempering, or shaping purchased glass.

## **3273 CEMENT AND CONCRETE PRODUCT MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Cement manufacturing;
2. Ready-mix concrete manufacturing;
3. Concrete pipe, brick, and block manufacturing; and/or
4. 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.

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### **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.

### **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 primarily engaged in manufacturing concrete delivered to a purchaser, such as batch plants or mix plants, in a plastic and unhardened state. Ready-mix concrete manufacturing establishments may mine, quarry, or purchase sand and gravel.

### **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.

### **327332 CONCRETE PIPE MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing concrete pipe.

### **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).

### **3274 LIME AND GYPSUM PRODUCT MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing lime from calcitic limestone, dolomitic limestone, or other calcareous materials, such as coral, chalk, and shells and/or gypsum products such as wallboard, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work.

### **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.

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### **32742 GYPSUM PRODUCT MANUFACTURING**

This industry comprises establishments primarily engaged in manufacturing gypsum products such as wallboard, 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 wallboard, plaster, plasterboard, molding, ornamental moldings, statuary, and architectural plaster work. Gypsum product manufacturing establishments may mine, quarry, or purchase gypsum.

### **3279 OTHER NONMETALLIC MINERAL PRODUCT MANUFACTURING**

This industry group comprises establishments primarily engaged in 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.

#### **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.

#### **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.

#### **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.

#### **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).

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## **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 industry group 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, and wire); and
7. Making steel and forming pipe and tube.

#### **33111 IRON AND STEEL MILLS AND FERROALLOY MANUFACTURING**

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4. manufacturing ferroalloys;
5. making steel;
6. making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, and wire); and
7. making steel and forming pipe and tube.

##### **331111 IRON AND STEEL MILLS**

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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.

### **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.

### **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 PIPE AND TUBE 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 PIPE AND TUBE 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.

#### **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.

#### **331222 STEEL WIRE DRAWING**

This U.S. industry comprises establishments primarily engaged in drawing wire from purchased steel.

### **3313 ALUMINA AND ALUMINUM PRODUCTION AND PROCESSING**

This industry group 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, and wire).

### **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, and wire).

### **331311 ALUMINA REFINING**

This U.S. industry comprises establishments primarily engaged in refining alumina (i.e., aluminum oxide) generally from bauxite.

### **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, and strip).

Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

### **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.

### **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.

### **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.

### **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.

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## **3314 NONFERROUS METAL (EXCEPT ALUMINUM) PRODUCTION AND PROCESSING**

This industry group comprises establishments primarily engaged in one of the following:

1. Nonferrous metal (except aluminum) smelting and refining;
2. Copper rolling, drawing, extruding, and alloying; and/or
3. 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 one of the following:

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.

#### **331419 PRIMARY SMELTING AND REFINING OF NONFERROUS METAL (EXCEPT COPPER AND ALUMINUM)**

This U.S. industry comprises establishments primarily engaged in:

1. making (primary production) nonferrous metals by smelting ore and/or
2. the primary refining of nonferrous metals by electrolytic methods or other processes.

### **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, 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, 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, and 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, and tube (except bare or insulated copper communication or energy wire) in integrated mills.

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### **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.

### **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.

### **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, and/or extruding shapes (e.g., bar, plate, sheet, strip, and 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, and tube) in integrated mills.

### **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, and wire) using smelting or refining processes.

### **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.

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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 manhole covers, cast iron pipe, cast iron skillets). Establishments in this industry purchase iron made in other establishments.

#### **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.

#### **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.

### **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.

#### **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.

#### **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.

#### **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.

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## **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.

## **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 industry group 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, and coins); and
4. Manufacturing powder metallurgy products.

Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining and 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.

#### **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, and coins); and
4. manufacturing powder metallurgy products.

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Establishments making metal forgings, metal stampings, and metal spun products and further manufacturing (e.g., machining and 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.

### **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.

### **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.

### **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.

### **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.

### **332117 POWDER METALLURGY PART 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.

## **3322 CUTLERY AND HANDTOOL MANUFACTURING**

This industry group 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

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- 5. Manufacturing metal kitchen utensils (except cutting-type) and pots and pans (except those manufactured by casting (e.g., cast iron skillets) or stamped without further fabrication).

### **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 skillets) 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.

#### **332212 HAND AND EDGE TOOL MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing nonpowered hand and edge tools (except saws).

#### **332213 SAW BLADE AND HANSAW 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).

#### **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).

### **3323 ARCHITECTURAL AND STRUCTURAL METALS MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing one or more of the following:

- 1. Plate work and fabricated structural product manufacturing and
- 2. 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.

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### **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.

### **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.

### **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 (typically using purchased glass) and metal doors. Examples of products made by these establishments are: metal door frames; metal framed window and door screens; and metal molding and trim (except automotive).

### **332322 SHEET METAL WORK MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing sheet metal work (except stampings).

### **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.

### **3324 BOILER, TANK, AND SHIPPING CONTAINER MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Power boiler and heat exchanger manufacturing;
2. Metal tank (heavy gauge) manufacturing; and
3. 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.

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### **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.

### **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.

### **332439 OTHER METAL CONTAINER MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing metal (light gauge) containers (except cans).

### **3325 HARDWARE MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing metal hardware, such as metal hinges, metal handles, keys, and locks (except coin-operated and time locks).

### **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 and 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 and time locks).

### **3326 SPRING AND WIRE PRODUCT MANUFACTURING**

This industry group 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).

### **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).

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### **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.

### **332612 SPRING (LIGHT GAUGE) MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing light gauge springs from purchased wire or strip.

### **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.

## **3327 MACHINE SHOPS; TURNED PRODUCT; AND SCREW, NUT, AND BOLT MANUFACTURING**

This industry group comprises establishments primarily engaged in:

1. Machine shops and/or
2. Turned product and screw, nut, and bolt manufacturing.

### **33271 MACHINE SHOPS**

This industry comprises establishments primarily engaged in machining metal parts on a job or order basis (known as machine shops). 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 primarily engaged in machining metal parts on a job or order basis (known as machine shops). 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.

### **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 in manufacturing parts for machinery and equipment on a customized basis.

### **332721 PRECISION TURNED PRODUCT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in machining precision products of all materials on a job or order basis (known as precision turned manufacturers). 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.

### **332722 BOLT, NUT, SCREW, RIVET, AND WASHER MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing metal bolts, nuts, screws, rivets, washers, and other industrial fasteners using machines, such as headers, threaders, and nut forming machines.

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### **3328 COATING, ENGRAVING, HEAT TREATING, AND ALLIED ACTIVITIES**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Heat treating metals and metal products;
2. Enameling, lacquering, and 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.

Included in this industry are establishments that coat engravings and heat treat metals and metal formed products fabricated elsewhere.

### **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, and 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.

Included in this industry are establishments that 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.

#### **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.

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### **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.

### **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.

#### **332912 FLUID POWER VALVE AND HOSE FITTING MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing fluid power valves and hose fittings.

#### **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.

#### **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).

#### **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.

#### **332992 SMALL ARMS AMMUNITION MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing small arms ammunition.

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### **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.

### **332994 SMALL ARMS MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing small firearms that are carried and fired by the individual.

### **332995 OTHER ORDNANCE AND ACCESSORIES MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing ordnance (except small arms) and accessories.

### **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.

### **332997 INDUSTRIAL PATTERN MANUFACTURING**

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

### **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).

## **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

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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 industry group comprises establishments primarily engaged in one or more of the following:

1. Agricultural implement manufacturing;
2. Construction machinery manufacturing; and
3. 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).

##### **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.

##### **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.

##### **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, and rock drills and
2. manufacturing mineral beneficiating machinery and equipment used in surface or underground mines.

##### **333132 OIL AND GAS FIELD MACHINERY AND EQUIPMENT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in:

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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.

### **3332 INDUSTRIAL MACHINERY MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Sawmill and woodworking machinery manufacturing;
2. Plastics and rubber industry machinery manufacturing; and
3. 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.

#### **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.

#### **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.

#### **333292 TEXTILE MACHINERY MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing textile machinery for making thread, yarn, and fiber.

#### **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, typesetting machinery, and bindery machinery.

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### **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, and ice cream freezers), bakery machinery and equipment (e.g., dough mixers, bake ovens, and pastry rolling machines), meat and poultry processing and preparation machinery, and other commercial food products machinery (e.g., slicers, choppers, and mixers).

### **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.

### **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).

### **3333 COMMERCIAL AND SERVICE INDUSTRY MACHINERY MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing commercial and service machinery, such as automatic vending machinery, commercial laundry and dry-cleaning 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.

### **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 dry-cleaning 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.

### **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.

### **333313 OFFICE MACHINERY MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing office machinery (except computers and photocopying equipment), such as mailhandling machinery and equipment, calculators, typewriters, and dedicated word processing equipment.

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#### **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 and proton), telescopes, prisms, and lenses (except ophthalmic);
2. coating or polishing lenses (except ophthalmic); and
3. mounting lenses (except ophthalmic).

#### **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, and digital), projectors, film developing equipment, photocopying equipment, and microfilm equipment.

#### **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).

#### **3334 VENTILATION, HEATING, AIR-CONDITIONING, AND COMMERCIAL REFRIGERATION EQUIPMENT MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing ventilation, heating, air-conditioning, and commercial and industrial refrigeration and freezer equipment.

#### **33341 VENTILATION, HEATING, AIR-CONDITIONING, AND COMMERCIAL REFRIGERATION EQUIPMENT MANUFACTURING**

This industry comprises establishments primarily engaged in manufacturing ventilation, 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.

#### **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.

#### **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.

#### **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.

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## **3335 METALWORKING MACHINERY MANUFACTURING**

This industry group 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.

### **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.

#### **333512 MACHINE TOOL (METAL CUTTING TYPES) MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing metal cutting machine tools (except handtools).

#### **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.

#### **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.

#### **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.

#### **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.

#### **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).

## **3336 ENGINE, TURBINE, AND POWER TRANSMISSION EQUIPMENT MANUFACTURING**

This industry group comprises establishments primarily engaged in manufacturing turbines, power transmission equipment, and internal combustion engines (except automotive, gasoline, and aircraft).

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## **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.

### **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).

### **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, clutches (except motor vehicle and electromagnetic industrial control), couplings, joints, and drive chains.

### **333618 OTHER ENGINE EQUIPMENT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing internal combustion engines (except automotive gasoline and aircraft).

## **3339 OTHER GENERAL PURPOSE MACHINERY MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Pump and compressor manufacturing;
2. Material handling equipment manufacturing; and
3. 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.

### **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.

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### **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.

### **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.

### **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.

### **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.

### **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.

### **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, and pneumatic) handtools, such as drills, screwguns, circular saws, chain saws, staplers, and nailers.

### **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).

### **333993 PACKAGING MACHINERY MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing packaging machinery, such as wrapping, bottling, canning, and labeling machinery.

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### **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, and wood).

### **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.

### **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.

### **333997 SCALE AND BALANCE (EXCEPT LABORATORY) MANUFACTURING**

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

## **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 industry group 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:

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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.

### **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:

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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.

### **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.

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### **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.

### **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).

### **3342 COMMUNICATIONS EQUIPMENT MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Telephone apparatus manufacturing;
2. Radio and television broadcasting and wireless communications equipment manufacturing; and
3. 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 standalone 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, LAN modems, multi-user modems, and other 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.

### **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.

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### **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).

### **3343 AUDIO AND VIDEO EQUIPMENT MANUFACTURING**

This industry group 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.

### **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.

### **3344 SEMICONDUCTOR AND OTHER ELECTRONIC COMPONENT MANUFACTURING**

This industry group 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.

### **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.

### **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.

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### **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 opto-electronic devices.

### **334414 ELECTRONIC CAPACITOR MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing electronic fixed and variable capacitors and condensers.

### **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.

### **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.

### **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.

### **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.

### **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).

## **3345 NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING**

This industry group 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.

## **33451 NAVIGATIONAL, MEASURING, ELECTROMEDICAL, 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.

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**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.

**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.

**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.

**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 (i.e., monitor and analyze) industrial process variables, such as temperature, humidity, pressure, vacuum, combustion, flow, level, viscosity, density, acidity, concentration, and rotation.

**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.

**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.

**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.

**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, and research and scientific evaluation. Irradiation can take the form of beta-rays, gamma-rays, X-rays, or other ionizing radiation.

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### **334518 WATCH, CLOCK, AND PART 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.

### **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).

### **3346 MANUFACTURING AND REPRODUCING MAGNETIC AND OPTICAL MEDIA**

This industry group 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.

### **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.

### **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.

### **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.

## **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

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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 industry group comprises establishments primarily engaged in one or more of the following:

1. Electric lamp bulb and part manufacturing and/or
2. Lighting fixture manufacturing.

#### **33511 ELECTRIC LAMP BULB AND PART 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).

#### **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.

##### **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.

##### **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) and nonelectric lighting equipment.

### **3352 HOUSEHOLD APPLIANCE MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Small electrical appliance manufacturing and/or
2. 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.

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## **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).

## **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.

## **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).

### **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.

### **335224 HOUSEHOLD LAUNDRY EQUIPMENT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing household-type laundry equipment.

### **335228 OTHER MAJOR HOUSEHOLD APPLIANCE MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing electric and non-electric major household-type appliances (except cooking equipment, refrigerators, upright and chest freezers, and household-type laundry equipment).

## **3353 ELECTRICAL EQUIPMENT MANUFACTURING**

This industry group 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.

### **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.

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### **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.

### **335313 SWITCHGEAR AND SWITCHBOARD APPARATUS MANUFACTURING**

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

### **3359 OTHER ELECTRICAL EQUIPMENT AND COMPONENT MANUFACTURING**

This industry group comprises establishments primarily engaged in 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.

#### **335912 PRIMARY BATTERY MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing wet or dry primary batteries.

### **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.

#### **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.

### **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.

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### **335932 NONCURRENT-CARRYING WIRING DEVICE MANUFACTURING**

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

### **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.

## **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 industry group comprises establishments primarily engaged in:

1. Automobile and light duty motor vehicle manufacturing and/or
2. Heavy duty truck manufacturing.

#### **33611 AUTOMOBILE AND LIGHT DUTY MOTOR VEHICLE MANUFACTURING**

This industry comprises establishments primarily engaged in:

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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.

### **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.

### **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.

### **3362 MOTOR VEHICLE BODY AND TRAILER MANUFACTURING**

This industry group 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.

### **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.

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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.

### **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.

### **336213 MOTOR HOME MANUFACTURING**

This U.S. industry group 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.

### **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.

### **3363 MOTOR VEHICLE PARTS MANUFACTURING**

This industry group comprises establishments primarily engaged in:

1. Motor vehicle gasoline engine and engine parts manufacturing;
2. Motor vehicle electrical and electronic equipment manufacturing;
3. Motor vehicle steering and suspension components (except spring) manufacturing;
4. Motor vehicle brake system manufacturing;
5. Motor vehicle transmission and power train parts manufacturing;
6. Motor vehicle seating and interior trim manufacturing;
7. Motor vehicle metal stamping; and/or
8. 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.

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### **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.

### **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.

### **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, and ships).

#### **336321 VEHICULAR LIGHTING EQUIPMENT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

#### **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.

#### **33633 MOTOR VEHICLE STEERING AND SUSPENSION COMPONENTS (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 COMPONENTS (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).

#### **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.

#### **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.

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### **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.

### **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.

### **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.

### **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.

### **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).

### **3364 AEROSPACE PRODUCT AND PARTS MANUFACTURING**

This industry group 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).

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## **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).

### **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).

### **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.

### **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.

### **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

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2. developing and making prototypes of guided missile and space vehicle propulsion units and propulsion unit 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.

### **3365 RAILROAD ROLLING STOCK MANUFACTURING**

This industry group 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.

### **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.

### **3366 SHIP AND BOAT BUILDING**

This industry group 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.

### **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

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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.

### **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.

### **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.

### **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.

### **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, and armored vehicles and tanks).

### **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

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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., knockdown). The manufacture of furniture parts and frames is included in this sub-sector.

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.

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## **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.

### **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).

### **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).

### **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 fiber-glass. The furniture may be made on a stock or custom basis and may be assembled or unassembled (i.e., knockdown).

### **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).

### **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.

## **3372 OFFICE FURNITURE (INCLUDING FIXTURES) MANUFACTURING**

This industry group 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).

### **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).

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## **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.

## **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).

## **337215 SHOWCASE, PARTITION, SHELVING, AND LOCKER MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing wood and non-wood 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.

## **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).

## **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).

## **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.

### **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:

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1. venetian blinds, other window blinds, shades;
  2. curtain and drapery rods, poles; and/or
  3. curtain and drapery fixtures.

The blinds and shades may be made on a stock or custom basis and may be made of any material.

### **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 industry group 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.

##### **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.

For this industry, the 1997 Economic Census did not fully implement the conversion to NAICS. The data from 1997 to 2001 for NAICS industry 339111 did not include establishments primarily engaged in the manufacture of hospital beds and other hospital furniture. These establishments are included in the 2002 Economic Census data.

###### **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, electro-medical 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.

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### **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).

### **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 and dental cements.

### **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, reading glasses made to standard powers, and protective eyewear.

### **339116 DENTAL LABORATORIES**

This U.S. industry comprises establishments primarily engaged in manufacturing dentures, crowns, bridges, and orthodontic appliances customized for individual application.

### **3399 OTHER MISCELLANEOUS MANUFACTURING**

This industry group comprises establishments primarily engaged in one or more of the following:

1. Jewelry and silverware manufacturing;
2. Sporting and athletic goods manufacturing;
3. Doll, toy, and game manufacturing;
4. Office supplies (except paper) manufacturing;
5. Sign manufacturing; and/or
6. 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

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9. drilling, sawing, and peeling cultured and costume pearls.

### **339911 JEWELRY (EXCEPT COSTUME) MANUFACTURING**

This U.S. industry group comprises establishments primarily engaged in one 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.

### **339912 SILVERWARE AND HOLLOWWARE 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 hollowware.

### **339913 JEWELERS' MATERIAL AND LAPIDARY WORK MANUFACTURING**

This U.S. industry group comprises establishments primarily engaged in one 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.

### **339914 COSTUME JEWELRY AND NOVELTY MANUFACTURING**

This U.S. industry group comprises establishments primarily engaged in one of the following:

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.

### **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).

### **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).

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### **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.

### **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).

### **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.

### **339942 LEAD PENCIL AND ART GOOD 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.

### **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.

### **339944 CARBON PAPER AND INKED RIBBON MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing 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, and 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, and displays).

### **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.

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**339992 MUSICAL INSTRUMENT MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing musical instruments (except toys).

**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).

**339994 BROOM, BRUSH, AND MOP MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing brooms, mops, and brushes.

**339995 BURIAL CASKET MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing burial caskets, cases, and vaults (except concrete).

**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).

# Appendix C.

## Methodology

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### SOURCES OF THE DATA

The manufacturing sector includes approximately 350,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing. The amount of information requested from manufacturing establishments was 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).

Establishments in the 2002 Economic Census are divided into those sent report forms and those not sent report forms. The coverage of and the method of obtaining census information from each are described below:

1. Establishments sent a report form:

- 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-10000) 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 473 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 certain 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

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for the respondent to describe significant materials not listed on the form.

A wide variety of special inquiries were 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 "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 "not specified by kind" (nsk) categories.

2. Establishments not sent a report form:

- a. 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 the Census Bureau's ability to assign the correct six-digit NAICS industry classification to the establishment. For each six-digit NAICS 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 that requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these establishments, but were included in the product and material "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a 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 NAICS group classification codes available in the files. For manufacturing, these establishments were sent a

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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.

- b. All nonemployers, i.e., all firms subject to federal income tax, with no paid employees, during 2002 are excluded as in previous censuses. Data for nonemployers are not included in this report, but are released in the annual *Nonemployer Statistics* series.

The report forms used to collect information for establishments in this sector are available at [help.econ.census.gov/econhelp/resources/](http://help.econ.census.gov/econhelp/resources/).

A more detailed examination of census methodology is presented in the *History of the Economic Census* at [www.census.gov/econ/www/history.html](http://www.census.gov/econ/www/history.html).

## **INDUSTRY CLASSIFICATION OF ESTABLISHMENTS**

The classifications for all establishments covered in the 2002 Economic Census — Manufacturing are classified in 1 of 473 industries in accordance with the industry definitions in the *North American Industry Classification System (NAICS), United States, 2002* manual. There were no changes between the 2002 edition and the 1997 edition affecting this sector. When applicable, Appendix F 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 2002, there are 21 sub-sectors (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). Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are 1,450 product classes (seven-digit codes), 5,674 census products, and an additional 3,746 ten-digit product codes. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 2002 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 2002, 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.

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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 that 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 2002 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 2002, 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 2002 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 ASM sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1999 survey year based on the 1997 Economic Census — Manufacturing. This sample will be in place through the 2003 ASM.

In 1997, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the establishments in the 1997 manufacturing population were partitioned into two components for developing estimates within the ASM. The details of each are described below:

1. Mail stratum. The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies

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that operate at more than one physical location). Approximately 200,000 of the 370,000 establishments in the 1997 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 1999 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1997 census. Supplemental samples representing both 1998 and 1999 births (newly active establishments that were not included in the 1997 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 2003.

The 1999-2003 ASM sample design is similar to the one used since 1984. Companies in the 1997 Economic Census — Manufacturing 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 1999-2003 sample, there are approximately 500 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. Across these 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 1997 Economic Census — Manufacturing.

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 1997 industry classification and its 1997 product class data. For each product class (1,755) and six-digit industry (473), 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 the Census Bureau's 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) that permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

2. Nonmail stratum. The initial nonmail component of the survey was comprised of approximately 170,000 small, single-establishment companies that were tabulated as administrative records in the 1997 Economic Census — Manufacturing. 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.

## **RELIABILITY OF DATA**

All data compiled in the economic census are subject to nonsampling errors. Nonsampling errors can be attributed to many sources during the development or execution of the census. The following are two ways that further explain this method: ASM Estimating Procedure. Most of the ASM

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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 1997 (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 1998-2002 ASM estimates, the 1997 Economic Census — Manufacturing values serve as the base year. For the 2003 ASM, the base will be updated to be the 2002 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 contained approximately 170,000 individual establishments in 1999, 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. ASM Data Qualifications. 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.

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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.

### **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 2002 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.

### **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 in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at [www.census.gov/epcd/ec02/disclosure.htm](http://www.census.gov/epcd/ec02/disclosure.htm).

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. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which can be suppressed even though value of shipments data are published.

## Appendix D. Geographic Notes

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### MICHIGAN

**Allendale** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Ottawa County.

**Bedford** (Calhoun County) is no longer tabulated separately due to a population decrease. This change adds territory to the Balance of Calhoun County.

**Cass City** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Tuscola County.

**Clare** is in Clare and Isabella Counties.

**Clinton** is no longer tabulated separately due to a population decrease. This change adds territory to the Balance of Lenawee County.

**Clio** is no longer tabulated separately due to a population decrease. This change adds territory to the Balance of Genesee County.

**Commerce (balance)** contains all of Commerce except Wolverine Lake.

**DeWitt township** lost territory due to the annexation of East Lansing into Clinton County.

**East Lansing** is in Clinton and Ingham Counties; it annexed into Clinton County in June 1998. This change deletes territory from DeWitt.

**Emmett** (Calhoun County) code changed from 25950 to 25935.

**Fenton city** is in Genesee and Livingston Counties; it annexed into Livingston County in September 2000. This change deletes territory from the Balance of Livingston County.

**Flushing township** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Genesee County.

**Fort Gratiot** is now tabulated separately due to a population increase. This change deletes territory from the Balance of St. Clair County.

**Grand Ledge** is in Clinton and Eaton Counties; it annexed into Clinton County in April 1998. This change deletes territory from the Balance of Clinton County.

**Grosse Pointe Shores** is in Macomb and Wayne Counties.

**Hartland** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Livingston County.

**Holland city** is in Allegan and Ottawa Counties.

**Hudson** is no longer tabulated separately due to a population decrease. This change adds territory to the Balance of Lenawee County.

**Iron River** is now tabulated separately due to a population increase from its merger with Mineral Hills and Stambaugh in July 2000; none of which were tabulated separately in 1997. This change deletes territory from the Balance of Iron County.

**Lansing** is in Eaton and Ingham Counties.

**Middleville** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Barry County.

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**Midland** is in Bay and Midland Counties.

**Milan** is in Monroe and Washtenaw Counties.

**Monitor** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Bay County.

**Newberry** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Luce County.

**Niles city** is in Berrien and Cass Counties.

**Northville city** is in Oakland and Wayne Counties.

**Orion (balance)** contains all of Orion except Lake Orion.

**Oscoda** is no longer tabulated separately due to a population decrease. This change adds territory to the Balance of Iosco County.

**Oxford charter township (balance)** incorrectly shown as Oxford township (balance). Oxford township (balance) contains all of Oxford township except Oxford village.

**Richmond** is in Macomb and St. Clair Counties; it annexed into St. Clair County in November 1999. This change deletes territory from the Balance of St. Clair County.

**St. Joseph charter township** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Berrien County.

**Sandusky** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Sanilac County.

**South Haven** is in Allegan and Van Buren Counties.

**Spring Lake town (balance)** contains all of Spring Lake town except Spring Lake village and is now tabulated separately due to a population increase. This change deletes territory from the Balance of Ottawa County.

**Superior** (Washtenaw County) is now tabulated separately due to a population increase. This change deletes territory from the Balance of Washtenaw County.

**Texas** is now tabulated separately due to a population increase. This change deletes territory from the Balance of Kalamazoo County.

**Traverse City** is in Grand Traverse and Leelanau Counties.

**Washington (balance)** (Macomb County) contains all of Washington except Romeo (part).

**Balance of Barry County** no longer includes Middleville, which is tabulated separately due to a population increase.

**Balance of Bay County** no longer includes Monitor, which is tabulated separately due to a population increase.

**Balance of Berrien County** no longer includes St. Joseph charter township, which is tabulated separately due to a population increase.

**Balance of Calhoun County** includes Bedford, which is no longer tabulated separately due to a population decrease.

**Balance of Clinton County** lost territory due to the annexations of East Lansing and Grand Ledge into the county.

**Balance of Genesee County** includes Clio, which is no longer tabulated separately due to a population decrease and no longer includes Flushing township, which is tabulated separately due to a population increase.

**Balance of Iosco County** includes Oscoda, which is no longer tabulated separately due to a population decrease.

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**Balance of Iron County** no longer includes Iron River, which is tabulated separately due to a population increase from its merger with Mineral Hills and Stambaugh.

**Balance of Kalamazoo County** no longer includes Texas, which is tabulated separately due to a population increase.

**Balance of Lenawee County** includes Clinton and Hudson, which are no longer tabulated separately due to a population decrease.

**Balance of Livingston County** lost territory due to the annexation of Fenton into the county and no longer includes Hartland, which is tabulated separately due to a population increase.

**Balance of Luce County** no longer includes Newberry, which is tabulated separately due to a population increase.

**Balance of Ottawa County** no longer includes Allendale and Spring Lake town (balance), which are tabulated separately due to a population increase.

**Balance of St. Clair County** lost territory due to the annexation of Richmond into the county and no longer includes Fort Gratiot, which is tabulated separately due to a population increase.

**Balance of Sanilac County** no longer includes Sandusky, which is tabulated separately due to a population increase.

**Balance of Tuscola County** no longer includes Cass City, which is tabulated separately due to a population increase.

**Balance of Washtenaw County** no longer includes Superior, which is tabulated separately due to a population increase.

# **Appendix E.**

## **Metropolitan and Micropolitan Statistical Areas**

### **DETROIT-WARREN-FLINT, MI COMBINED STATISTICAL AREA**

#### **Ann Arbor, MI Metropolitan Statistical Area**

Washtenaw County, MI

#### **Detroit-Warren-Livonia, MI Metropolitan Statistical Area**

##### ***Detroit-Livonia-Dearborn, MI Metropolitan Division***

Wayne County, MI

##### ***Warren-Farmington Hills-Troy, MI Metropolitan Division***

Lapeer County, MI

Livingston County, MI

Macomb County, MI

Oakland County, MI

St. Clair County, MI

#### **Flint, MI Metropolitan Statistical Area**

Genesee County, MI

#### **Monroe, MI Metropolitan Statistical Area**

Monroe County, MI

### **GRAND RAPIDS-MUSKEGON-HOLLAND, MI COMBINED STATISTICAL AREA**

#### **Allegan, MI Micropolitan Statistical Area**

Allegan County, MI

#### **Grand Rapids-Wyoming, MI Metropolitan Statistical Area**

Barry County, MI

Ionia County, MI

Kent County, MI

Newaygo County, MI

#### **Holland-Grand Haven, MI Metropolitan Statistical Area**

Ottawa County, MI

#### **Muskegon-Norton Shores, MI Metropolitan Statistical Area**

Muskegon County, MI

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**LANSING-EAST LANSING-OWOSSO, MI COMBINED STATISTICAL AREA**

**Lansing-East Lansing, MI Metropolitan Statistical Area**

Clinton County, MI

Eaton County, MI

Ingham County, MI

**Owosso, MI Micropolitan Statistical Area**

Shiawassee County, MI

**SAGINAW-BAY CITY-SAGINAW TOWNSHIP NORTH, MI COMBINED STATISTICAL AREA**

**Bay City, MI Metropolitan Statistical Area**

Bay County, MI

**Saginaw-Saginaw Township North, MI Metropolitan Statistical Area**

Saginaw County, MI

**ADRIAN, MI MICROPOLITAN STATISTICAL AREA**

Lenawee County, MI

**ALMA, MI MICROPOLITAN STATISTICAL AREA**

Gratiot County, MI

**ALPENA, MI MICROPOLITAN STATISTICAL AREA**

Alpena County, MI

**BATTLE CREEK, MI METROPOLITAN STATISTICAL AREA**

Calhoun County, MI

**BIG RAPIDS, MI MICROPOLITAN STATISTICAL AREA**

Mecosta County, MI

**CADILLAC, MI MICROPOLITAN STATISTICAL AREA**

Missaukee County, MI

Wexford County, MI

**COLDWATER, MI MICROPOLITAN STATISTICAL AREA**

Branch County, MI

**ESCANABA, MI MICROPOLITAN STATISTICAL AREA**

Delta County, MI

**HOUGHTON, MI MICROPOLITAN STATISTICAL AREA**

Houghton County, MI

Keweenaw County, MI

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**IRON MOUNTAIN, MI-WI MICROPOLITAN STATISTICAL AREA**

Dickinson County, MI

Florence County, WI

**JACKSON, MI METROPOLITAN STATISTICAL AREA**

Jackson County, MI

**KALAMAZOO-PORTAGE, MI METROPOLITAN STATISTICAL AREA**

Kalamazoo County, MI

Van Buren County, MI

**MARINETTE, WI-MI MICROPOLITAN STATISTICAL AREA**

Menominee County, MI

Marinette County, WI

**MARQUETTE, MI MICROPOLITAN STATISTICAL AREA**

Marquette County, MI

**MIDLAND, MI MICROPOLITAN STATISTICAL AREA**

Midland County, MI

**MOUNT PLEASANT, MI MICROPOLITAN STATISTICAL AREA**

Isabella County, MI

**NILES-BENTON HARBOR, MI METROPOLITAN STATISTICAL AREA**

Berrien County, MI

**SAULT STE. MARIE, MI MICROPOLITAN STATISTICAL AREA**

Chippewa County, MI

**SOUTH BEND-MISHAWAKA, IN-MI METROPOLITAN STATISTICAL AREA**

St. Joseph County, IN

Cass County, MI

**STURGIS, MI MICROPOLITAN STATISTICAL AREA**

St. Joseph County, MI

**TRAVERSE CITY, MI MICROPOLITAN STATISTICAL AREA**

Benzie County, MI

Grand Traverse County, MI

Kalkaska County, MI

Leelanau County, MI

