Newsprint Mills

1997

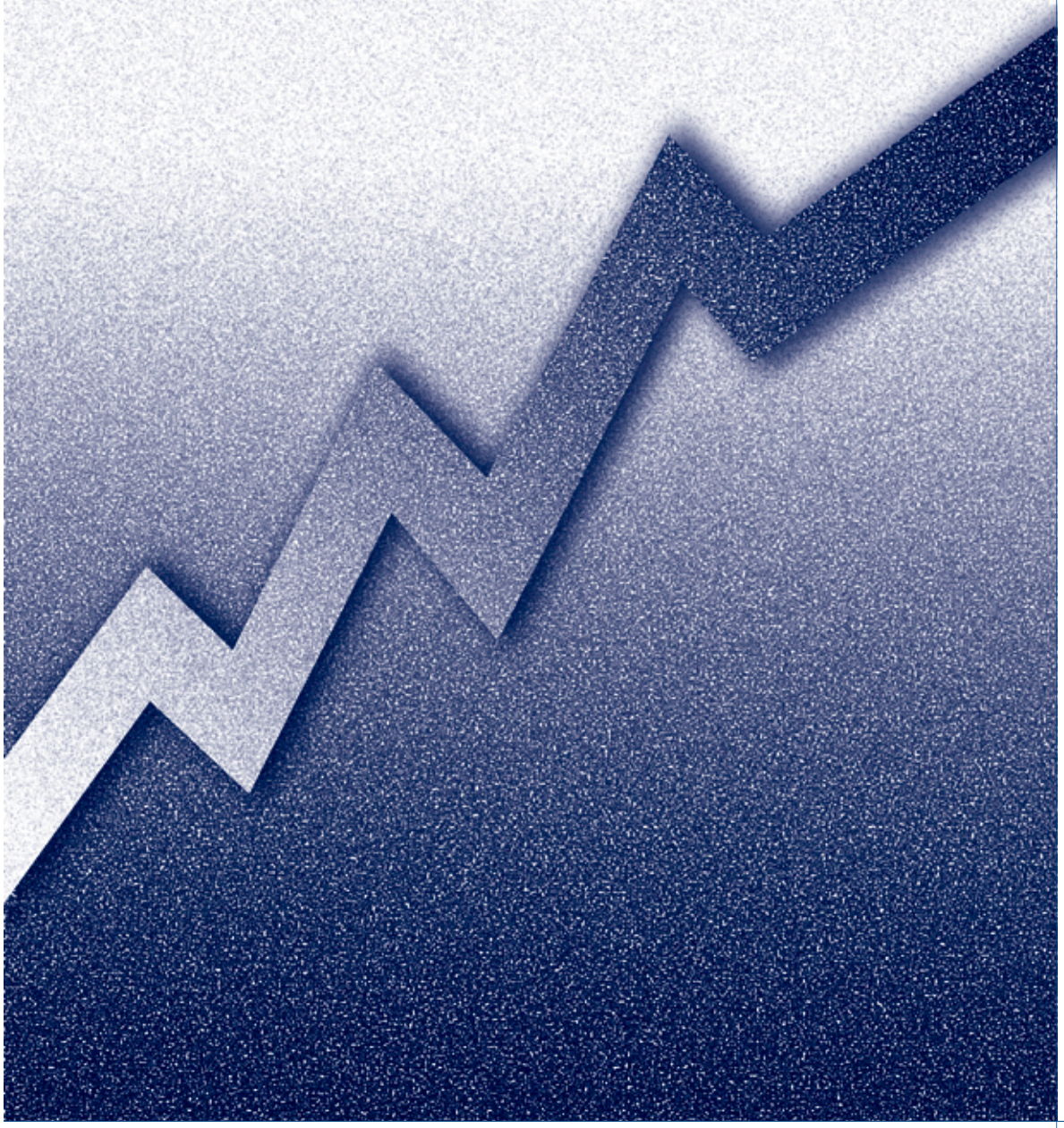
Issued November 1999

EC97M-3221C

1997 Economic Census

Manufacturing

Industry Series



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CONTENTS

-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

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

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

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

ALL-NEW INDUSTRY CLASSIFICATIONS

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

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

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

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

RELATIONSHIP TO SIC

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

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

GEOGRAPHIC AREA CODING

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

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

BASIS OF REPORTING

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

DOLLAR VALUES

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

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

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

Special Tabulations

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

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

Manufacturing and Construction Division	301-457-4673
Service Sector Statistics Division	301-457-2668

HISTORICAL INFORMATION

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

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

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

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

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

SOURCES FOR MORE INFORMATION

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

ABBREVIATIONS AND SYMBOLS

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

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.
V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Manufacturing

SCOPE

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

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

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

GENERAL

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

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

State reports, which include the District of Columbia, present similar statistics at the "all manufacturing" level for each state and its metropolitan areas (MAs) with 250 employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

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

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

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

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

GEOGRAPHIC AREAS COVERED

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

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

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

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

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

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

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

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

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

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

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

DISCLOSURE

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

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

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

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

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

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

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

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

NAICS or SIC code	Industry	Companies[1]	All establishments[2]	All employees		Production workers			Value added by manufacture ($1,000)	Cost of materials ($1,000)	Value of shipments ($1,000)	Total capital expenditures ($1,000)
				Number	Payroll ($1,000)	Number	Hours (1,000)	Wages ($1,000)				
322122	**Newsprint mills**	**25**	**31**	**14 015**	**767 084**	**10 774**	**23 405**	**557 562**	**2 775 594**	**2 791 788**	**5 584 285**	**414 272**
262120	Paper mills (pt)	N	31	14 015	767 084	10 774	23 405	557 562	2 775 594	2 791 788	5 584 285	414 272

[1]For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
[2]Includes establishments with payroll at any time during the year.

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

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

Industry and geographic area	E[1]	All establishments		All employees		Production workers			Value added by manufacture ($1,000)	Cost of materials ($1,000)	Value of shipments ($1,000)	Total capital expenditures ($1,000)
		Total	With 20 employees or more	Number	Payroll ($1,000)	Number	Hours (1,000)	Wages ($1,000)				
322122, NEWSPRINT MILLS												
United States	**–**	**31**	**30**	**14 015**	**767 084**	**10 774**	**23 405**	**557 562**	**2 775 594**	**2 791 788**	**5 584 285**	**414 272**
Washington	–	5	5	1 399	84 989	1 066	2 327	62 131	426 479	447 302	874 386	34 983

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

[1]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.

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

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

Item		Value
322122, NEWSPRINT MILLS		
Companies[1]	number	25
All establishments	number	31
Establishments with 1 to 19 employees	number	1
Establishments with 20 to 99 employees	number	1
Establishments with 100 employees or more	number	29
All employees	number	14 015
Total compensation[2]	$1,000	964 406
Annual payroll	$1,000	767 084
Total fringe benefits	$1,000	197 322
Production workers, average for year	number	10 774
Production workers on March 12	number	10 751
Production workers on May 12	number	10 787
Production workers on August 12	number	10 917
Production workers on November 12	number	10 641
Production-worker hours	1,000	23 405
Production-worker wages	$1,000	557 562
Total cost of materials	$1,000	2 791 788
Cost of materials, parts, containers, etc., consumed	$1,000	2 045 540
Cost of resales	$1,000	D
Cost of fuels	$1,000	226 717
Cost of purchased electricity	$1,000	400 499
Cost of contract work	$1,000	D
Quantity of electricity purchased for heat and power	1,000 kWh	12 303 132
Quantity of electricity generated less sold for heat and power	1,000 kWh	4 224 230
Total value of shipments	$1,000	5 584 285
Primary products value of shipments	$1,000	D
Secondary products value of shipments	$1,000	D
Total miscellaneous receipts	$1,000	D
Value of resales	$1,000	D
Contract receipts	$1,000	–
Other miscellaneous receipts	$1,000	3 031
Primary products specialization ratio	percent	D
Value of primary products shipments made in all industries	$1,000	5 496 517
Value of primary products shipments made in this industry	$1,000	D
Value of primary products shipments made in other industries	$1,000	D
Coverage ratio	percent	D
Value added	$1,000	2 775 594
Total inventories, beginning of year	$1,000	422 346
Finished goods inventories, beginning of year	$1,000	101 679
Work-in-process inventories, beginning of year	$1,000	9 386
Materials and supplies inventories, beginning of year	$1,000	311 281
Total inventories, end of year	$1,000	384 389
Finished goods inventories, end of year	$1,000	82 903
Work-in-process inventories, end of year	$1,000	11 259
Materials and supplies inventories, end of year	$1,000	290 227
Gross book value of total assets at beginning of year	$1,000	9 162 571
Total capital expenditures (new and used)	$1,000	414 272
Capital expenditures for buildings and other structures (new and used)	$1,000	30 034
Capital expenditures for machinery and equipment (new and used)	$1,000	384 238
Total retirements[2]	$1,000	92 208
Gross book value of total assets at end of year	$1,000	9 484 635
Total depreciation during year[2]	$1,000	414 239
Total rental payments[2]	$1,000	42 246
Buildings and other structures rental payments[2]	$1,000	29 291
Machinery and equipment rental payments[2]	$1,000	12 955
Cost of purchased services for the repair of buildings and other structures[3]	$1,000	8 221
Response coverage ratio[4]	percent	87
Cost of purchased services for the repair of machinery and equipment[3]	$1,000	190 870
Response coverage ratio[4]	percent	87
Cost of purchased communications services[3]	$1,000	4 668
Response coverage ratio[4]	percent	87
Cost of purchased legal services[3]	$1,000	3 100
Response coverage ratio[4]	percent	87
Cost of purchased accounting and bookkeeping services[3]	$1,000	1 075
Response coverage ratio[4]	percent	87
Cost of purchased advertising services[3]	$1,000	803
Response coverage ratio[4]	percent	87
Cost of purchased software and other data processing services[3]	$1,000	4 293
Response coverage ratio[4]	percent	87
Cost of purchased refuse removal (including hazardous waste) services[3]	$1,000	18 336
Response coverage ratio[4]	percent	87
3221221, Newsprint mills—integrated producer		
Companies[1]	number	N
All establishments	number	25
Establishments with 1 to 19 employees	number	–
Establishments with 20 to 99 employees	number	–
Establishments with 100 employees or more	number	25
All employees	number	12 920
Total compensation[2]	$1,000	884 114
Annual payroll	$1,000	703 776
Total fringe benefits	$1,000	180 338
Production workers, average for year	number	9 966
Production workers on March 12	number	9 940
Production workers on May 12	number	9 986
Production workers on August 12	number	10 090
Production workers on November 12	number	9 848
322122, NEWSPRINT MILLS—Con.		
3221221, Newsprint mills—integrated producer—Con.		
Production-worker hours	1,000	21 624
Production-worker wages	$1,000	514 548
Total cost of materials	$1,000	2 561 659
Cost of materials, parts, containers, etc., consumed	$1,000	1 869 654
Cost of resales	$1,000	D
Cost of fuels	$1,000	200 698
Cost of purchased electricity	$1,000	379 924
Cost of contract work	$1,000	D
Quantity of electricity purchased for heat and power	1,000 kWh	11 939 929
Quantity of electricity generated less sold for heat and power	1,000 kWh	4 031 691
Total value of shipments	$1,000	5 121 499
Primary products value of shipments	$1,000	X
Secondary products value of shipments	$1,000	X
Total miscellaneous receipts	$1,000	X
Value of resales	$1,000	X
Contract receipts	$1,000	X
Other miscellaneous receipts	$1,000	X
Primary products specialization ratio	percent	X
Value of primary products shipments made in all industries	$1,000	X
Value of primary products shipments made in this industry	$1,000	X
Value of primary products shipments made in other industries	$1,000	X
Coverage ratio	percent	X
Value added	$1,000	2 545 217
Total inventories, beginning of year	$1,000	386 257
Finished goods inventories, beginning of year	$1,000	93 554
Work-in-process inventories, beginning of year	$1,000	6 240
Materials and supplies inventories, beginning of year	$1,000	286 463
Total inventories, end of year	$1,000	349 700
Finished goods inventories, end of year	$1,000	78 035
Work-in-process inventories, end of year	$1,000	7 136
Materials and supplies inventories, end of year	$1,000	264 529
Gross book value of total assets at beginning of year	$1,000	X
Total capital expenditures (new and used)	$1,000	X
Capital expenditures for buildings and other structures (new and used)	$1,000	X
Capital expenditures for machinery and equipment (new and used)	$1,000	X
Total retirements[2]	$1,000	X
Gross book value of total assets at end of year	$1,000	X
Total depreciation during year[2]	$1,000	X
Total rental payments[2]	$1,000	X
Buildings and other structures rental payments[2]	$1,000	X
Machinery and equipment rental payments[2]	$1,000	X
Cost of purchased services for the repair of buildings and other structures[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased services for the repair of machinery and equipment[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased communications services[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased legal services[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased accounting and bookkeeping services[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased advertising services[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased software and other data processing services[3]	$1,000	X
Response coverage ratio[4]	percent	X
Cost of purchased refuse removal (including hazardous waste) services[3]	$1,000	X
Response coverage ratio[4]	percent	X
3221222, Newsprint mills—nonintegrated producer		
Companies[1]	number	N
All establishments	number	6
Establishments with 1 to 19 employees	number	1
Establishments with 20 to 99 employees	number	1
Establishments with 100 employees or more	number	4
All employees	number	1 095
Total compensation[2]	$1,000	80 292
Annual payroll	$1,000	63 308
Total fringe benefits	$1,000	16 984
Production workers, average for year	number	808
Production workers on March 12	number	811
Production workers on May 12	number	801
Production workers on August 12	number	827
Production workers on November 12	number	793
Production-worker hours	1,000	1 781
Production-worker wages	$1,000	43 014
Total cost of materials	$1,000	230 129
Cost of materials, parts, containers, etc., consumed	$1,000	175 886
Cost of resales	$1,000	–
Cost of fuels	$1,000	26 019
Cost of purchased electricity	$1,000	20 575
Cost of contract work	$1,000	7 649
Quantity of electricity purchased for heat and power	1,000 kWh	363 203
Quantity of electricity generated less sold for heat and power	1,000 kWh	192 539

Table 3. **Detailed Statistics by Industry: 1997**—Con.

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

Item	Value
322122, NEWSPRINT MILLS—Con.	
3221222, Newsprint mills—nonintegrated producer—Con.	
Total value of shipments $1,000	462 786
Primary products value of shipments $1,000	X
Secondary products value of shipments $1,000	X
Total miscellaneous receipts $1,000	X
Value of resales $1,000	X
Contract receipts $1,000	X
Other miscellaneous receipts $1,000	X
Primary products specialization ratio ..... percent	X
Value of primary products shipments made in all industries $1,000	X
Value of primary products shipments made in this industry $1,000	X
Value of primary products shipments made in other industries $1,000	X
Coverage ratio ..... percent	X
Value added $1,000	230 377
Total inventories, beginning of year $1,000	36 089
Finished goods inventories, beginning of year $1,000	8 125
Work-in-process inventories, beginning of year $1,000	3 146
Materials and supplies inventories, beginning of year $1,000	24 818
Total inventories, end of year $1,000	34 689
Finished goods inventories, end of year $1,000	4 868
Work-in-process inventories, end of year $1,000	4 123
Materials and supplies inventories, end of year $1,000	25 698
Gross book value of total assets at beginning of year $1,000	X

Item	Value
322122, NEWSPRINT MILLS—Con.	
3221222, Newsprint mills—nonintegrated producer—Con.	
Gross book value of total assets at beginning of year—Con.	
Total capital expenditures (new and used) $1,000	X
Capital expenditures for buildings and other structures (new and used) $1,000	X
Capital expenditures for machinery and equipment (new and used) $1,000	X
Total retirements[2] $1,000	X
Gross book value of total assets at end of year $1,000	X
Total depreciation during year[2] $1,000	X
Total rental payments[2] $1,000	X
Buildings and other structures rental payments[2] $1,000	X
Machinery and equipment rental payments[2] $1,000	X
Cost of purchased services for the repair of buildings and other structures[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased services for the repair of machinery and equipment[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased communications services[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased legal services[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased accounting and bookkeeping services[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased advertising services[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased software and other data processing services[3] $1,000	X
Response coverage ratio[4] ..... percent	X
Cost of purchased refuse removal (including hazardous waste) services[3] $1,000	X
Response coverage ratio[4] ..... percent	X

[1]For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
[2]These items are collected in the ASM and estimated for the remaining establishments; therefore, the levels of estimation are higher than for other items in the table.
[3]Based on ASM sample data.
[4]A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

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

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

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

Employment size class	E[1]	All establishments		All employees		Production workers			Value added by manufacture ($1,000)	Cost of materials ($1,000)	Value of shipments ($1,000)	Total capital expenditures ($1,000)
		Total	With 20 employees or more	Number	Payroll ($1,000)	Number	Hours (1,000)	Wages ($1,000)				
322122, NEWSPRINT MILLS												
All establishments	**–**	**31**	**30**	**14 015**	**767 084**	**10 774**	**23 405**	**557 562**	**2 775 594**	**2 791 788**	**5 584 285**	**414 272**
Establishments with 1 to 4 employees	–	–	–	–	–	–	–	–	–	–	–	–
Establishments with 5 to 9 employees	–	1	–	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	–	–	–	–	–	–	–	–	–	–	–	–
Establishments with 20 to 49 employees	–	1	1	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	–	–	–	–	–	–	–	–	–	–	–	–
Establishments with 100 to 249 employees	–	8	8	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	–	12	12	4 136	233 051	3 134	6 713	164 908	1 181 339	921 260	2 113 012	240 648
Establishments with 500 to 999 employees	–	5	5	3 192	183 226	2 479	5 402	136 418	559 477	829 598	1 394 142	52 613
Establishments with 1,000 to 2,499 employees	–	4	4	5 278	269 190	4 114	8 909	200 082	668 262	707 968	1 375 062	86 855
Establishments with 2,500 employees or more	–	–	–	–	–	–	–	–	–	–	–	–
Administrative records[2]	–	–	–	–	–	–	–	–	–	–	–	–

[1]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.

[2]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. Data are also included in respective size classes shown.

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

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

NAICS industry or product class code	Industry or primary product class	All establishments	All employees		Production workers			Value added by manufacture ($1,000)	Cost of materials ($1,000)	Value of shipments ($1,000)	Total capital expenditures ($1,000)
			Number	Payroll ($1,000)	Number	Hours (1,000)	Wages ($1,000)				
322122	**Newsprint mills**	**31**	**14 015**	**767 084**	**10 774**	**23 405**	**557 562**	**2 775 594**	**2 791 788**	**5 584 285**	**414 272**
3221221	Newsprint	21	9 562	541 596	7 347	15 889	397 385	2 028 256	2 055 654	4 089 699	191 002
3221223	Uncoated groundwood paper (containing more than 10 percent mechanical fiber)	10	4 453	225 488	3 427	7 516	160 177	747 338	736 134	1 494 586	223 270

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

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

NAICS product code	Product	1997				1992			
		Number of companies with shipments of $100,000 or more	Quantity of production for all purposes	Product shipments		Number of companies with shipments of $100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value ($1,000)			Quantity	Value ($1,000)
322122	**Newsprint**	**N**	**X**	**X**	**5 496 517**	**N**	**X**	**X**	**N**
3221221	Newsprint	N	X	X	3 712 495	N	X	X	2 924 869
32212211	Newsprint	N	X	X	3 712 495	N	X	X	N
3221221100	Newsprint, 1,000 s tons	21	X	7 146.9	3 712 495	20	X	7 217.4	2 924 869
3221223	Uncoated groundwood paper (containing more than 10 percent mechanical fiber)	N	X	X	1 784 022	N	X	X	972 107
32212231	Uncoated groundwood paper (containing more than 10 percent mechanical fiber)	N	X	X	1 784 022	N	X	X	N
3221223111	Uncoated groundwood publication and printing paper, including supercalendered, 1,000 s tons	16	X	1 820.4	1 250 761	N	X	X	N
3221223121	Other converting and miscellaneous groundwood paper, including form bond, wallpaper base, and body stock for coating, 1,000 s tons	8	X	447.3	533 261	6	X	98.8	78 129
3221223Y	Uncoated groundwood paper (containing more than 10 percent mechanical fiber), nsk	N	X	X	–	N	X	X	N
3221223YWV	Uncoated groundwood paper (containing more than 10 percent mechanical fiber), nsk	N	X	X	–	N	X	X	20 716
322122W	Newsprint mill products, nsk, total	N	X	X	–	N	X	X	N
322122WY	Newsprint mill products, nsk, total	N	X	X	–	N	X	X	N
322122WYWW	Newsprint mill products, nsk, for nonadministrative-record establishments	N	X	X	–	N	X	X	N
322122WYWY	Newsprint mill products, nsk, for administrative-record establishments	N	X	X	–	N	X	X	N

Additional information is available for this item; see Appendix F.
@ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.
$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

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

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

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

NAICS product class code	Product class and geographic area	Value of product shipments ($1,000)	
		1997	1992
3221221	**NEWSPRINT**		
	United States	**3 712 495**	**2 924 869**
	Washington	710 877	469 784
3221223	**UNCOATED GROUNDWOOD PAPER (CONTAINING MORE THAN 10 PERCENT MECHANICAL FIBER)**		
	United States	**1 784 022**	**972 107**
	Maine	430 618	319 311
	Michigan	93 391	N
	Minnesota	269 583	N
	Wisconsin	92 966	52 903

Additional information is available for this item; see Appendix F.
@ Additional data are available for these codes at the aggregate U.S. level in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.
$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

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

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

NAICS material code	Material consumed	1997		1992	
		Quantity	Delivered cost ($1,000)	Quantity	Delivered cost ($1,000)
322122	**NEWSPRINT MILLS**				
11331005	Spruce and true fir pulpwood bolts and logs ..... 1,000 standard cords..	819.1	73 149	N	N
11331007	Hemlock pulpwood bolts and logs ..... 1,000 standard cords..	D	D	N	N
11331009	Southern pine pulpwood bolts and logs ..... 1,000 standard cords..	3 884.2	255 406	N	N
11331023	Other softwood pulpwood bolts and logs, including Douglas fir and Jack pine ..... 1,000 standard cords..	D	D	N	N
32100009	Softwood pulpwood wood chips, slabs, cores, sawdust, bark, and other mill residues ..... 1,000 standard cords..	1 855.7	148 846	N	N
11331011	Southern mixed hardwood pulpwood bolts and logs ..... 1,000 standard cords..	487.1	23 615	N	N
11331025	Other hardwood pulpwood bolts and logs ..... 1,000 standard cords..	D	D	N	N
32100011	Hardwood pulpwood wood chips, slabs, cores, sawdust, bark, and other mill residues ..... 1,000 standard cords..	721.5	41 479	N	N
32518103	Chlorine (100 percent Cl basis) .....1,000 s tons..	60.5	14 337	N	N
32518107	Sodium hydroxide (caustic soda)(100 percent NaOH) .....1,000 s tons..	173.6	29 855	N	N
32518823	Sodium chlorate (100 percent NaClO3) .....1,000 s tons..	36.8	13 490	N	N
32510007	Other sodium compounds.....	X	54 195	X	N
32518813	Aluminum sulfate (17 percent Al2O3) .....1,000 s tons..	83.7	15 021	N	N
32599811	Rosin sizing ..... mil lb (dry basis)..	19.0	7 206	N	N
32741003	Lime .....1,000 s tons..	82.4	5 687	N	N
21232400	Kaolin and ball clay .....1,000 s tons..	249.0	51 317	N	N
31122113	Starch..... mil lb..	56.7	14 723	N	N
32521131	Synthetic resins ..... mil lb..	D	D	N	N
32513103	Titanium dioxide, composite and pure (100 percent TiO2) ..... mil lb..	3.2	2 878	N	N
32518829	Calcium carbonate, precipitated (100 percent CaCO2) .....1,000 s tons..	27.3	4 743	N	N
32500009	All other chemicals, including organic.....	X	280 897	X	N
32210029	Woodpulp produced at affiliated or associated mills at other locations.....1,000 s tons (dry basis)..	D	D	N	N
32210031	Woodpulp purchased market wood pulp .....1,000 s tons (dry basis)..	371.7	183 702	N	N
00190006	Mixed wastepaper, except plant's own broke paper .....1,000 s tons..	386.6	44 934	N	N
00190007	Mechanical news wastepaper, except plant's own broke paper.....1,000 s tons..	3 123.7	229 807	N	N
00190072	Other mechanical wastepaper, except plant's own broke paper .....1,000 s tons..	276.4	19 707	N	N
00190073	Corrugated wastepaper, including kraft, except plant's own broke paper .....1,000 s tons..	152.4	22 893	N	N
00190009	High grade pulp substitutes wastepaper, except plant's own broke paper.....1,000 s tons..	D	D	N	N
00190010	High grade deinking wastepaper, except plant's own broke paper .....1,000 s tons..	128.4	13 009	N	N
31122305	Cotton linters (net weight) ..... mil lb..	–	–	N	N
32210033	Linter pulp .....1,000 s tons..	–	–	N	N
00190015	Other fibrous materials, including rags, straw, and bagasse .....1,000 s tons..	–	–	N	N
32610013	Plastics products consumed in the form of sheets, rods, tubes, film, and other shapes	X	D	X	N
31323001	Nonwoven fabrics.....mil sq yd..	–	–	N	N
001900A2	Packaging paper and plastics film, coated, laminated, printed, etc.	X	41 788	X	N
32552003	Glues and adhesives ..... mil lb..	D	D	N	N
32221001	Paperboard containers, boxes, and corrugated paperboard	X	–	X	N
00970099	All other materials and components, parts, containers, and supplies	X	325 434	X	N
00971000	Materials, ingredients, containers, and supplies, n.s.k.	X	60 941	X	N

Additional information is available for this item; see Appendix F.

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

Appendix A. Explanation of Terms

BEGINNING- AND END-OF-YEAR INVENTORIES

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

Inventory Data by Stage of Fabrication

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

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

COST OF MATERIALS

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

Included in this item are:

1. Cost of parts, components, containers, etc.—Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
2. Cost of products bought and sold in the same condition.
3. Cost of fuels consumed for heat and power—Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. Cost of purchased electricity—The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
5. Cost of contract work—This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term "Contract Work" refers to the fee a company pays to another company to perform a service.

Specific Materials Consumed

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

Duplication in Cost of Materials and Value of Shipment

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

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

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

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

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

COST OF PURCHASED SERVICES

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

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

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

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

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

Response Coverage Ratio

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

DEPRECIATION CHARGES FOR FIXED ASSETS

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

EMPLOYEES

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

Production Workers

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

All Other Employees

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

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

FRINGE BENEFITS

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

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

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

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

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

NUMBER OF ESTABLISHMENTS AND COMPANIES

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

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

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

PAYROLL

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

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

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

PRODUCT CODES AND CLASSES OF PRODUCTS

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

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

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

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

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

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

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

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

PRIMARY PRODUCT CLASS CODE

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

PRODUCTION-WORKER HOURS

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

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

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

RENTAL PAYMENTS

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

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

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

RETIREMENTS OF DEPRECIABLE ASSETS

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

TOTAL CAPITAL EXPENDITURES (NEW AND USED)

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

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

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

VALUE ADDED

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

For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

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

VALUE OF SHIPMENTS

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

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

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

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

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

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

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

Duplication in Cost of Materials and Value of Shipment

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

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

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

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

Specialization and Coverage Ratios

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

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

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

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

Appendix B.
NAICS Codes, Titles, and Descriptions

322122 NEWSPRINT MILLS

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

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

2621 Paper mills (pt)

3221221 Newsprint Mills - Integrated Producer

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

3221222 Newsprint Mills - Nonintegrated Producer

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

Appendix C. Coverage and Methodology

MAIL/NONMAIL UNIVERSE

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

1. Small single-establishment companies not sent a report form.

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

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

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

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

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

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

2. Establishments sent a report form.

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

   a. ASM sample establishments.

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

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

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

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

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

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

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

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

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

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

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

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

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

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

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

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

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

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

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

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

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

ESTABLISHMENT BASIS OF REPORTING

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

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

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

DESCRIPTION OF THE ASM SURVEY SAMPLE

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

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

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

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

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

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

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1992 industry classification, its 1992 product class data, and the historical variability of the year-to-year estimates of the product class estimates. For each product class (1,755) and four-digit industry (459), a desired reliability constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

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

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

DESCRIPTION OF THE ASM ESTIMATING PROCEDURE

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

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

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

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

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

QUALIFICATIONS OF THE ASM DATA

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

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

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

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

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

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

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

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

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

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

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

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

DATA FROM THE CURRENT INDUSTRIAL REPORTS (CIR)

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

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

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

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

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

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

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

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E.
Metropolitan Areas

Not applicable for this report.

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

Not applicable for this report.

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

1997 published	1997 collected	1992 published
3221101	26111	26111
3221101100	2611100	2611100
3221103	26113	26113
3221103111	2611335	2611335
3221103121	2611343	2611343
3221103YWV	2611300	2611300
3221105	26114	26114
3221105111	2611432	2611432
3221105121	2611466	2611466
3221105131	2611472	2611472
3221105141	2611478	2611478
3221105YWV	2611400	2611400
3221107	26115	26115
3221107111	2611511	2611511
3221107121	2611513	2611513
3221107131	2611517	2611517
3221107141	2611519	2611519
3221107YWV	2611500	2611500
322110W	26110	26110
322110WYWW	2611000	2611000
322110WYWY	2611002	2611002
3221211	26213	26213
3221211111 pt	2621311 pt	2621315
3221211111 pt	2621311 pt	2621329 pt
3221211221 pt	2621321 pt	2621316
3221211221 pt	2621321 pt	2621329 pt
3221211231 pt	2621323 pt	2621320
3221211231 pt	2621323 pt	2621329 pt
3221211YWV	2621300	2621300
3221213	26214	26214
3221213111	2621431	2621431
3221213115	2621432	2621432
3221213221	2621437	2621437
3221213225	2621441	2621441
3221213231	2621447	2621447
3221213235	2621448	2621448
3221213341	2621454	2621454
3221213345	2621455	2621455
3221213351	2621456	2621456
3221213461	2621460	2621460
3221213471	2621471	2621471
3221213481	2621473	2621473
3221213491	2621489	2621489
3221213YWV	2621400	2621400
3221215	26215	26215
3221215111	2621531	2621531
3221215121	2621532	2621532
3221215131	2621537	2621537
3221215141	2621558	2621558
3221215YWV	2621500	2621500
3221217	26216	26216
3221217111 pt	2621615 pt	2621611
3221217111 pt	2621615 pt	2621619
3221217121	2621627	2621627
3221217YWV	2621600	2621600
3221219	26217	26217
3221219111	2621730	2621730
3221219121	2621750	2621750
3221219131	2621760	2621760
3221219191	2621768	2621768
3221219YWV	2621700	2621700
322121A	26218	26218
322121A111	2621830	2621830
322121A121	2621850	2621850
322121A131	2621860	2621860
322121A141 pt	2621870 pt	2621864
322121A141 pt	2621870 pt	2621868
322121A151	2621883	2621883
322121AYWV	2621800	2621800
322121C	26219	26219
322121C100	2621900	2621900
322121E	2621B	2621B
322121E111	2621B22	2621B22
322121E121	2621B28	2621B28
322121EYWV	2621B00	2621B00
322121G	2621A	2621A
322121G111	2621A11	2621A11
322121G221	2621A60	2621A60
322121G331	2621A30	2621A30
322121G341	2621A51	2621A51
322121G351	2621A73	2621A73
322121G361	2621A78	2621A78
322121G371	2621A81	2621A81
322121G391	2621A88	2621A88
322121GYWV	2621A00	2621A00
322121J	26767	26761 pt
322121J111	2676714	2676114 pt
322121J121	2676751	2676151 pt
322121JYWV	2676700	2676100 pt
322121L pt	26768	26763 pt
322121L pt	38421 pt	38421 pt
322121L111	2676800 pt	2676300 pt
322121L121	3842134	3842132 pt
322121L131	3842136	3842132 pt
322121LYWV pt	2676800 pt	2676300 pt
322121LYWV pt	3842100 pt	3842100 pt
322121N	26769	26764 pt
322121N111	2676911	2676411 pt
322121N221	2676925	2676425 pt
322121N223	2676927	2676427 pt
322121N225	2676933	2676433 pt
322121N227	2676935	2676435 pt
322121N229	2676937	2676437 pt
322121N331	2676945	2676445 pt
322121N433	2676947	2676447 pt
322121N535	2676941	2676441 pt
322121N541	2676943	2676443 pt
322121N551	2676955	2676455 pt
322121N661	2676971	2676471 pt
322121N771	2676976	2676476 pt
322121N773	2676977	2676477 pt
322121N881	2676981	2676481 pt
322121N891	2676999	2676499 pt
322121NYWV	2676900	2676400 pt
322121W pt	26210 pt	26210 pt
322121W pt	26760 pt	26760 pt
322121W pt	38420 pt	38420 pt
322121WYWW pt	2621000 pt	2621000 pt
322121WYWW pt	2676000 pt	2676000 pt
322121WYWW pt	3842000 pt	3842000 pt
322121WYWY pt	2621002 pt	2621002 pt
322121WYWY pt	2676002 pt	2676002 pt
322121WYWY pt	3842002 pt	3842002 pt
3221221	26211	26211
3221221100	2621100	2621100
3221223	26212	26212
3221223111 pt	2621213 pt	2621215
3221223111 pt	2621213 pt	2621219
3221223121	2621227	2621227
3221223YWV	2621200	2621200
322122W	26210 pt	26210 pt
322122WYWW	2621000 pt	2621000 pt
322122WYWY	2621002 pt	2621002 pt
3221301	26311	26311
3221301111	2631110	2631110
3221301221	2631188	2631188
3221301YWV	2631100	2631100
3221303	26312	26312
3221303111	2631240	2631240
3221303221	2631261	2631261
3221303331	2631210	2631210
3221303341	2631262	2631262
3221303351	2631263	2631263
3221303361	2631288	2631288
3221303YWV	2631200	2631200
3221305	26313	26313
3221305100	2631300	2631300
3221307	26314	26314
3221307111	2631420	2631420
3221307221	2631410	2631410
3221307231	2631430	2631430
3221307341	2631446	2631446
3221307451	2631443	2631443
3221307461 pt	2631441 pt	2631444
3221307461 pt	2631441 pt	2631445
3221307571	2631450	2631450
3221307575	2631481	2631481
3221307581	2631482	2631482
3221307591	2631488	2631488
3221307YWV	2631400	2631400
3221309	26318	26318
3221309100	2631800	2631800
322130W	26310	26310
322130WYWW	2631000	2631000
322130WYWY	2631002	2631002
3222110	26530	26530
3222110111	2653012	2653012
3222110114	2653014	2653014
3222110221	2653013	2653013
3222110341	2653016	2653016
3222110345	2653018	2653018
3222110431	2653015	2653015
3222110433	2653021	2653021
3222110435	2653022	2653022
3222110437	2653030	2653030
3222110551	2653067	2653067
3222110661	2653051	2653051
3222110665	2653068	2653068
3222110691	2653098	2653098
3222110YWW	2653000	2653000
3222110YWY	2653002	2653002
3222120	26570	26570
3222120111	2657014	2657014
3222120221	2657021	2657021
3222120331	2657073	2657071 pt
3222120335	2657075	2657071 pt
3222120441	2657081	2657081
3222120551	2657084	2657084
3222120555	2657086	2657086
3222120661	2657015	2657015
3222120663	2657061	2657061
3222120665	2657088	2657088
3222120667	2657090	2657090
3222120671	2657095	2657095
3222120673	2657082	2657099 pt
3222120675	2657031	2657031
3222120677	2657041	2657041
3222120681	2657051	2657051
3222120683	2657096	2657096
3222120691	2657098	2657099 pt
3222120YWW	2657000	2657000
3222120YWY	2657002	2657002
3222130	26520	26520
3222130111	2652021	2652021
3222130121	2652031	2652031
3222130131	2652041	2652041
3222130141	2652051	2652051
3222130191 pt	2652097 pt	2652061
3222130191 pt	2652097 pt	2652071
3222130191 pt	2652097 pt	2652098
3222130YWW	2652000	2652000
3222130YWY	2652002	2652002
3222141	26551	26551
3222141100	2655100	2655100
3222143	26552	26552
3222143111	2655221	2655221
3222143221	2655231	2655231
3222143331	2655271	2655271
3222143391	2655298	2655298
3222143YWV	2655200	2655200
322214W	26550	26550
322214WYWW	2655000	2655000
322214WYWY	2655002	2655002
3222151	26561	26561
3222151100	2656100	2656100
3222153	26562	26562
3222153111	2656233	2656233
3222153121	2656235	2656235
3222153YWV	2656200	2656200
3222155	26563	26563
3222155111	2656310	2656310
3222155121 pt	2656397 pt	2656312
3222155121 pt	2656397 pt	2656319
3222155YWV	2656300	2656300
322215W	26560	26560
322215WYWW	2656000	2656000
322215WYWY	2656002	2656002
3222211	26711	26711
3222211111	2671111	2671111
3222211121	2671115	2671115
3222211YWV	2671100	2671100
3222213 pt	26715 pt	26713
3222213 pt	26715 pt	26714 pt
3222213111 pt	2671511 pt	2671300
3222213111 pt	2671511 pt	2671313
3222213111 pt	2671511 pt	2671314
3222213111 pt	2671511 pt	2671320
3222213221	2671521	2671411
3222213YWV	2671500	2671400 pt

1997 published	1997 collected	1992 published
322221W	26710 pt	26710 pt
322221WYWW	2671000 pt	2671000 pt
322221WYWY	2671002 pt	2671002 pt
3222221	26721	26721
3222221111	2672113	2672113
3222221121	2672153	2672153
3222221YWV	2672100	2672100
3222223	26722	26722
3222223111	2672212	2672212
3222223121	2672230	2672230
3222223YWV	2672200	2672200
3222225	26723	26723
3222225111	2672313	2672313
3222225221	2672343	2672343
3222225331	2672333	2672333
3222225341	2672345	2672345
3222225351	2672353	2672353
3222225361	2672359	2672359
3222225371	2672361	2672361
3222225475	2672381	2672381
3222225581	2672385	2672385
3222225585	2672375	2672375
3222225591	2672398	2672398
3222225YWV	2672300	2672300
3222226	26791	26791
3222226111	2679122	2679122
3222226121 pt	2679125 pt	2679126
3222226121 pt	2679125 pt	2679128
3222226131	2679134	2679134
3222226141	2679136	2679136
3222226191	2679141	2679141
3222226YWV	2679100	2679100
3222227	26792	26792
3222227111	2679282	2679282
3222227121	2679291	2679291
3222227191	2679296	2679296
3222227YWV	2679200	2679200
3222229	26724	26724
3222229111	2672445	2672445
3222229121	2672453	2672453
3222229131	2672455	2672455
3222229141	2672456	2672456
3222229151	2672469	2672469
3222229YWV	2672400	2672400
322222W pt	26720	26720
322222W pt	26790 pt	26790 pt
322222WYWW pt	2672000	2672000
322222WYWW pt	2679000 pt	2679000 pt
322222WYWY pt	2672002	2672002
322222WYWY pt	2679002 pt	2679002 pt
3222231	26731	26731
3222231100	2673100	2673100
3222233	26733 pt	26733 pt
3222233111	2673306	2673311 pt
3222233121	2673312	2673312
3222233131 pt	2673315 pt	2673311 pt
3222233131 pt	2673315 pt	2673314 pt
3222233YWV	2673300 pt	2673300 pt
322223W	26730 pt	26730 pt
322223WYWW	2673000 pt	2673000 pt
322223WYWY	2673002 pt	2673002 pt
3222241	26741	26741
3222241111	2674111	2674111
3222241221	2674112	2674112
3222241231	2674113	2674113
3222241341	2674115	2674115
3222241YWV	2674100	2674100
3222243	26742	26742
3222243111	2674211	2674211
3222243221	2674212	2674212
3222243YWV	2674200	2674200
322224W	26740	26740
322224WYWW	2674000	2674000
322224WYWY	2674002	2674002
3222250 pt	34970 pt	34970 pt
3222250 pt	34972	34972
3222250101	3497210	3497210
3222250206	3497222	3497222
3222250311	3497225	3497225
3222250416	3497228	3497228
3222250421	3497241	3497241
3222250YWW pt	3497000 pt	3497000 pt
3222250YWW pt	3497200	3497200
3222250YWY	3497002 pt	3497002 pt
3222260 pt	26750 pt	26750 pt
3222260 pt	26753	26753
3222260100	2675300	2675300
3222260YWW	2675000 pt	2675000 pt
3222260YWY	2675002 pt	2675002 pt
3222311	26751	26751
3222311111	2675110	2675110
3222311121	2675111	2675111
3222311231	2675112	2675112
3222311391 pt	2675191 pt	2675120
3222311391 pt	2675191 pt	2675130
3222311YWV	2675100	2675100
3222313	26793	26793
3222313111	2679311	2679311
3222313191	2679331	2679331
3222313YWV	2679300	2679300
322231W pt	26750 pt	26750 pt
322231W pt	26790 pt	26790 pt
322231WYWW pt	2675000 pt	2675000 pt
322231WYWW pt	2679000 pt	2679000 pt
322231WYWY pt	2675002 pt	2675002 pt
322231WYWY pt	2679002 pt	2679002 pt
3222320	26770	26770
3222320111	2677010	2677010
3222320121	2677021	2677021
3222320131	2677022	2677022
3222320141	2677040	2677040
3222320YWW	2677000	2677000
3222320YWY	2677002	2677002
3222331	26781	26781
3222331111	2678111	2678111
3222331121	2678113	2678113
3222331131	2678121	2678121
3222331YWV	2678100	2678100
3222333	26782	26782
3222333111	2678212	2678212
3222333221 pt	2678225 pt	2678213
3222333221 pt	2678225 pt	2678221
3222333331	2678235	2678235
3222333441	2678245	2678245
3222333551	2678251	2678251
3222333691	2678298	2678298
3222333YWV	2678200	2678200
322233W	26780	26780
322233WYWW	2678000	2678000
322233WYWY	2678002	2678002
3222911	26762	26761 pt
3222911111	2676214	2676114 pt
3222911121	2676251	2676151 pt
3222911YWV	2676200	2676100 pt
3222913 pt	26765	26763 pt
3222913 pt	38421 pt	38421 pt
3222913111	2676500 pt	2676300 pt
3222913121	3842133	3842132 pt
3222913131	3842135	3842132 pt
3222913YWV pt	2676500 pt	2676300 pt
3222913YWV pt	3842100 pt	3842100 pt
3222915	26766	26764 pt
3222915111	2676611	2676411 pt
3222915221	2676625	2676425 pt
3222915223	2676627	2676427 pt
3222915225	2676633	2676433 pt
3222915227	2676635	2676435 pt
3222915229	2676637	2676437 pt
3222915331	2676645	2676445 pt
3222915433	2676647	2676447 pt
3222915535	2676641	2676441 pt
3222915541	2676643	2676443 pt
3222915551	2676655	2676455 pt
3222915661	2676671	2676471 pt
3222915771	2676676	2676476 pt
3222915773	2676677	2676477 pt
3222915881	2676681	2676481 pt
3222915891	2676699	2676499 pt
3222915YWV	2676600	2676400 pt
322291W pt	26760 pt	26760 pt
322291W pt	38420 pt	38420 pt
322291WYWW pt	2676000 pt	2676000 pt
322291WYWW pt	3842000 pt	3842000 pt
322291WYWY pt	2676002 pt	2676002 pt
322291WYWY pt	3842002 pt	3842002 pt
3222991	26794	26794
3222991100	2679400	2679400
3222993 pt	26752	26752
3222993 pt	26795	26795
3222993 pt	39999 pt	39999 pt
3222993111	2679521	2679521
3222993221	2679531	2679531
3222993231	2679541	2679541
3222993241	2679548	2679548
3222993351 pt	2679550 pt	2679551
3222993351 pt	2679550 pt	2679555
3222993361	2679561	2679561
3222993471 pt	2675200 pt	2675200
3222993471 pt	2675200 pt	2675261
3222993471 pt	2675200 pt	2675271
3222993471 pt	2675200 pt	2675297
3222993591 pt	2679598	2679598
3222993591 pt	3999996 pt	3999913 pt
3222993591 pt	3999996 pt	3999999 pt
3222993YWV pt	2679500	2679500
3222993YWV pt	3999900 pt	3999900 pt
322299W pt	26750 pt	26750 pt
322299W pt	26790 pt	26790 pt
322299W pt	39990 pt	39990 pt
322299WYWW pt	2675000 pt	2675000 pt
322299WYWW pt	2679000 pt	2679000 pt
322299WYWW pt	3999000 pt	3999000 pt
322299WYWY pt	2675002 pt	2675002 pt
322299WYWY pt	2679002 pt	2679002 pt
322299WYWY pt	3999002 pt	3999002 pt