

Section 20

Science

This section presents statistics relating to various aspects of scientific and technical activity. Major topics are research and development, training and employment of scientists and engineers, atomic energy, space vehicles, and patents and trademarks. Principal sources of these data are the National Science Foundation, the Atomic Energy Commission, and the National Aeronautics and Space Administration.

The National Science Foundation gathers data chiefly through recurring statistical surveys and the National Register of Scientific and Technical Personnel (see below). Current Foundation publications containing data on funds for research and development and on scientific and engineering personnel include the bulletin series, *Reviews of Data on Science Resources*; the regular reports, *Federal Funds for Research, Development, and Other Scientific Activities*; *Basic Research, Applied Research, and Development in Industry*, and *American Science Manpower*; occasional reports relating to colleges and universities, and other nonprofit institutions; special reports such as *Scientific Manpower From Abroad*; and policy reports relating to national allocation of manpower and funds to science and technology. Statistical surveys in these areas pose particularly difficult problems of concept and definition and the data should, therefore, be regarded as broad estimates rather than precise quantitative statements. Detailed discussions of the scope and limitations of the data appear in the source publications.

Neither the National Aeronautics and Space Administration nor the Atomic Energy Commission publish any statistical reports as such. NASA's *Semiannual Report* contains current data on finances and its biweekly *Satellite Situation Report* presents information on artificial satellites, including both objects in orbit and decayed objects. The Atomic Energy Commission's annual and semiannual reports contain data on atomic energy, equipment, finances, and licenses.

Other sources of statistics on scientific and technical activities include *The Budget of the United States Government*, which contains summary financial data on all Federal research and development programs; the report series *Resources for Medical Research*, issued by the Public Health Service of the Department of Health, Education, and Welfare, and designed to present timely information on funds, manpower, facilities, and institutions devoted to medical and health-related research; and the *Annual Report of the Commissioner of Patents*, issued by the Department of Commerce's Patent Office and presenting data on patent applications and issuances and on trademark registrations and renewals.

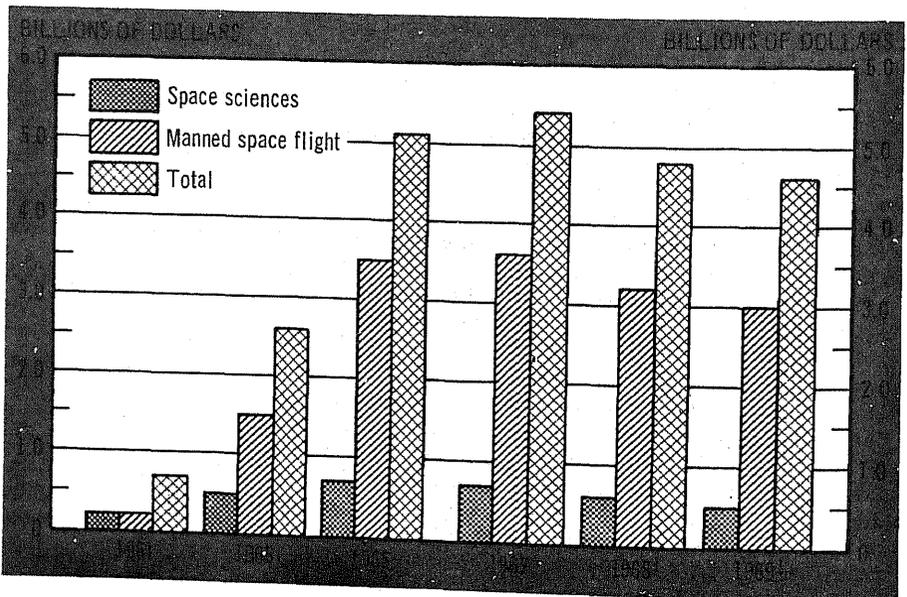
Research and development.—The National Science Foundation defines research as a "systematic and intensive study directed toward a fuller knowledge of the subject studied" and development as "the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems, methods, or processes." The data on funds are presented within the framework of a national economic structure composed of four sectors: (1) The *government sector*, made up primarily of Federal executive agencies; (2) the *industry sector*, consisting of manufacturing and nonmanufacturing firms and the federally funded research and development centers they administer; (3) the *colleges and universities sector*, composed of colleges, universities, and their affiliated institutions, agricultural experiment stations and associated schools of agriculture, and federally funded research and development centers administered by educational institutions; and (4) the *other nonprofit institutions sector*, consisting of such organizations as private philanthropic foundations, nonprofit research insti-

tutes, voluntary health agencies, and federally funded research and development centers administered by nonprofit organizations. The federally funded centers are research and development organizations which are exclusively or substantially financed by the Federal government and which, in most instances, were originally established to meet a particular R&D need of the Government. They are administered on a contractual basis, by companies, educational institutions, or other nonprofit organizations. The R&D funds reported consist of current operating costs, including those for planning and administration, except as otherwise noted. They exclude funds for routine testing, mapping and surveying, collection of general-purpose data, dissemination of scientific information, and training of scientific manpower.

Scientists, engineers, and technicians.—Scientists and engineers are defined as persons engaged in scientific and engineering work at a level requiring a knowledge of sciences equivalent at least to that acquired through completion of a 4-year college course. They are generally classified according to the fields of their employment and not according to the discipline in which they received their major training. Technicians are defined as persons engaged in technical work at a level requiring knowledge acquired through a technical institute, junior college, or other type of training less extensive than 4-year college training. Craftsmen and skilled workers are excluded. The National Register of Scientific and Technical Personnel is a comprehensive program, conducted by the National Science Foundation, for the voluntary registration of scientists. Because it is voluntary, the Register does not include all scientists and engineers in the United States but it does provide valuable statistical information on demographic and other characteristics not available elsewhere.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

FIG. XXXI. NASA EXPENDITURES FOR RESEARCH AND DEVELOPMENT: 1961 TO 1969
[See table 797]



¹ Estimated.

Source: Chart prepared by Dept. of Commerce, Bureau of the Census. Data from National Aeronautics and Space Administration.

No. 772. FUNDS FOR PERFORMANCE OF RESEARCH AND DEVELOPMENT AND BASIC RESEARCH, BY SECTOR, DISTRIBUTED BY SOURCE: 1955 to 1967

[In millions of dollars. Data primarily on calendar year basis—data for calendar year 1957 for industry and other nonprofit institutions combined with Federal and university data for fiscal 1957 (1956-57); same pattern followed for subsequent years. Data refer, in general, to natural sciences including engineering and to social sciences in all but industry sector. Major portion of funds excludes capital expenditures for research and development. Expenditures at associated federally funded research and development centers administered by industry and other nonprofit institutions included in totals of respective sectors]

| PERFORMANCE SECTOR AND SOURCE OF FUNDS ¹ | 1955 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 (prel.) | 1966 (prel.) | 1967 (est.) |
|---|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total R&D ² | 6,270 | 10,850 | 12,520 | 13,710 | 14,500 | 15,610 | 17,350 | 19,180 | 20,470 | 22,370 | 23,800 |
| Federal Government..... | 900 | 1,370 | 1,640 | 1,730 | 1,870 | 2,100 | 2,280 | 2,840 | 3,090 | 3,260 | 3,360 |
| Industry..... | 4,640 | 8,390 | 9,620 | 10,510 | 10,910 | 11,460 | 12,630 | 13,510 | 14,200 | 15,550 | 16,610 |
| Federal funds..... | 2,180 | 4,760 | 5,640 | 6,080 | 6,240 | 6,430 | 7,270 | 7,720 | 7,760 | 8,300 | 8,760 |
| Industry funds..... | 2,460 | 3,630 | 3,980 | 4,430 | 4,670 | 5,030 | 5,360 | 5,790 | 6,440 | 7,250 | 7,850 |
| Universities proper..... | 410 | 600 | 680 | 830 | 970 | 1,140 | 1,360 | 1,590 | 1,870 | 2,180 | 2,360 |
| Federal funds..... | 170 | 260 | 300 | 410 | 500 | 610 | 760 | 910 | 1,100 | 1,340 | 1,470 |
| Industry funds..... | 20 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 50 | 50 |
| University and college funds ³ | 190 | 260 | 290 | 330 | 370 | 420 | 490 | 560 | 640 | 700 | 750 |
| Other nonprofit institutions funds ³ | 30 | 40 | 50 | 50 | 60 | 70 | 70 | 80 | 90 | 90 | 90 |
| Associated federally funded R&D centers..... | 180 | 290 | 340 | 360 | 410 | 470 | 530 | 630 | 640 | 650 | 680 |
| Other nonprofit institutions..... | 140 | 200 | 240 | 280 | 340 | 440 | 550 | 610 | 670 | 730 | 790 |
| Federal funds..... | 60 | 85 | 115 | 140 | 195 | 275 | 380 | 430 | 480 | 520 | 570 |
| Industry funds..... | 30 | 30 | 35 | 40 | 40 | 45 | 45 | 50 | 50 | 60 | 60 |
| Other nonprofit institutions funds ⁴ | 50 | 85 | 90 | 100 | 105 | 120 | 125 | 130 | 140 | 150 | 160 |
| Total basic research..... | 608 | 965 | 1,145 | 1,314 | 1,528 | 1,869 | 2,189 | 2,551 | 2,916 | 3,250 | 3,572 |
| Federal Government..... | 90 | 125 | 173 | 160 | 206 | 251 | 299 | 363 | 424 | 449 | 502 |
| Industry..... | 189 | 295 | 320 | 376 | 395 | 488 | 522 | 549 | 597 | 610 | 655 |
| Federal funds..... | (NA) | 43 | 72 | 79 | 81 | 143 | 147 | 165 | 179 | 168 | 180 |
| Industry funds..... | (NA) | 252 | 248 | 297 | 314 | 345 | 375 | 384 | 418 | 442 | 475 |
| Universities proper..... | 237 | 390 | 468 | 576 | 701 | 850 | 1,036 | 1,281 | 1,492 | 1,764 | 1,945 |
| Federal funds..... | 103 | 178 | 226 | 299 | 382 | 481 | 610 | 767 | 920 | 1,130 | 1,240 |
| Industry funds..... | 16 | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 25 | 27 | 30 |
| University and college funds ³ | 90 | 159 | 185 | 215 | 250 | 293 | 343 | 402 | 473 | 530 | 590 |
| Other nonprofit institutions funds ³ | 19 | 29 | 33 | 38 | 44 | 51 | 58 | 67 | 74 | 77 | 85 |
| Associated federally funded R&D centers..... | 49 | 78 | 92 | 97 | 115 | 136 | 159 | 191 | 198 | 202 | 230 |
| Other nonprofit institutions..... | 43 | 77 | 92 | 105 | 111 | 144 | 173 | 187 | 205 | 225 | 240 |
| Federal funds..... | 14 | 28 | 38 | 44 | 47 | 71 | 95 | 105 | 118 | 125 | 135 |
| Industry funds..... | 5 | 6 | 8 | 10 | 11 | 12 | 14 | 16 | 16 | 20 | 20 |
| Other nonprofit institutions funds ⁴ | 24 | 43 | 46 | 51 | 53 | 61 | 64 | 66 | 71 | 80 | 85 |

NA. Not available. ¹ Data on sources of funds are based on reports by the performers. ² Includes basic research, applied research, and development. ³ Includes State and local government funds received by these institutions and used for research and development. ⁴ Includes estimates for independent nonprofit hospitals and voluntary health agencies. Source: National Science Foundation; unpublished data.

No. 773. FUNDS FOR PERFORMANCE OF INDUSTRIAL RESEARCH AND DEVELOPMENT, BY CHARACTER OF WORK, 1960 to 1966, AND BY INDUSTRY, 1966

[In millions of dollars. Includes performance of federally funded research and development centers administered by industrial firms, classified by industry of the administering company. Excludes performance by certain industry-oriented organizations, such as trade associations, that account annually for less than 1 percent of the total. Excludes funds for R&D capital and the social sciences]

| YEAR AND INDUSTRY | Total | RESEARCH | | | Development |
|---|--------|----------|-------|---------|-------------|
| | | Total | Basic | Applied | |
| 1960..... | 10,509 | 2,417 | 388 | 2,029 | 8,092 |
| 1961..... | 10,908 | 2,372 | 395 | 1,977 | 8,537 |
| 1962..... | 11,464 | 2,937 | 488 | 2,449 | 8,527 |
| 1963..... | 12,630 | 2,979 | 522 | 2,457 | 9,651 |
| 1964..... | 13,512 | 3,149 | 549 | 2,600 | 10,362 |
| 1965..... | 14,185 | 3,260 | 597 | 2,663 | 10,934 |
| 1966..... | 15,541 | 3,444 | 610 | 2,834 | 12,097 |
| Chemicals and allied products..... | 1,515 | 794 | 195 | 599 | 721 |
| Petroleum refining and extraction ¹ | 441 | 202 | 33 | 169 | 238 |
| Electrical equipment and communication ² | 3,570 | 558 | 126 | 432 | 3,012 |
| Aircraft and missiles..... | 5,446 | 839 | 68 | 771 | 4,607 |
| All other..... | 4,569 | 1,051 | 188 | 863 | 3,519 |

¹ Excludes geological and geophysical exploration activities of petroleum companies. ² These 2 industries have been combined because of the similarity of their research and development activities. Source: National Science Foundation; annual report, *Basic Research, Applied Research, and Development in Industry*.

NO. 774. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT: 1960 TO 1968

[In millions of dollars. For years ending June 30. Excludes R&D plant. For any given year, obligations differ from expenditures (see table 775) because not all funds are expended during year obligated]

| ITEM | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 est. | 1968 est. |
|---|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total research and development | 7,545 | 9,053 | 10,281 | 12,482 | 14,212 | 14,600 | 15,304 | 16,509 | 16,734 |
| Basic research..... | 610 | 825 | 1,106 | 1,389 | 1,567 | 1,690 | 1,844 | 2,074 | 2,331 |
| Applied research..... | 1,331 | 1,796 | 2,166 | 2,652 | 2,898 | 3,164 | 3,427 | 3,549 | 4,059 |
| Development..... | 5,605 | 6,432 | 7,008 | 8,442 | 9,747 | 9,746 | 10,033 | 10,886 | 10,343 |
| Total research | 1,941 | 2,620 | 3,273 | 4,041 | 4,464 | 4,854 | 5,271 | 5,623 | 6,390 |
| Life sciences..... | 511 | 629 | 810 | 922 | 1,045 | 1,167 | 1,290 | 1,431 | 1,584 |
| Psychological sciences..... | 38 | 51 | 57 | 72 | 95 | 103 | 100 | 107 | 124 |
| Physical sciences..... | 1,323 | 1,764 | 2,152 | 2,871 | 3,145 | 3,386 | 3,641 | 3,817 | 4,382 |
| Social sciences..... | 35 | 45 | 63 | 80 | 102 | 127 | 166 | 178 | 209 |
| Other sciences..... | 33 | 132 | 190 | 97 | 77 | 70 | 74 | 90 | 91 |

NO. 775. FEDERAL EXPENDITURES FOR RESEARCH AND DEVELOPMENT, AND R&D PLANT, BY AGENCY: 1960 TO 1968

[In millions of dollars. For years ending June 30. Includes social science research. Expenditure data in this table differ from those in table 772 because of the difference between Federal fiscal year reports and predominantly calendar year reporting by other sectors. See also *Historical Statistics, Colonial Times to 1867*, series W 79-94]

| AGENCY | RESEARCH AND DEVELOPMENT | | | | | R&D PLANT | | | | |
|---|--------------------------|---------------|---------------|---------------|---------------|------------|--------------|--------------|------------|------------|
| | 1960 | 1965 | 1966 | 1967 est. | 1968 est. | 1960 | 1965 | 1966 | 1967 est. | 1968 est. |
| Total | 7,277 | 13,790 | 14,945 | 15,755 | 16,309 | 461 | 1,084 | 1,058 | 752 | 767 |
| Departments: | | | | | | | | | | |
| Agriculture..... | 121 | 200 | 228 | 256 | 268 | 11 | 6 | 8 | 22 | 50 |
| Commerce..... | 30 | 58 | 53 | 55 | 68 | 3 | 28 | 19 | 5 | 10 |
| Defense..... | 5,553 | 6,628 | 6,680 | 7,112 | 7,605 | 101 | 100 | 55 | 57 | 77 |
| Army..... | 1,066 | 1,409 | 1,473 | 1,568 | 1,648 | 43 | 20 | 12 | 28 | 40 |
| Navy..... | 1,277 | 1,397 | 1,533 | 1,782 | 1,964 | 24 | 22 | 16 | 12 | 3 |
| Air Force..... | 2,958 | 3,360 | 3,172 | 3,271 | 3,491 | 20 | 45 | 23 | 15 | 30 |
| Other..... | 252 | 462 | 508 | 492 | 503 | 15 | 12 | 4 | 2 | 4 |
| Health, Educ., and Welfare..... | 292 | 681 | 831 | 1,024 | 1,092 | 32 | 57 | 49 | 79 | 94 |
| Interior..... | 63 | 109 | 131 | 140 | 186 | 2 | 10 | 18 | 19 | 43 |
| Transportation ¹ | 38 | 94 | 158 | 239 | 177 | 3 | 2 | 8 | 8 | 13 |
| Atomic Energy Commission ² | 762 | 1,241 | 1,212 | 1,272 | 1,401 | 224 | 279 | 250 | 211 | 235 |
| National Aero. and Space Admin..... | 330 | 4,555 | 5,351 | 5,310 | 5,126 | 71 | 538 | 583 | 280 | 174 |
| National Science Foundation..... | 51 | 136 | 160 | 181 | 208 | 7 | 57 | 65 | 57 | 65 |
| All other..... | 38 | 89 | 141 | 106 | 178 | 7 | 8 | 3 | 4 | 6 |

¹ Prior to 1966, Federal Aviation Agency. ² Data represent "accrued costs" rather than expenditures.

Source of tables 774 and 775: National Science Foundation; annual report, *Federal Funds for Research, Development, and Other Scientific Activities*.

NO. 776. INDUSTRIAL RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION: 1966

[Amounts in millions of dollars. See headnote, table 773. For States in each division, see fig. I, p. xii]

| GEOGRAPHIC DIVISION | TOTAL FUNDS | | FEDERAL FUNDS | | COMPANY FUNDS | |
|----------------------------|---------------|------------|---------------|------------|---------------|------------|
| | Amount | Percent | Amount | Percent | Amount | Percent |
| United States | 15,541 | 100 | 8,287 | 100 | 7,254 | 100 |
| New England..... | 1,382 | 9 | 727 | 9 | 655 | 9 |
| Middle Atlantic..... | 3,550 | 23 | 1,402 | 17 | 2,149 | 30 |
| East North Central..... | 2,834 | 18 | 507 | 6 | 2,327 | 32 |
| West North Central..... | 509 | 3 | 233 | 3 | 277 | 4 |
| South Atlantic..... | 1,158 | 7 | 815 | 10 | 343 | 5 |
| East South Central..... | 463 | 3 | 360 | 4 | 104 | 1 |
| West South Central..... | 797 | 5 | 621 | 6 | 276 | 4 |
| Mountain..... | 476 | 3 | 321 | 4 | 155 | 2 |
| Pacific..... | 4,370 | 28 | 3,401 | 41 | 969 | 13 |

Source: National Science Foundation; annual report, *Basic Research, Applied Research, and Development in Industry*.

No. 777. FUNDS FOR PERFORMANCE OF INDUSTRIAL RESEARCH AND DEVELOPMENT, BY INDUSTRY AND SOURCE OF FUNDS: 1960 TO 1966

[In millions of dollars. See headnote, table 773]

| INDUSTRY | TOTAL FUNDS ¹ | | | | | FEDERAL FUNDS | | | | | PRIVATE INDUSTRY FUNDS | | | | |
|---|--------------------------|--------|--------|--------|-------|---------------|-------|-------|-------|-------|------------------------|-------|--|--|--|
| | 1960 | 1964 | 1965 | 1966 | 1960 | 1964 | 1965 | 1966 | 1960 | 1964 | 1965 | 1966 | | | |
| | | | | | | | | | | | | | | | |
| Total | 10,509 | 13,512 | 14,185 | 15,541 | 6,081 | 7,720 | 7,740 | 8,287 | 4,423 | 5,792 | 6,445 | 7,254 | | | |
| Food and kindred products..... | 104 | 141 | 152 | 166 | 9 | 1 | 1 | 1 | 95 | 140 | 150 | 165 | | | |
| Textiles and apparel..... | 38 | 32 | 38 | 42 | 9 | (NA) | (NA) | (NA) | 29 | (NA) | (NA) | (NA) | | | |
| Lumber, wood products, and furniture..... | 10 | 12 | 12 | 14 | 1 | (NA) | (NA) | (NA) | 9 | (NA) | (NA) | (NA) | | | |
| Paper and allied products..... | 56 | 71 | 77 | 85 | (NA) | 202 | 191 | 191 | (NA) | 87 | 77 | 85 | | | |
| Chemicals and allied products..... | 980 | 1,300 | 1,390 | 1,515 | 171 | 202 | 191 | 191 | (NA) | 87 | 1,198 | 1,324 | | | |
| Petroleum refining and extraction ² | 296 | 410 | 424 | 441 | 20 | 72 | 69 | 56 | 276 | 338 | 364 | 385 | | | |
| Rubber products..... | 121 | 159 | 160 | 192 | 38 | 35 | 25 | 25 | 83 | 124 | 141 | 156 | | | |
| Stone, clay, and glass products..... | 88 | 110 | 117 | 131 | (NA) | 4 | 4 | 6 | (NA) | 106 | 113 | 125 | | | |
| Primary metals..... | 177 | 195 | 213 | 223 | 5 | 8 | 8 | 7 | 162 | 186 | 205 | 221 | | | |
| Fabricated metal products..... | 145 | 148 | 148 | 164 | 35 | 19 | 15 | 16 | 109 | 129 | 129 | 148 | | | |
| Machinery..... | 949 | 1,051 | 1,123 | 1,301 | 391 | 263 | 267 | 343 | 538 | 768 | 860 | 958 | | | |
| Electrical equipment and communication ³ | 2,532 | 2,952 | 3,168 | 3,570 | 1,685 | 1,858 | 1,963 | 2,161 | 847 | 1,093 | 1,206 | 1,409 | | | |
| Motor vehicles and other transportation equipment..... | 884 | 1,176 | 1,223 | 1,321 | 216 | 1,222 | 1,335 | 1,415 | 338 | 394 | 398 | 476 | | | |
| Aircraft and missiles..... | 514 | 5,055 | 5,098 | 5,446 | 3,150 | 4,610 | 4,476 | 4,600 | 364 | 446 | 622 | 756 | | | |
| Professional and scientific instruments..... | 329 | 324 | 383 | 444 | 133 | 94 | 106 | 143 | 176 | 229 | 257 | 301 | | | |
| Other industries ⁴ | 287 | 378 | 443 | 490 | 182 | 229 | 267 | 293 | 105 | 149 | 176 | 193 | | | |

- Represents zero. NA Not available.

¹ Includes basic research, applied research, and development.

² Excludes geological and geophysical exploration activities of petroleum companies.

³ These 2 industries have been combined because of the similarity of their research and development activities.

⁴ Includes data for all other manufacturing and nonmanufacturing industries not specifically listed. Excludes industry data specified as not available.

Source: National Science Foundation; annual report, *Basic Research, Applied Research, and Development in Industry*.

No. 778. FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES: 1964 TO 1967

[Money figures in millions of dollars. For years ending June 30. R&D=research and development]

| YEAR | FEDERAL OBLIGATIONS | | ACADEMIC SCIENCE OBLIGATIONS | | | | NON-SCIENCE ACTIVITIES | | |
|-----------|---------------------|-------------------------|------------------------------|--------------------|---------|-----------|------------------------|-------|--------------------|
| | Total | Percent annual increase | Total | Percent of Federal | R&D | R&D plant | Other activities | Total | Percent of Federal |
| 1964..... | 1,624.5 | 15.0 | 1,528.1 | 94.0 | 974.6 | 101.3 | 452.2 | 96.4 | 5.9 |
| 1965..... | 2,304.6 | 41.9 | 1,815.3 | 78.8 | 1,094.1 | 126.2 | 595.0 | 489.3 | 21.2 |
| 1966..... | 3,030.5 | 31.5 | 2,184.1 | 72.1 | 1,270.7 | 114.8 | 798.6 | 846.5 | 27.9 |
| 1967..... | 3,330.6 | 9.9 | 2,342.9 | 70.3 | 1,343.8 | 116.6 | 882.4 | 987.7 | 29.6 |

Source: National Science Foundation; annual report, *Federal Support for Academic Science and Other Educational Activities in Universities and Colleges*.

No. 779. UNIVERSITIES AND COLLEGES WITH SCIENCE AND ENGINEERING PROGRAMS—SELECTED FINANCIAL CHARACTERISTICS: 1964

[Money figures in millions of dollars. Excludes federally funded research and development (R&D) centers administered by universities]

| ITEM | Total | Granting graduate degrees ¹ | | | Other |
|---|---------|--|-----------------|---|-------|
| | | Total ² | Medical schools | Agricultural experiment stations ³ | |
| Number of institutions surveyed..... | 1,942 | 400 | 89 | 59 | 1,542 |
| With separately budgeted R&D..... | 636 | 341 | 89 | 59 | 295 |
| With federally financed R&D..... | 561 | 328 | 89 | 59 | 233 |
| Separately budgeted R&D ⁴ | 1,272.4 | 1,259.6 | 351.1 | 208.7 | 12.8 |
| Source of funds: | | | | | |
| Federal Government..... | 917.3 | 907.3 | 284.0 | 71.0 | 10.0 |
| State and local governments..... | 173.2 | 172.7 | 11.5 | 117.1 | .5 |
| Foundations and health agencies..... | 61.4 | 60.5 | 29.5 | 2.8 | .9 |
| Industry..... | 40.4 | 39.8 | 8.0 | 8.2 | .5 |
| Institutions' own funds..... | 58.0 | 58.0 | 9.4 | 6.7 | .9 |
| Other..... | 21.3 | 21.2 | 8.6 | 2.9 | .1 |
| Character of work: | | | | | |
| Basic research..... | 1,003.0 | 994.0 | 300.2 | 108.8 | 8.9 |
| Applied research..... | 231.9 | 228.5 | 45.7 | 87.5 | 3.4 |
| Development..... | 37.6 | 37.1 | 5.2 | 12.5 | .5 |
| Capital expenditures for R&D instruction: | | | | | |
| Federal..... | 134.4 | 128.5 | 48.5 | 7.3 | 5.0 |
| Nonfederal..... | 395.1 | 322.0 | 57.1 | 22.0 | 78.0 |
| Current expd. for instruction and research ⁵ | 1,553.1 | 1,275.4 | 253.0 | 63.3 | 277.7 |

¹ Degrees in sciences and engineering. ² Includes university and college components not shown separately. ³ Includes related colleges of agriculture. ⁴ Excludes unreimbursed indirect costs. ⁵ Excludes indirect costs.

Source: National Science Foundation; unpublished data.

No. 780. FEDERAL PRIME CONTRACTS AND GRANTS AWARDED FOR RESEARCH AND DEVELOPMENT—STATES: 1965

[Money figures in thousands of dollars. For year ending June 30. Excludes unallocated funds]

| STATE | Rank | Amount | STATE | Rank | Amount | STATE | Rank | Amount |
|------------------|------|------------|-----------------------------|------|-----------|---------------------|------|---------|
| U.S..... | (X) | 11,358,966 | Kentucky..... | 40 | 10,009 | North Dakota..... | 49 | 1,943 |
| Alabama..... | 15 | 183,373 | Louisiana..... | 7 | 362,709 | Ohio..... | 13 | 197,085 |
| Alaska..... | 43 | 6,013 | Maine..... | 47 | 3,035 | Oklahoma..... | 33 | 24,458 |
| Arizona..... | 28 | 37,685 | Maryland ¹ | 5 | 478,346 | Oregon..... | 36 | 19,087 |
| Arkansas..... | 44 | 5,610 | Massachusetts..... | 3 | 636,457 | Pennsylvania..... | 6 | 427,717 |
| California..... | 1 | 4,085,117 | Michigan..... | 20 | 134,459 | Rhode Island..... | 37 | 18,755 |
| Colorado..... | 14 | 184,539 | Minnesota..... | 23 | 86,968 | South Carolina..... | 38 | 14,939 |
| Connecticut..... | 17 | 160,285 | Mississippi..... | 30 | 26,546 | South Dakota..... | 48 | 2,144 |
| Delaware..... | 41 | 6,766 | Missouri..... | 11 | 221,291 | Tennessee..... | 18 | 152,539 |
| Florida..... | 8 | 321,195 | Montana..... | 45 | 4,324 | Texas..... | 4 | 610,267 |
| Georgia..... | 27 | 43,666 | Nebraska..... | 42 | 6,423 | Utah..... | 31 | 25,501 |
| Hawaii..... | 29 | 34,818 | Nevada..... | 19 | 144,287 | Vermont..... | 46 | 3,548 |
| Idaho..... | 25 | 60,539 | New Hampshire..... | 32 | 25,125 | Virginia..... | 21 | 120,935 |
| Illinois..... | 16 | 177,550 | New Jersey..... | 9 | 293,228 | Washington..... | 12 | 203,231 |
| Indiana..... | 24 | 62,405 | New Mexico..... | 10 | 276,275 | West Virginia..... | 39 | 13,634 |
| Iowa..... | 35 | 22,630 | New York..... | 2 | 1,218,337 | Wisconsin..... | 22 | 120,212 |
| Kansas..... | 34 | 24,443 | North Carolina..... | 26 | 50,782 | Wyoming..... | 50 | 1,756 |

X Not applicable. ¹ Includes District of Columbia.

Source: National Science Foundation; *Geographic Distribution of Federal Funds for Research and Development, Fiscal Year 1966* (NSF 67-8).

Scientists and Engineers

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No. 781. RESEARCH AND DEVELOPMENT SCIENTISTS AND ENGINEERS—NUMBER AND AVERAGE COST, BY INDUSTRY AND SOURCE OF SUPPORT: 1966

[Covers 200 companies accounting for 93 percent of all Federal funds for industry R&D performance and employing 89 percent of all R&D scientists and engineers on Federal projects in industry]

| INDUSTRY | Total | Company | FEDERAL | | | |
|--|-----------------|-----------------|-----------------|-----------------------|------------------------------|--------------------|
| | | | Total | Department of Defense | Nat'l Aero. and Space Admin. | All other agencies |
| | | | | | | |
| Number employed ¹ | 235,900 | 94,300 | 141,600 | 77,600 | 2 48,200 | 2 15,800 |
| Chemicals and allied products | 17,100 | 13,500 | 3,600 | 1,200 | (NA) | 2,400 |
| Machinery | 21,900 | 14,000 | 7,900 | 4,300 | 3,200 | 400 |
| Electrical equipment and communication | 71,000 | 30,400 | 40,600 | 21,800 | 11,600 | 7,200 |
| Motor veh. and other transportation equip. | 10,500 | 6,900 | 3,500 | 1,900 | (NA) | (NA) |
| Aircraft and missiles | 95,400 | 17,800 | 77,600 | 43,500 | 30,200 | 3,900 |
| Professional and scientific instruments | 3,400 | 2,000 | 1,500 | 900 | (NA) | (NA) |
| Other industries | 16,600 | 9,700 | 6,900 | 4,100 | 1,700 | 1,600 |
| Average cost (per scientist or engineer) ² | \$48,600 | \$40,000 | \$54,400 | \$50,500 | 2 \$62,000 | 2 \$50,200 |
| Chemicals and allied products | 46,400 | 45,800 | 48,700 | 42,800 | 31,800 | 48,200 |
| Machinery | 41,100 | 40,800 | 41,800 | 39,300 | 47,200 | 26,900 |
| Electrical equipment and communication | 42,000 | 34,300 | 47,800 | 52,400 | 37,700 | 50,500 |
| Motor veh. and other transportation equip. | 58,100 | 54,900 | 64,400 | 79,800 | (NA) | (NA) |
| Aircraft and missiles | 56,300 | 40,200 | 60,000 | 50,700 | 74,800 | 48,200 |
| Professional and scientific instruments | 34,900 | 32,600 | 38,100 | 33,000 | (NA) | (NA) |
| Other industries | 42,200 | 39,500 | 45,900 | 42,400 | 33,900 | 53,100 |

NA Not available. ¹ Arithmetic mean of full-time equivalent of R&D scientists and engineers in Jan. 1966 and Jan. 1967 (i.e., full-time employees plus full-time equivalent of part-time employees).

² Includes data for industries not available separately.

³ Obtained by dividing total R&D performance funds by number of R&D scientists and engineers.

Source: National Science Foundation; annual report, *Basic Research, Applied Research, and Development in Industry*.

No. 782. SCIENTISTS AND ENGINEERS IN PRIVATE INDUSTRY: 1961 to 1966

[As of January. Estimated to nearest hundred. 1966 data are preliminary]

| YEAR AND INDUSTRY | Total | Engineers | Mathematicians | Chemists | Physicists | Metalurgists | Earth scientists | Other physical scientists | Life scientists |
|--|----------------|----------------|----------------|---------------|---------------|---------------|------------------|---------------------------|-----------------|
| ALL SCIENTISTS AND ENGINEERS ¹ | | | | | | | | | |
| 1961 | 786,900 | 641,500 | 15,100 | 70,800 | 13,800 | 12,300 | 12,000 | 2,700 | 18,700 |
| 1962 | 824,000 | 670,600 | 18,200 | 71,900 | 13,900 | 11,800 | 12,500 | 6,400 | 18,700 |
| 1963 | 870,000 | 712,000 | 20,200 | 74,100 | 14,400 | 11,700 | 12,300 | 4,700 | 20,600 |
| 1964 | 891,400 | 726,900 | 21,700 | 77,200 | 15,900 | 11,800 | 11,800 | 5,200 | 20,900 |
| 1965 | 918,100 | 748,700 | 25,000 | 81,300 | 14,200 | 10,400 | 13,800 | 4,300 | 20,400 |
| Total, 1966 | 954,600 | 776,100 | 27,200 | 84,300 | 15,100 | 11,000 | 13,800 | 4,700 | 22,400 |
| Ordnance and accessories | 59,000 | 50,700 | 3,100 | 1,500 | 2,400 | 500 | 200 | 100 | 100 |
| Chemicals and allied products | 97,700 | 40,600 | 1,300 | 40,300 | 2,000 | 700 | 100 | 800 | 11,900 |
| Petroleum refining | 12,900 | 9,300 | 200 | 3,000 | 200 | (Z) | 100 | 100 | (Z) |
| Primary and fabr. metal products | 57,900 | 48,400 | 800 | 3,000 | 200 | 5,100 | 100 | 300 | - |
| Machinery | 81,600 | 75,100 | 2,700 | 1,700 | 700 | 1,100 | - | 100 | 200 |
| Communications and equipment | 72,200 | 67,500 | 1,900 | 600 | 1,300 | 200 | (Z) | 600 | 100 |
| Other electrical equipment | 68,600 | 64,500 | 600 | 1,600 | 1,200 | 400 | (Z) | 200 | 100 |
| Aircraft and parts | 82,200 | 75,200 | 2,800 | 1,500 | 1,200 | 1,100 | (Z) | 200 | 200 |
| Motor vehicles and equipment | 29,300 | 27,200 | 500 | 800 | 300 | 500 | (Z) | (Z) | (Z) |
| Instruments and related products | 35,600 | 29,600 | 200 | 4,200 | 1,000 | 100 | - | 300 | 200 |
| Other manufacturing | 69,000 | 47,700 | 1,300 | 14,600 | 500 | 300 | 200 | 1,100 | 3,300 |
| Mining | 29,200 | 17,100 | 200 | 200 | - | 400 | 10,500 | 100 | 100 |
| Contract construction | 47,200 | 46,800 | 300 | (Z) | (Z) | (Z) | 100 | - | (Z) |
| Transp., public utilities, and other nonmfg | 94,400 | 79,100 | 6,800 | 4,700 | 200 | 100 | 500 | 300 | 2,700 |
| Services ² | 117,800 | 97,200 | 4,500 | 6,000 | 4,000 | 500 | 2,000 | 500 | 3,100 |
| R&D SCIENTISTS AND ENGINEERS | | | | | | | | | |
| Total, 1966 | 361,000 | 268,000 | 13,400 | 47,900 | 12,800 | 4,600 | 3,000 | 2,200 | 9,100 |
| Ordnance and accessories | 36,900 | 30,700 | 2,000 | 1,200 | 1,900 | 400 | 200 | - | 500 |
| Chemicals and allied products | 43,000 | 11,400 | 600 | 23,400 | 1,700 | 600 | - | 200 | 5,100 |
| Primary and fabr. metal products | 11,100 | 8,800 | 100 | 900 | 200 | 1,100 | - | - | - |
| Machinery | 32,300 | 28,400 | 1,500 | 1,300 | 600 | 400 | - | 100 | - |
| Communications and equipment | 46,400 | 43,000 | 1,400 | 500 | 1,100 | 100 | (Z) | 200 | 100 |
| Other electrical equipment | 27,400 | 24,600 | 300 | 1,000 | 1,100 | 300 | (Z) | 100 | - |
| Aircraft and parts | 52,300 | 46,800 | 2,200 | 1,100 | 1,100 | 800 | (Z) | 100 | 200 |
| Motor vehicles and equipment | 11,600 | 10,300 | 400 | 500 | 200 | 200 | (Z) | (Z) | (Z) |
| Instruments and related products | 14,800 | 11,600 | 100 | 1,700 | 900 | (Z) | - | 300 | 200 |
| Other manufacturing | 23,800 | 12,200 | 300 | 9,000 | 300 | (Z) | 200 | 700 | 1,100 |
| Services ² | 48,000 | 33,200 | 3,200 | 4,500 | 3,500 | 500 | 1,200 | 400 | 1,500 |
| Other | 13,400 | 7,000 | 1,800 | 2,800 | 200 | 200 | 1,400 | 100 | 400 |

- Represents zero. Z Less than 50. ¹ Excludes psychologists and social scientists.

² Mainly laboratory, engineering, medical, and miscellaneous business services.

Source: Dept. of Labor, Bureau of Labor Statistics; unpublished data.

No. 783. PROFESSIONAL SCIENTIFIC AND TECHNICAL PERSONNEL IN THE FEDERAL GOVERNMENT, BY OCCUPATIONAL GROUP: 1959 TO 1966

[1959 to 1962, as of October; thereafter, as of December]

| OCCUPATIONAL GROUP | 1959 | 1960 | 1961 | 1962 ¹ | 1964 ¹ | 1966 |
|---|----------------|----------------|----------------|-------------------|-------------------|----------------|
| Total | 149,827 | 155,973 | 163,427 | 174,408 | 186,822 | 193,607 |
| Scientific personnel | 51,649 | 53,264 | 60,077 | 61,982 | 68,324 | 72,471 |
| Physical sciences | 16,519 | 17,984 | 23,573 | 23,043 | 26,282 | 27,323 |
| Mathematics and statistics ² | 4,471 | 4,664 | 4,671 | 5,163 | 5,912 | 6,492 |
| Biological sciences | 21,446 | 21,636 | 22,502 | 23,666 | 24,883 | 26,424 |
| Social sciences ⁴ | 4,589 | 4,672 | 4,919 | 5,479 | 5,818 | 6,328 |
| Geography and cartography | 2,688 | 2,300 | 2,278 | 2,389 | 2,949 | 3,173 |
| Psychology | 1,672 | 1,689 | 1,788 | 1,815 | 1,843 | 1,879 |
| Operations research | 264 | 319 | 346 | 427 | 637 | 882 |
| Engineering personnel | 57,808 | 60,972 | 59,974 | 67,500 | 74,869 | 76,832 |
| Health professional personnel | 40,370 | 41,731 | 43,376 | 44,926 | 43,629 | 44,304 |
| Health officers | 13,402 | 13,728 | 14,282 | 14,640 | 12,339 | 13,119 |
| Other | 26,968 | 28,003 | 29,094 | 30,286 | 31,290 | 31,185 |

¹ Data not collected for 1963 and 1965.

² Because of overlapping in job series classifications, several thousand personnel were transferred from engineering to the physical sciences series in 1961; many of them were transferred back to engineering in 1962.

³ Includes actuary, mathematics, statistics, and, beginning 1961, mathematical statisticians.

⁴ Includes social science, economics, history, and the anthropological sciences. Also included only in 1964 and 1966 is urban planning, with 138 and 176 in each year, respectively.

Source: National Science Foundation; periodic report, *Scientific and Technical Personnel in the Federal Government*; 1966, compiled from data supplied by Civil Service Commission.

No. 784. SCIENTISTS, ENGINEERS, SELECTED HEALTH-RELATED PROFESSIONALS, AND TECHNICIANS EMPLOYED BY STATE GOVERNMENT AGENCIES, BY STATES: 1964

[Not comparable with survey data published by Dept. of Labor, Bureau of Labor Statistics, for 1962. Social scientists, statisticians, and practicing psychologists, reported as scientists in 1964, were not all in 1962. Non-practicing physicians, dentists, psychiatrists, public health specialists, and veterinarians who were counted as scientists in 1962 are reported with selected health-related professionals in 1964]

| STATE | Scien- tists | Engi- neers | Health- related profes- sionals | Techni- cians | STATE | Scien- tists | Engi- neers | Health- related profes- sionals | Techni- cians |
|---------------------|-----------------|----------------|--|------------------|----------------------|-----------------|----------------|--|------------------|
| U.S. | 16,686 | 34,537 | 36,153 | 60,232 | Missouri | 267 | 850 | 395 | 1,309 |
| Alabama | 195 | 736 | 460 | 2,150 | Montana | 115 | 379 | 125 | 691 |
| Alaska | 178 | 346 | 72 | 342 | Nebraska | 115 | 229 | 183 | 533 |
| Arizona | 168 | 132 | 91 | 784 | Nevada | 99 | 236 | 65 | 223 |
| Arkansas | 145 | 194 | 327 | 655 | New Hampshire | 72 | 343 | 160 | 75 |
| California | 1,651 | 6,297 | 2,883 | 6,250 | New Jersey | 274 | 1,077 | 1,104 | 718 |
| Colorado | 185 | 490 | 256 | 769 | New Mexico | 156 | 188 | 138 | 568 |
| Connecticut | 261 | 620 | 604 | 892 | New York | 1,393 | 2,653 | 4,938 | 2,623 |
| Delaware | 56 | 77 | 159 | 395 | North Carolina | 370 | 776 | 545 | 986 |
| Florida | 649 | 777 | 1,953 | 2,601 | North Dakota | 88 | 182 | 72 | 270 |
| Georgia | 301 | 654 | 280 | 1,381 | Ohio | 488 | 666 | 978 | 2,016 |
| Hawaii | 185 | 259 | 383 | 306 | Oklahoma | 281 | 120 | 447 | 630 |
| Idaho | 157 | 113 | 307 | 598 | Oregon | 538 | 782 | 569 | 669 |
| Illinois | 822 | 1,556 | 1,403 | 1,787 | Pennsylvania | 805 | 1,183 | 3,616 | 2,188 |
| Indiana | 348 | 624 | 441 | 632 | Rhode Island | 97 | 162 | 373 | 299 |
| Iowa | 191 | 321 | 340 | 1,936 | South Carolina | 191 | 278 | 640 | 902 |
| Kansas | 283 | 427 | 431 | 1,137 | South Dakota | 93 | 150 | 102 | 107 |
| Kentucky | 273 | 702 | 398 | 1,595 | Tennessee | 301 | 394 | 793 | 1,777 |
| Louisiana | 147 | 493 | 851 | 2,217 | Texas | 454 | 1,352 | 901 | 3,893 |
| Maine | 182 | 301 | 211 | 391 | Utah | 275 | 353 | 81 | 668 |
| Maryland | 279 | 448 | 1,206 | 1,014 | Vermont | 79 | 354 | 117 | 369 |
| Massachusetts | 453 | 1,303 | 2,191 | 1,246 | Virginia | 608 | 828 | 1,203 | 2,397 |
| Michigan | 728 | 942 | 821 | 1,572 | Washington | 445 | 1,156 | 404 | 853 |
| Minnesota | 320 | 543 | 688 | 1,683 | West Virginia | 180 | 228 | 177 | 626 |
| Mississippi | 249 | 251 | 534 | 1,217 | Wisconsin | 416 | 745 | 484 | 638 |
| | | | | | Wyoming | 80 | 258 | 103 | 467 |

Source: Dept. of Labor, Bureau of Labor Statistics; *Scientific and Technical Personnel in State Government Agencies, 1964* (Bulletin No. 1557).

No. 785. SELECTED CHARACTERISTICS OF SCIENTISTS, 1966, AND ENGINEERS, 1964

[For discussion of coverage, see text, p. 524]

| CHARACTERISTIC | SCIENTISTS, 1966 | | ENGINEERS, 1964 | | CHARACTERISTIC | SCIENTISTS, 1966 | | ENGINEERS, 1964 | |
|-----------------------------|------------------|--------------|-----------------|--------------|-----------------------------------|------------------|----------|-----------------|----------|
| | Number | Per cent | Number | Per cent | | Number | Per cent | Number | Per cent |
| Total | 242,763 | 100.0 | 57,779 | 100.0 | Years of professional experience: | | | | |
| Sex: | | | | | 1 year or less..... | 12,967 | 5.3 | 1,359 | 2.4 |
| Men..... | 222,599 | 91.7 | 57,571 | 99.6 | 2 to 4 years..... | 36,907 | 15.2 | 5,787 | 10.0 |
| Women..... | 20,164 | 8.3 | 208 | 0.4 | 5 to 9 years..... | 48,430 | 19.9 | 9,565 | 16.6 |
| Highest degree: | | | | | 10 to 14 years..... | 39,083 | 16.1 | 11,431 | 19.8 |
| Ph. D..... | 90,304 | 37.2 | 2,905 | 5.0 | 15 to 19 years..... | 35,419 | 14.6 | 8,086 | 13.9 |
| Professional medical..... | 6,436 | 2.7 | 16 | (Z) | 20 years or more..... | 59,022 | 24.3 | 18,280 | 31.6 |
| Master's..... | 66,754 | 27.5 | 9,976 | 17.3 | Not reported..... | 10,935 | 4.5 | 3,871 | 5.8 |
| Bachelor's..... | 73,764 | 30.4 | 36,369 | 62.9 | Age: | | | | |
| Less than a bachelor's..... | 2,435 | 1.0 | 3,404 | 5.9 | 20 to 29 years..... | 48,026 | 19.8 | 7,811 | 13.5 |
| Not reported..... | 3,070 | 1.3 | 5,109 | 8.8 | 30 to 39 years..... | 82,378 | 33.9 | 18,588 | 32.2 |
| | | | | | 40 to 49 years..... | 65,376 | 26.9 | 17,256 | 29.9 |
| | | | | | 50 to 59 years..... | 32,078 | 13.2 | 9,849 | 16.2 |
| | | | | | 60 years and over..... | 14,424 | 5.9 | 4,674 | 8.1 |
| | | | | | Not reported..... | 481 | 0.2 | 101 | 0.2 |

Z Less than 0.05 percent.

Source: National Science Foundation. Data derived from the National Register of Scientific and Technical Personnel, 1966, and *National Engineers Register, 1964*.

No. 786. SCIENTISTS—NUMBER AND MEDIAN ANNUAL SALARIES, BY TYPE OF EMPLOYER AND WORK ACTIVITY: 1966

[For discussion of coverage, see text, p. 524. For definition of median, see headnote, table 8]

| TYPE OF EMPLOYER | Total | WORK ACTIVITY | | | | | | | |
|-------------------------------|-----------------|--------------------------|-----------------|------------------|------------------------------|-----------------|----------------|---------------------------|-----------------|
| | | Research and development | | | Management or administration | | Teaching | Production and inspection | Other |
| | | Total ¹ | Basic research | Applied research | Total ² | R&D | | | |
| NUMBER | | | | | | | | | |
| All employers | 242,763 | 80,821 | 38,293 | 31,077 | 49,921 | 24,448 | 44,626 | 16,419 | 26,702 |
| Educational institutions..... | 87,315 | 29,161 | 22,057 | 6,596 | 7,431 | 3,104 | 43,256 | 316 | 3,624 |
| Federal Government..... | 24,689 | 10,787 | 5,208 | 4,870 | 8,221 | 3,995 | 202 | 1,319 | 3,362 |
| Other government..... | 8,288 | 2,161 | 732 | 1,303 | 2,946 | 910 | 266 | 584 | 1,958 |
| Military..... | 5,891 | 1,032 | 513 | 447 | 2,073 | 606 | 300 | 206 | 1,909 |
| Nonprofit organizations..... | 9,813 | 4,836 | 2,565 | 1,982 | 2,345 | 1,274 | 132 | 307 | 1,801 |
| Industry and business..... | 83,990 | 31,726 | 6,699 | 15,392 | 25,679 | 14,103 | 154 | 13,350 | 10,265 |
| Self-employed..... | 4,914 | 350 | 79 | 223 | 722 | 249 | 31 | 190 | 3,208 |
| Other..... | 1,309 | 411 | 214 | 149 | 313 | 122 | 72 | 113 | 341 |
| No report of employer..... | 1,791 | 357 | 226 | 115 | 191 | 85 | 213 | 34 | 234 |
| MEDIAN SALARY | | | | | | | | | |
| All employers | \$12,000 | \$12,000 | \$12,000 | \$12,100 | \$15,600 | \$16,800 | \$9,800 | \$10,500 | \$11,500 |
| Educational institutions..... | 9,600 | 10,500 | 11,000 | 10,000 | 13,200 | 14,500 | 9,300 | (B) | 10,000 |
| Federal Government..... | 12,000 | 11,700 | 11,400 | 12,000 | 16,000 | 16,200 | 11,500 | 9,000 | 11,000 |
| Other government..... | 12,100 | 11,700 | 12,000 | 11,700 | 14,200 | 16,200 | 11,700 | 9,900 | 11,090 |
| Nonprofit organizations..... | 9,900 | 9,800 | 10,000 | 9,600 | 10,800 | 12,000 | 9,800 | 8,400 | 9,600 |
| Industry and business..... | 13,000 | 12,500 | 12,000 | 13,000 | 16,800 | 18,200 | 15,000 | 11,000 | 10,900 |
| Self-employed..... | 13,000 | 12,500 | 13,400 | 12,600 | 16,500 | 17,000 | 11,500 | 10,800 | 12,000 |
| Other..... | 11,500 | 16,600 | 10,500 | 11,500 | 14,000 | 15,700 | 8,400 | 9,800 | 18,000 |
| No report of employer..... | 12,000 | 12,000 | 12,000 | 13,300 | 16,200 | 17,500 | 10,400 | 10,000 | 12,000 |

B Not computed; base less than 25 registrants reporting salary.

¹ Includes development or design, not separately identified.

² Includes management or administration of activities other than research or development that were not separately identified.

³ Includes 14,783 not employed and 9,491 not reporting work activity.

Source: National Science Foundation. *American Science Manpower, 1966* (NSF 68-7). Data derived from the National Register of Scientific and Technical Personnel.

No. 787. SCIENTISTS—STATES AND OTHER AREAS: 1966

[For discussion of coverage, see text, p. 524]

| STATE OR OTHER AREA | Total ¹ | FIELD OF GREATEST COMPETENCE | | | | | | | | |
|----------------------|--------------------|------------------------------|---------------------|---------------|-----------------------------|----------------------------|---------------|---------------|---------------|-------------------------|
| | | Agricultural sciences | Biological sciences | Psychology | Earth sciences, meteorology | Mathematics and statistics | Physics | Chemistry | Economics | Sociology, anthropology |
| Total | 242,763 | 10,938 | 29,633 | 19,027 | 26,032 | 25,848 | 29,130 | 65,917 | 13,150 | 4,559 |
| Alabama | 2,040 | 181 | 250 | 90 | 129 | 293 | 267 | 529 | 89 | 29 |
| Alaska | 488 | 113 | 57 | 9 | 218 | 21 | 16 | 25 | 11 | 2 |
| Arizona | 1,945 | 171 | 240 | 161 | 355 | 209 | 235 | 317 | 94 | 49 |
| Arkansas | 859 | 153 | 154 | 56 | 89 | 48 | 51 | 188 | 51 | 15 |
| California | 27,641 | 859 | 3,041 | 2,507 | 3,126 | 4,079 | 4,496 | 5,689 | 1,215 | 457 |
| Colorado | 4,170 | 305 | 402 | 281 | 1,315 | 366 | 499 | 564 | 118 | 55 |
| Connecticut | 4,393 | 66 | 491 | 366 | 196 | 466 | 680 | 1,445 | 236 | 91 |
| Delaware | 2,492 | 21 | 113 | 68 | 33 | 69 | 129 | 1,610 | 127 | 7 |
| District of Columbia | 7,625 | 220 | 799 | 531 | 1,024 | 1,005 | 1,009 | 1,031 | 1,255 | 231 |
| Florida | 4,109 | 290 | 612 | 410 | 489 | 439 | 442 | 867 | 177 | 76 |
| Georgia | 2,630 | 311 | 513 | 229 | 200 | 257 | 190 | 552 | 173 | 57 |
| Hawaii | 849 | 59 | 163 | 65 | 163 | 79 | 59 | 121 | 45 | 35 |
| Idaho | 911 | 267 | 107 | 53 | 95 | 42 | 96 | 154 | 27 | 6 |
| Illinois | 12,695 | 232 | 1,632 | 1,135 | 810 | 1,175 | 1,430 | 4,131 | 843 | 280 |
| Indiana | 5,060 | 145 | 724 | 395 | 239 | 569 | 514 | 1,635 | 287 | 98 |
| Iowa | 2,633 | 130 | 489 | 313 | 141 | 258 | 292 | 598 | 188 | 63 |
| Kansas | 2,208 | 98 | 326 | 266 | 340 | 205 | 169 | 493 | 131 | 37 |
| Kentucky | 1,788 | 102 | 282 | 162 | 133 | 170 | 130 | 510 | 98 | 58 |
| Louisiana | 3,561 | 192 | 360 | 136 | 1,280 | 217 | 146 | 814 | 122 | 43 |
| Maine | 707 | 95 | 114 | 68 | 67 | 69 | 45 | 137 | 41 | 15 |
| Maryland | 7,784 | 188 | 1,676 | 466 | 676 | 1,135 | 1,139 | 1,715 | 200 | 89 |
| Massachusetts | 10,374 | 91 | 1,190 | 797 | 729 | 1,324 | 2,071 | 2,738 | 471 | 230 |
| Michigan | 8,608 | 334 | 1,086 | 799 | 62 | 803 | 803 | 2,768 | 505 | 223 |
| Minnesota | 4,177 | 271 | 620 | 425 | 525 | 705 | 383 | 1,146 | 235 | 72 |
| Mississippi | 955 | 159 | 171 | 62 | 192 | 73 | 50 | 136 | 42 | 19 |
| Missouri | 4,326 | 157 | 580 | 273 | 398 | 375 | 362 | 1,396 | 325 | 84 |
| Montana | 942 | 265 | 144 | 31 | 223 | 58 | 30 | 88 | 38 | 14 |
| Nebraska | 1,203 | 104 | 208 | 114 | 191 | 155 | 85 | 184 | 76 | 31 |
| Nevada | 506 | 71 | 41 | 27 | 126 | 34 | 68 | 87 | 23 | 4 |
| New Hampshire | 759 | 59 | 125 | 44 | 73 | 81 | 83 | 160 | 61 | 22 |
| New Jersey | 12,200 | 106 | 888 | 673 | 294 | 1,099 | 1,447 | 5,845 | 475 | 80 |
| New Mexico | 2,113 | 154 | 134 | 73 | 350 | 274 | 648 | 310 | 42 | 29 |
| New York | 26,642 | 295 | 3,329 | 2,971 | 1,139 | 3,221 | 3,547 | 7,377 | 1,850 | 611 |
| North Carolina | 3,485 | 240 | 646 | 226 | 210 | 368 | 266 | 1,049 | 192 | 101 |
| North Dakota | 522 | 85 | 91 | 33 | 83 | 42 | 20 | 115 | 28 | 5 |
| Ohio | 10,850 | 168 | 1,092 | 823 | 584 | 831 | 1,300 | 4,270 | 552 | 189 |
| Oklahoma | 3,184 | 95 | 259 | 136 | 1,164 | 229 | 172 | 719 | 102 | 33 |
| Oregon | 2,531 | 660 | 414 | 199 | 233 | 175 | 131 | 388 | 125 | 55 |
| Pennsylvania | 13,800 | 273 | 1,662 | 1,140 | 683 | 1,281 | 1,641 | 4,953 | 689 | 223 |
| Rhode Island | 971 | 26 | 110 | 74 | 67 | 79 | 185 | 295 | 44 | 20 |
| South Carolina | 1,318 | 153 | 162 | 63 | 82 | 110 | 121 | 415 | 73 | 18 |
| South Dakota | 521 | 110 | 94 | 44 | 56 | 47 | 24 | 69 | 34 | 15 |
| Tennessee | 3,421 | 154 | 485 | 215 | 176 | 239 | 510 | 1,177 | 150 | 41 |
| Texas | 11,383 | 285 | 995 | 519 | 3,773 | 977 | 966 | 2,469 | 390 | 119 |
| Utah | 1,604 | 171 | 253 | 108 | 298 | 157 | 132 | 291 | 52 | 29 |
| Vermont | 445 | 48 | 86 | 38 | 26 | 44 | 46 | 90 | 31 | 12 |
| Virginia | 4,384 | 201 | 461 | 301 | 407 | 753 | 585 | 1,017 | 223 | 44 |
| Washington | 4,270 | 502 | 599 | 330 | 440 | 491 | 503 | 843 | 180 | 86 |
| West Virginia | 1,514 | 105 | 146 | 59 | 113 | 67 | 63 | 682 | 74 | 20 |
| Wisconsin | 4,376 | 264 | 638 | 364 | 265 | 462 | 472 | 1,216 | 243 | 120 |
| Wyoming | 687 | 130 | 52 | 36 | 280 | 32 | 19 | 76 | 13 | 6 |
| Other areas | 393 | 6 | 46 | 25 | 86 | 20 | 30 | 98 | 31 | 16 |
| Foreign | 3,642 | 100 | 331 | 225 | 1,416 | 274 | 293 | 295 | 253 | 190 |

¹ Includes linguistics and other fields not shown separately.

Source: National Science Foundation; *American Science Manpower, 1966* (NSF 68-7). Data derived from the National Register of Scientific and Technical Personnel.

No. 788. ENROLLMENT IN SCIENCE AND MATHEMATICS—PUBLIC HIGH SCHOOLS: 1957 TO 1965

[In thousands. For school years ending in year stated. Prior to 1963, excludes Alaska and Hawaii. Based on sample]

| COURSE | 1957 | 1959 | 1963 | 1965 (prel.) | COURSE | 1957 | 1959 | 1963 | 1965 (prel.) |
|-----------------|---------|-------|-------|--------------|----------------------|-------|-------------|-------|--------------|
| | Science | 4,044 | 4,670 | 6,020 | | 7,244 | Mathematics | 4,401 | 5,108 |
| General science | 1,518 | 1,581 | 1,827 | 2,176 | General mathematics | 976 | 1,024 | 1,213 | 1,785 |
| Biology | 1,450 | 1,677 | 2,437 | 2,694 | Elementary algebra | 1,518 | 1,775 | 2,131 | 2,260 |
| Chemistry | 520 | 657 | 859 | 1,085 | Plane geometry | 788 | 979 | 1,454 | 999 |
| Physics | 310 | 379 | 397 | 526 | Intermediate algebra | 484 | 643 | 1,017 | 1,004 |
| Other science | 266 | 376 | 450 | 763 | Trigonometry | 200 | 220 | 204 | 231 |
| | | | | | Solid geometry | 160 | 106 | 73 | 85 |
| | | | | | Other mathematics | 275 | 361 | 639 | 1,133 |

Source: National Science Foundation. Data from Dept. of Health, Education, and Welfare, Office of Education; *Offerings and Enrollments in Science and Mathematics in Public High Schools*.

No. 789. SCIENCE DOCTORATES CONFERRED AND ENROLLMENT FOR ADVANCED DEGREES: 1960 TO 1967

[Doctorates conferred, years ending June 30; enrollment, as of fall term]

| FIELD OF SCIENCE | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|---------------|---------------|
| Science doctorates conferred | 6,397 | 6,876 | 7,619 | 8,427 | 9,471 | 10,701 | 11,654 | 13,174 |
| Life sciences | 1,730 | 1,782 | 1,976 | 2,076 | 2,363 | 2,679 | 2,869 | 3,116 |
| Agriculture and related..... | 343 | 366 | 387 | 373 | 445 | 480 | 485 | 517 |
| Health sciences..... | 69 | 101 | 109 | 107 | 142 | 145 | 175 | 176 |
| Anatomy, cytology, and embryology..... | 33 | 46 | 75 | 87 | 105 | 139 | 132 | 160 |
| Physiology and related fields..... | 217 | 205 | 268 | 300 | 356 | 403 | 396 | 470 |
| Botany and phytopathology..... | 188 | 188 | 181 | 200 | 205 | 240 | 247 | 215 |
| Biochemistry..... | 259 | 272 | 286 | 300 | 371 | 391 | 446 | 495 |
| Microbiology..... | 184 | 176 | 199 | 210 | 194 | 273 | 286 | 330 |
| Zoology and entomology..... | 270 | 265 | 289 | 272 | 309 | 360 | 395 | 372 |
| Other life sciences..... | 107 | 163 | 192 | 227 | 236 | 248 | 307 | 381 |
| Psychology | 773 | 820 | 857 | 892 | 1,013 | 955 | 1,133 | 1,293 |
| Physical sciences | 1,861 | 1,993 | 2,096 | 2,428 | 2,527 | 2,859 | 3,028 | 3,478 |
| Physics and astronomy..... | 531 | 597 | 710 | 818 | 864 | 1,046 | 1,049 | 1,295 |
| Chemistry..... | 1,077 | 1,150 | 1,137 | 1,288 | 1,351 | 1,439 | 1,580 | 1,764 |
| Earth sciences..... | 253 | 246 | 249 | 322 | 312 | 374 | 399 | 419 |
| Engineering | 792 | 940 | 1,215 | 1,357 | 1,662 | 2,068 | 2,283 | 2,581 |
| Mathematics | 291 | 332 | 388 | 484 | 590 | 684 | 766 | 828 |
| Social sciences, selected | 950 | 1,009 | 1,087 | 1,190 | 1,316 | 1,456 | 1,575 | 1,878 |
| Sociology..... | 162 | 167 | 184 | 211 | 201 | 239 | 258 | 332 |
| Economics..... | 352 | 413 | 418 | 450 | 526 | 561 | 622 | 684 |
| Pol. science, pub. admin., int'l rel..... | 238 | 254 | 278 | 290 | 336 | 391 | 401 | 495 |
| Anthropology and archeology..... | 77 | 60 | 88 | 91 | 93 | 92 | 109 | 158 |
| Other selected social sciences..... | 121 | 115 | 119 | 148 | 160 | 173 | 185 | 209 |
| School enrollment, all fields | 314,349 | 338,981 | 373,845 | 413,366 | 477,535 | 535,332 | | |
| Science fields | 120,638 | 128,794 | 142,433 | 158,051 | 177,544 | 194,530 | | |
| Agriculture and forestry..... | 4,412 | 4,346 | 4,995 | 5,165 | 5,622 | 6,426 | | |
| Biological sciences, incl. general programs..... | 15,303 | 17,100 | 18,958 | 21,723 | 25,165 | 28,323 | | |
| Mathematical subjects..... | 11,770 | 12,671 | 14,121 | 15,974 | 18,226 | 20,198 | (NA) | (NA) |
| Physical sciences..... | 25,707 | 26,553 | 28,591 | 30,959 | 34,061 | 36,506 | | |
| Engineering..... | 36,636 | 39,367 | 43,860 | 48,917 | 54,818 | 57,516 | | |
| Psychology..... | 10,677 | 10,751 | 11,344 | 12,627 | 13,733 | 15,551 | | |
| Social sciences..... | 16,133 | 18,006 | 20,574 | 22,686 | 26,419 | 30,010 | | |
| Health fields | 5,842 | 6,199 | 6,586 | 7,322 | 8,234 | 8,909 | | |
| All other fields | 187,869 | 203,988 | 224,826 | 247,993 | 291,757 | 331,893 | | |

NA Not available.

Source: National Science Foundation. Data from National Research Council, Doctorate Record File; and Dept. of Health, Education, and Welfare, Office of Education; *Enrollment for Advanced Degrees*.

No. 790. SCIENTISTS AND ENGINEERS ADMITTED AS IMMIGRANTS, BY OCCUPATION: 1962 TO 1966

[For years ending June 30. Includes professors and instructors in each field]

| OCCUPATION | 1962-1966, total | 1962 | 1963 | 1964 | 1965 | 1966 |
|--|------------------|--------------|--------------|--------------|--------------|--------------|
| Total | 28,542 | 4,297 | 5,932 | 5,762 | 5,345 | 7,205 |
| Engineers | 19,040 | 2,940 | 4,014 | 3,725 | 3,446 | 4,915 |
| Aeronautical..... | 610 | 108 | 128 | 64 | 69 | 241 |
| Chemical..... | 1,043 | 164 | 194 | 197 | 163 | 325 |
| Civil..... | 2,115 | 346 | 459 | 422 | 399 | 489 |
| Electrical..... | 2,769 | 417 | 656 | 559 | 447 | 680 |
| Industrial..... | 680 | 92 | 142 | 145 | 132 | 169 |
| Mechanical..... | 2,082 | 316 | 398 | 419 | 372 | 577 |
| Metallurgical and metallurgists..... | 382 | 52 | 83 | 66 | 81 | 100 |
| Mining..... | 184 | 30 | 27 | 45 | 43 | 39 |
| Sales..... | 276 | 59 | 52 | 57 | 51 | 57 |
| Other..... | 8,909 | 1,356 | 1,875 | 1,751 | 1,689 | 2,238 |
| Natural scientists | 8,153 | 1,165 | 1,688 | 1,754 | 1,597 | 1,949 |
| Agricultural scientists ² | 756 | 104 | 133 | 153 | 181 | 185 |
| Biologists and medical scientists..... | 785 | 87 | 136 | 162 | 173 | 227 |
| Chemists..... | 3,794 | 503 | 840 | 859 | 718 | 874 |
| Geologists and geophysicists..... | 501 | 104 | 87 | 98 | 114 | 98 |
| Mathematicians ³ | 708 | 105 | 166 | 147 | 114 | 176 |
| Physicists..... | 1,301 | 218 | 262 | 274 | 232 | 315 |
| Other..... | 308 | 44 | 64 | 61 | 65 | 74 |
| Social scientists | 1,349 | 192 | 231 | 283 | 302 | 341 |
| Economists..... | 689 | 95 | 120 | 136 | 174 | 164 |
| Psychologists..... | 429 | 73 | 83 | 98 | 78 | 97 |
| Other..... | 231 | 24 | 28 | 49 | 50 | 80 |

¹ Includes persons who classified themselves as engineers but did not indicate their specialty. Thus, categories listed may be somewhat under-represented. Also includes specialized classifications not shown separately.

² Includes foresters and conservationists. ³ Includes statisticians and actuaries.

Source: National Science Foundation. Data from Dept. of Justice, Immigration and Naturalization Service.

No. 791. ATOMIC ENERGY COMMISSION—LICENSES AND AGREEMENTS: 1955 TO 1967

| ITEM | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 |
|--|-------|-------|-------|-------|-------|-------|-------|
| Licenses in effect: | | | | | | | |
| Power reactors: | | | | | | | |
| Construction permits and authorizations..... | - | 11 | 4 | 5 | 7 | 11 | 22 |
| Licenses to operate and operating authorizations (includes possession only)..... | - | 3 | 13 | 15 | 16 | 17 | 20 |
| Research and test reactors: | | | | | | | |
| Construction permits..... | 4 | 18 | 11 | 5 | 18 | 19 | 17 |
| Licenses to operate (includes possession only)..... | 2 | 47 | 68 | 73 | 72 | 75 | 79 |
| Critical experiment facilities: | | | | | | | |
| Construction permits..... | 2 | 1 | 2 | - | - | - | 1 |
| Licenses to operate (includes possession only)..... | - | 14 | 15 | 16 | 17 | 16 | 15 |
| Production facilities: | | | | | | | |
| Construction permits..... | - | - | 1 | 1 | 1 | - | 1 |
| Licenses to operate (includes possession only)..... | - | - | - | - | - | 1 | 1 |
| Operator licenses (includes senior) ² | 3 | 563 | 1,295 | 1,554 | 1,460 | 1,535 | 1,645 |
| Special nuclear material licenses ³ | 7 | 362 | 511 | 571 | 583 | 575 | 580 |
| Source material licenses ³ | 1,763 | 1,153 | 499 | 467 | 440 | 427 | 412 |
| Byproduct material (radioisotope) licenses ³ | (X) | 8,429 | 7,895 | 8,073 | 8,454 | 8,313 | 8,378 |
| Reactor export licenses issued..... | - | 3 | 1 | 7 | 4 | 3 | 6 |
| Organizations with byproduct (radioisotope) Licenses ⁴: | | | | | | | |
| Medical institutions and physicians..... | 3,016 | 5,940 | 5,889 | 5,871 | 6,153 | 5,998 | 6,009 |
| Industrial concerns..... | 1,173 | 2,568 | 2,184 | 2,192 | 2,169 | 2,076 | 2,046 |
| Colleges and universities..... | 1,266 | 1,817 | 1,825 | 1,951 | 2,117 | 2,207 | 2,329 |
| Federal and State laboratories..... | 227 | 297 | 307 | 314 | 313 | 296 | 306 |
| Foundations, institutes, and other..... | 258 | 1,153 | 1,487 | 1,322 | 1,459 | 1,325 | 1,238 |
| Access permits in effect..... | 82 | 105 | 86 | 92 | 95 | 94 | 90 |
| Effective agreements for foreign cooperation..... | 602 | 1,006 | 596 | 540 | 505 | 435 | 401 |
| Research (bilateral)..... | 22 | 54 | 54 | 55 | 58 | 62 | 63 |
| Research and power (bilateral)..... | 19 | 27 | 22 | 22 | 16 | 18 | 17 |
| Mutual defense..... | 3 | 13 | 14 | 14 | 16 | 15 | 14 |
| Trilateral safeguards ⁵ | - | 9 | 12 | 12 | 12 | 12 | 12 |
| Other..... | - | - | 1 | 1 | 9 | 13 | 16 |
| | | 5 | 1 | 6 | 4 | 4 | 4 |

- Represents zero. X Not applicable.

¹ Permits authorized construction of 11 research and test reactors in 1955, 13 in 1966, and 11 in 1967.

² Beginning 1963, each reactor licensee was required to have available a "senior" reactor operator.

³ Beginning 1963, State governments began to take over a part of materials licensing under agreements with the AEC. As of Dec. 31, 1967, 17 such agreement States had issued or assumed control of 6,077 material licenses not reflected in above figures.

⁴ Beginning 1960, includes only parent organizations, which are issued single basic licenses. Subordinate organizations at various locations included for prior years.

⁵ Trilateral agreements involve the United States, the International Atomic Energy Agency (IAEA), and a third country and pertain to the application of the IAEA safeguards system to material and equipment supplied by the United States under bilateral agreements for cooperation in the civil uses of atomic energy.

Source: Atomic Energy Commission; *Semiannual Report*, *Annual Report*, and unpublished data.

No. 792. ATOMIC ENERGY COMMISSION—FINANCES AND EMPLOYMENT: 1955 TO 1967

[Money figures in millions of dollars. For years ending June 30]

| ITEM | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Appropriations received | | | | | | | |
| Operations..... | 1,210 | 2,650 | 3,135 | 2,743 | 2,625 | 2,366 | 2,199 |
| Plant and capital equipment..... | 1,099 | 2,387 | 2,872 | 2,343 | 2,262 | 2,122 | 1,923 |
| | 111 | 263 | 263 | 400 | 363 | 244 | 276 |
| Plant investment, year end | | | | | | | |
| Completed plant..... | 6,487 | 7,345 | 8,233 | 8,578 | 8,871 | 9,048 | 9,062 |
| Production plants..... | 5,858 | 7,018 | 7,652 | 8,170 | 8,470 | 8,748 | 8,820 |
| Research and development facilities..... | 4,646 | 5,458 | 5,447 | 5,497 | 5,464 | 5,446 | 5,368 |
| Other..... | 707 | 1,271 | 1,886 | 2,148 | 2,370 | 2,672 | 2,841 |
| Construction in progress..... | 505 | 289 | 318 | 525 | 636 | 629 | 611 |
| | 629 | 327 | 582 | 409 | 401 | 300 | 242 |
| Cost of operations ¹ | | | | | | | |
| Procurement of raw materials..... | 1,290 | 2,619 | 2,713 | 2,739 | 2,570 | 2,440 | 2,447 |
| Production of nuclear materials..... | 194 | 717 | 478 | 326 | 261 | 206 | 162 |
| Weapons development and fabrication..... | 588 | 731 | 652 | 636 | 571 | 544 | 521 |
| Development of nuclear reactors..... | 259 | 505 | 697 | 805 | 763 | 729 | 737 |
| Physical research..... | 115 | 399 | 508 | 563 | 538 | 489 | 528 |
| Biology and medicine research..... | 48 | 133 | 199 | 216 | 237 | 265 | 292 |
| Community operations (net)..... | 29 | 49 | 71 | 77 | 85 | 91 | 95 |
| Administrative expenses..... | 10 | 7 | 5 | 5 | 4 | 3 | 2 |
| Miscellaneous expenses and income (net)..... | 34 | 51 | 67 | 73 | 80 | 84 | 90 |
| | 13 | 27 | 38 | 40 | 31 | 29 | 20 |
| Employment | | | | | | | |
| Federal Government..... | 112,618 | 122,718 | 135,278 | 136,620 | 133,912 | 128,206 | 130,101 |
| Contractor operating..... | 6,076 | 6,907 | 7,120 | 7,268 | 7,329 | 7,443 | 7,506 |
| Contractor construction and design..... | 82,936 | 104,612 | 115,012 | 117,257 | 114,783 | 112,221 | 113,619 |
| | 23,606 | 11,199 | 13,146 | 12,095 | 11,800 | 8,542 | 8,976 |

¹ Includes depreciation; costs not fully adjusted for reclassification changes between programs.

Source: Atomic Energy Commission; *Financial Report*.

No. 793. ATOMIC ENERGY COMMISSION—SELECTED DATA ON NUCLEAR REACTORS,
URANIUM, RADIOISOTOPES, AND HEAVY WATER: 1960 TO 1967

[For years ending June 30, except as noted]

| ITEM | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 |
|--|--------|--------|--------|--------|--------|--------|
| NUCLEAR REACTORS | | | | | | |
| Development costs ¹mil. dol. | 399 | 508 | 563 | 538 | 489 | 528 |
| Civilian power reactors.....mil. dol. | 100 | 88 | 99 | 117 | 120 | 141 |
| Military reactors.....mil. dol. | 187 | 146 | 139 | 116 | 92 | 105 |
| Space propulsion.....mil. dol. | 15 | 70 | 95 | 93 | 92 | 86 |
| Merchant ship reactors.....mil. dol. | 4 | 8 | 6 | 3 | - | - |
| Auxiliary power sources.....mil. dol. | 12 | 76 | 89 | 105 | 73 | 80 |
| General.....mil. dol. | 81 | 121 | 137 | 104 | 112 | 116 |
| Electrical generation: ² | | | | | | |
| Capacity.....net electrical megawatts | 396 | 1,015 | 1,105 | 1,057 | 1,916 | 2,838 |
| Gross output.....1,000 megawatt hours | 591 | 3,807 | 3,814 | 4,368 | 6,583 | 8,836 |
| AEC procurement: URANIUM | | | | | | |
| Quantity.....tons of U ₃ O ₈ | 34,582 | 26,981 | 18,655 | 15,313 | 12,427 | 9,979 |
| Domestic sources.....tons of U ₃ O ₈ | 16,567 | 15,759 | 12,584 | 11,319 | 10,110 | 9,067 |
| Canadian sources.....tons of U ₃ O ₈ | 13,443 | 7,017 | 2,299 | 1,189 | 718 | 258 |
| Overseas sources.....tons of U ₃ O ₈ | 4,572 | 4,205 | 3,832 | 2,805 | 1,599 | 624 |
| Cost.....mil. dol. | 704 | 480 | 328 | 265 | 211 | 165 |
| Domestic sources.....mil. dol. | 298 | 248 | 202 | 182 | 163 | 146 |
| Canadian sources.....mil. dol. | 296 | 137 | 39 | 21 | 14 | 5 |
| Overseas sources.....mil. dol. | 110 | 95 | 87 | 62 | 34 | 14 |
| Estimated ore reserves ³1,000 tons of contained U ₃ O ₈ | 238 | 160 | 152 | 145 | 141 | 148 |
| Rated ore milling capacity ³1,000 tons per day | 22 | 18 | 15 | 12 | 13 | 15 |
| RADIOISOTOPES | | | | | | |
| Sales by AEC.....\$1,000. | 2,209 | 1,192 | 1,279 | 1,601 | 1,971 | 1,528 |
| Exports (domestic) ^{2,4}\$1,000. | 1,286 | 2,548 | 2,919 | 3,026 | 3,779 | 3,144 |
| Imports ^{2,4}\$1,000. | 1,394 | 1,415 | 2,222 | 2,818 | 2,104 | 3,000 |
| HEAVY WATER | | | | | | |
| Sales by AEC.....tons | 86 | 38 | 30 | 82 | 96 | 421 |
| Value.....\$1,000. | 4,867 | 1,937 | 1,558 | 4,067 | 4,767 | 19,882 |

- Represents zero.

¹ Not fully adjusted for reclassification changes between categories.

² Calendar year data. ³ As of December.

⁴ Source: Dept. of Commerce, Bureau of the Census; FT 9523, *U.S. Exports of Radioactive and Stable Isotopes* and FT 9066, *U.S. Imports of Radioactive Substances*; export figures include shipments made by AEC and by commercial firms.

Source: Atomic Energy Commission; *Annual Report*, and unpublished data, except as noted.

No. 794. EMPLOYMENT IN THE ATOMIC ENERGY FIELD, BY OCCUPATION AND SEGMENT: 1967

[As of March. Based on an employment survey of the Atomic Energy Commission-owned, contractor-operated facilities and of atomic industrial establishments. Excludes persons in uranium mining, in non-AEC owned facilities of educational institutions, and in nuclear facilities construction]

| SEGMENT | Total | FACILITIES | | OCCUPATION | | | |
|---|---------|-------------|------------|------------|-------------|--------------|-----------|
| | | Gov-ernment | In-dus-try | Engi-neers | Scien-tists | Tech-nicians | All other |
| All activities..... | 137,750 | 102,293 | 35,457 | 21,711 | 13,137 | 23,796 | 79,106 |
| AEC laboratory and research facilities..... | 51,670 | 51,670 | (X) | 8,160 | 8,326 | 10,470 | 24,714 |
| Atomic energy defense production..... | 31,063 | 30,897 | 166 | 2,697 | 1,899 | 3,051 | 23,916 |
| Reactor and reactor components..... | 14,238 | 1,513 | 12,725 | 4,385 | 978 | 2,586 | 6,279 |
| Production of feed materials..... | 7,480 | 6,326 | 1,154 | 570 | 481 | 826 | 5,503 |
| Nuclear instrument manufacturing..... | 5,615 | 1,588 | 4,027 | 794 | 291 | 1,740 | 2,790 |
| Nuclear design and engineering..... | 6,037 | 1,529 | 4,508 | 2,497 | 118 | 1,501 | 1,921 |
| Private research laboratories..... | 2,074 | (X) | 2,074 | 529 | 630 | 647 | 268 |
| Uranium milling..... | 1,962 | (X) | 1,962 | 128 | 90 | 134 | 1,610 |
| Fuel element fabrication and recovery activities..... | 3,883 | 1,949 | 1,934 | 475 | 158 | 559 | 2,691 |
| Production of special materials for reactors..... | 1,350 | (X) | 1,350 | 114 | 45 | 244 | 947 |
| Particle accelerator manufacturing..... | 1,018 | (X) | 1,018 | 152 | 44 | 227 | 595 |
| Power reactor operation and maintenance..... | 1,026 | 217 | 809 | 182 | 18 | 208 | 618 |
| Processing and packaging radioisotopes..... | 824 | (X) | 824 | 42 | 240 | 287 | 255 |
| Industrial radiographic service..... | 559 | (X) | 559 | 53 | 3 | 434 | 69 |
| Radioactive waste disposal..... | 34 | (X) | 34 | 1 | 6 | 6 | 21 |
| Miscellaneous..... | 8,917 | 6,604 | 2,313 | 932 | 310 | 766 | 6,909 |

X Not applicable.

Source: Atomic Energy Commission; *Annual Report*. Data from Dept. of Labor, Bureau of Labor Statistics.

No. 795. PATENTS AND TRADEMARKS: 1941 TO 1967

[Covers patents issued to citizens of United States and residents of foreign countries. For information on copy rights, see table 752. See also *Historical Statistics, Colonial Times to 1867*, series W 66-75 and W 77-78]

| ITEM | 1941-45 | 1946-50 | 1951-55 | 1956-60 | 1961-65 | 1960 | 1965 | 1966 | 1967 |
|--|---------|---------|---------|---------|---------------------|--------|--------------------|--------------------|--------------------|
| Patent applications filed | 294,273 | 400,342 | 379,053 | 410,389 | 463,193 | 84,475 | 100,421 | 93,482 | 93,011 |
| Inventions..... | 265,417 | 360,095 | 351,649 | 384,782 | 436,082 | 79,590 | 94,632 | 88,293 | 87,872 |
| Designs..... | 27,536 | 39,127 | 25,951 | 23,865 | 25,251 | 4,525 | 5,413 | 4,853 | 4,744 |
| Botanical plants..... | 262 | 398 | 467 | 584 | 628 | 131 | 105 | 104 | 103 |
| Reissues..... | 1,058 | 722 | 986 | 1,158 | 1,232 | 229 | 271 | 282 | 292 |
| Patents issued¹ | 184,492 | 163,034 | 208,964 | 251,872 | 275,443 | 49,986 | 66,647 | 71,887 | 69,098 |
| Inventions ¹ | 164,360 | 144,076 | 192,651 | 237,469 | 259,971 | 47,170 | 62,857 | 68,406 | 65,652 |
| Individuals..... | 61,127 | 58,957 | 78,459 | 76,589 | 69,945 | 13,069 | 16,063 | 16,018 | 15,646 |
| Corporations: | | | | | | | | | |
| United States..... | 95,107 | 78,376 | 100,278 | 133,948 | 152,537 | 28,187 | 37,158 | 41,634 | 38,354 |
| Foreign..... | 5,147 | 4,669 | 10,537 | 21,043 | ² 30,992 | 4,670 | ³ 8,096 | ³ 9,222 | ¹ 9,895 |
| U.S. Government ⁴ | 846 | 1,761 | 3,359 | 5,889 | 6,497 | 1,244 | 1,540 | 1,532 | 1,757 |
| Designs..... | 18,830 | 18,016 | 15,084 | 13,024 | 13,862 | 2,543 | 3,424 | 3,188 | 3,165 |
| Botanical plants..... | 229 | 334 | 441 | 567 | 576 | 116 | 120 | 114 | 85 |
| Reissues..... | 1,023 | 608 | 788 | 812 | 1,034 | 157 | 246 | 179 | 196 |
| Certificates of trade- marks issued¹ | 52,191 | 85,611 | 100,942 | 108,246 | 106,635 | 22,367 | 21,666 | 23,844 | 23,837 |
| Trademarks..... | 34,435 | 61,339 | 83,311 | 90,727 | 91,946 | 18,434 | 18,501 | 20,259 | 20,036 |
| Trademark renewals..... | 17,756 | 24,272 | 17,631 | 17,519 | 14,689 | 3,933 | 3,165 | 3,585 | 3,801 |

¹ Excludes all registration numbers left blank due to withdrawal of patent or trademark before issue.
² 1942 to 1947, includes patents issued to Alien Property Custodian, and 1947 to 1953, those vested in Attorney General, to whom functions of Alien Property Custodian were transferred.
³ Includes foreign government patents: 147 in 1964, 210 in 1965, 253 in 1966, and 284 in 1967.
⁴ 1942 to 1947, excludes patents issued to Alien Property Custodian, and 1947 to 1953, those vested in Attorney General.

Source: Dept. of Commerce, Patent Office; unpublished data. Fiscal-year figures are published in the *Annual Report of the Commissioner of Patents*.

No. 796. FEDERAL SPACE PROGRAM—EXPENDITURES, BY AGENCY: 1960 TO 1969

[In millions of dollars. For years ending June 30]

| AGENCY | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 est. | 1969 est. |
|--|------|-------|-------|-------|-------|-------|-------|-------|-----------|-----------|
| Total | 888 | 1,468 | 2,387 | 4,079 | 5,930 | 6,886 | 7,719 | 7,237 | 6,750 | 6,826 |
| National Aero. and Space Admin. ¹ | 329 | 694 | 1,226 | 2,517 | 4,131 | 5,035 | 5,858 | 5,337 | 4,692 | 4,455 |
| Department of Defense..... | 518 | 710 | 1,029 | 1,368 | 1,864 | 1,592 | 1,687 | 1,673 | 1,870 | 2,180 |
| Atomic Energy Commission..... | 41 | 64 | 130 | 181 | 220 | 232 | 188 | 184 | 151 | 151 |
| Department of Commerce..... | - | - | 1 | 12 | 12 | 24 | 28 | 39 | 33 | 34 |
| Department of the Interior..... | - | - | - | - | - | - | 4 | 3 | 2 | 4 |
| Department of Agriculture..... | - | - | - | - | - | - | - | - | (Z) | 1 |
| National Science Foundation..... | - | - | 1 | 1 | 3 | 3 | 3 | 2 | 2 | 2 |

- Represents zero. Z Less than \$500,000. ¹ Excludes amounts for aircraft technology.

Source: 1960-1965, Report to the Congress from the President of the United States: *United States Aeronautics and Space Activities, 1968*; thereafter, Executive Office of the President, Bureau of the Budget; *The Budget of the United States Government, 1969*.

No. 797. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION—EXPENDITURES FOR RESEARCH AND DEVELOPMENT: 1965 TO 1969

[In millions of dollars. For years ending June 30]

| PROGRAM | PERFORMANCE | | | | | FACILITIES | | | | |
|----------------------------|-------------|-------|-------|-----------|-----------|------------|------|------|-----------|-----------|
| | 1965 | 1966 | 1967 | 1968 est. | 1969 est. | 1965 | 1966 | 1967 | 1968 est. | 1969 est. |
| Total | 4,562 | 5,361 | 5,137 | 4,645 | 4,500 | 531 | 572 | 289 | 160 | 76 |
| Manned space flight..... | 3,138 | 3,819 | 3,477 | 3,094 | 2,957 | 401 | 392 | 172 | 72 | 36 |
| Space applications..... | 87 | 112 | 122 | 135 | 147 | 2 | 2 | (Z) | - | - |
| Space sciences..... | 639 | 643 | 660 | 562 | 492 | 23 | 22 | 14 | 10 | 5 |
| Space technology..... | 431 | 396 | 408 | 388 | 414 | 53 | 40 | 33 | 32 | 12 |
| Aircraft technology..... | 53 | 71 | 87 | 100 | 114 | - | 4 | 2 | 12 | 6 |
| Supporting operations..... | 210 | 321 | 384 | 375 | 376 | 51 | 114 | 68 | 34 | 17 |

- Represents zero. Z Less than \$500,000.

Source: Executive Office of the President, Bureau of the Budget; unpublished data.

NO. 798. SPACECRAFT LAUNCHINGS: 1957 TO 1967

[Criterion of success is attainment of earth orbit or earth escape, respectively]

| YEAR | UNITED STATES | | | | U.S.S.R. successful launchings |
|--------------------|---------------|-----------|--------------|-----------|--------------------------------------|
| | Earth orbit | | Earth escape | | |
| | Success | Failure | Success | Failure | |
| Total | 514 | 97 | 28 | 12 | 284 |
| 1957..... | - | 1 | - | - | 2 |
| 1958..... | 5 | 8 | - | 4 | 1 |
| 1959..... | 9 | 9 | 1 | 2 | 3 |
| 1960..... | 16 | 12 | 1 | 2 | 3 |
| 1961..... | 35 | 12 | - | 12 | 7 |
| 1962..... | 54 | 12 | 4 | 1 | 21 |
| 1963..... | 60 | 11 | - | - | 18 |
| 1964..... | 69 | 8 | 4 | - | 38 |
| 1965..... | 94 | 8 | 3 | - | 73 |
| 1966..... | 95 | 12 | 5 | 1 | 51 |
| 1967..... | 77 | 4 | 10 | - | 67 |

- Represents zero. ¹ Attained earth orbit and included in earth orbit success totals.Source: Report to the Congress from the President of the United States: *U.S. Aeronautical and Space Activities, 1967*.

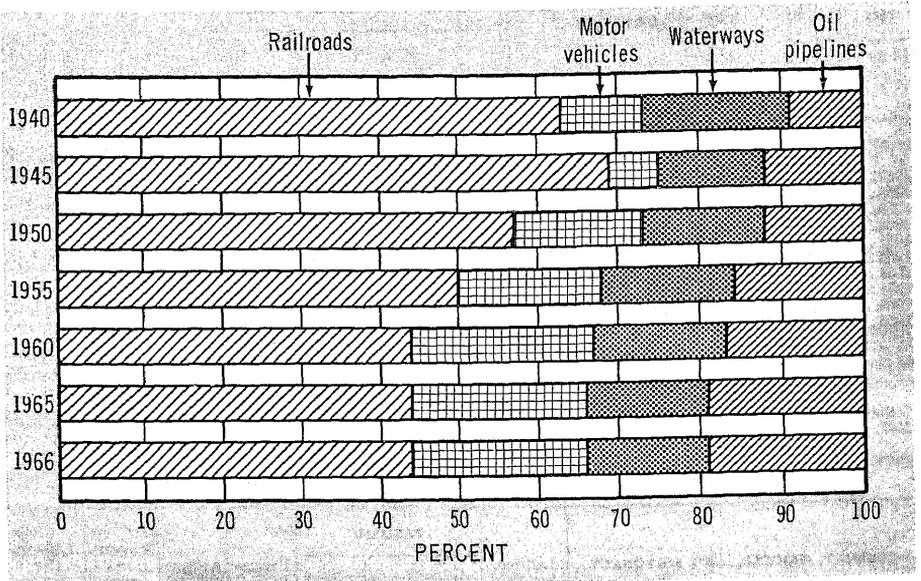
NO. 799. ORBITAL MANNED SPACECRAFT: 1961 THROUGH APRIL 1968

| COUNTRY, VEHICLE, AND ASTRONAUT | Launching date | PAYLOAD | | Perigee (miles) | Apogee (miles) | Revolutions ² (number) | Lifetime (hr.: min.) |
|---|----------------|-------------------------------|-----------------------|-----------------|----------------|-----------------------------------|----------------------|
| | | Dimensions ¹ (ft.) | Lift-off weight (lb.) | | | | |
| UNITED STATES | | | | | | | |
| Mercury Atlas: ³ | | | | | | | |
| VI..... Glenn | 2-20-62 | 9.5H-6D | 4,265 | 100 | 162.2 | 3 | 4:55 |
| VII..... Carpentier | 5-24-62 | 9.5H-6D | 4,244 | 99.9 | 166.8 | 3 | 4:56 |
| VIII..... Schirra | 10-3-62 | 9.5H-6D | 4,325 | 100 | 175.8 | 6 | 9:13 |
| IX..... Cooper | 5-15-63 | 9.6H-6D | 4,000 | 100.3 | 165.9 | 22 | 34:20 |
| Gemini: ⁵ | | | | | | | |
| III..... Grissom and Young | 3-23-65 | 18.5H-10D | 7,136 | 100 | 139 | 3 | 4:53 |
| IV..... McDivitt and White | 6-3-65 | 18.5H-10D | 7,879 | 100 | 184 | 62 | 97:56 |
| V..... Cooper and Conrad | 8-21-65 | 18.5H-10D | 7,879 | 100 | 207 | 120 | 190:55 |
| VI..... Schirra and Stafford | 12-15-65 | 18.5H-10D | 7,817 | 100 | 193 | 16 | 25:51 |
| VII..... Borman and Lovell | 12-4-65 | 18.5H-10D | 8,076 | 100 | 204 | 206 | 330:35 |
| VIII..... Armstrong and Scott | 3-16-66 | 18.5H-10D | 8,351 | 99 | 186 | 6.6 | 10:42 |
| IX..... Cernan and Stafford | 6-3-66 | 18.5H-10D | 8,100 | 100 | 194 | 45 | 72:21 |
| X..... Young and Collins | 7-18-66 | 18.5H-10D | 8,295 | 100 | 476 | 43 | 70:46 |
| XI..... Conrad and Gordon | 9-12-66 | 18.5H-10D | 8,374 | 99 | 853 | 44 | 71:17 |
| XII..... Lovell and Aldrin | 11-11-66 | 18.5H-10D | 8,296 | 100 | 187 | 59 | 94:34 |
| U.S.S.R. | | | | | | | |
| Vostok: | | | | | | | |
| Spacecraft I..... Gagarin | 4-12-61 | 20H | 10,418 | 108.8 | 187.7 | 1 | 1:48 |
| II..... Titov | 8-6-61 | 20H-12-14D | 10,430 | 110.3 | 115.3 | 17.5 | 25:18 |
| III..... Nikolayev | 8-11-62 | (NA) | 10,400 | 107.4 | 137.2 | 64+ | 94:35 |
| IV..... Popovich | 8-12-62 | (NA) | 10,400 | 111 | 158 | 48+ | 70:57 |
| V..... Bykovsky | 6-14-63 | (NA) | 10,360 | 99 | 120 | 81 | 119:06 |
| VI..... Tereshkova | 6-16-63 | (NA) | 10,360 | 108 | 135 | 48 | 70:50 |
| Voskhod: | | | | | | | |
| I..... Komarov, Yegorov, and Feoktistov | 10-12-64 | (NA) | 16,000 | 111 | 254 | 16 | 24:17 |
| II..... Belyayev and Leonov | 3-18-65 | (NA) | (NA) | 107.2 | 306.9 | 17 | 27:02 |
| Soyuz I (Union-I) Komarov ⁶ | 4-23-67 | (NA) | (NA) | 122.6 | 137.9 | 18 | 26:45 |

NA Not available. ¹ H=height; D=diameter.² A revolution is the distance a spacecraft must travel to return to a specified line of Earth longitude.³ Vehicle lift-off weight, 260,000 lb.; dimensions, 93H-16D.⁴ Recovery weight (in pounds): 2,400, 2,480, 2,440, and 2,460, respectively.⁵ Vehicle lift-off weight, 340,000 lb.; dimensions, 109H-10D; payload recovery weight, 4,700 lb.⁶ Cosmonaut was killed when spacecraft crashed when landing.Source: National Aeronautics and Space Administration; *Space Activities Summary*, various dates. (For U.S.S.R., based on unofficial data from U.S. and Soviet press and radio.)

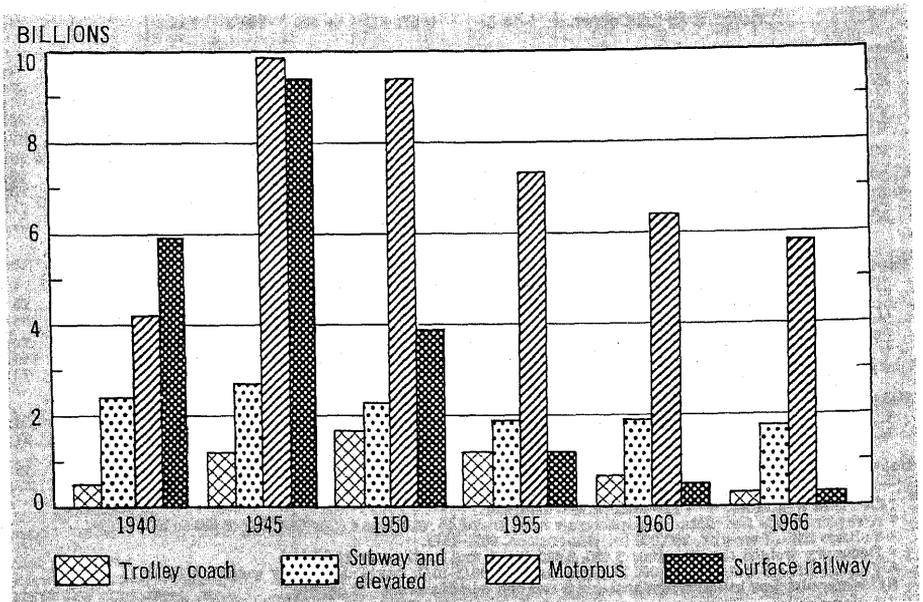
FIG. XXXII. PERCENT DISTRIBUTION OF TON-MILES OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORTATION: 1940 TO 1966

[Airways not shown separately—less than 1 percent. See table 801]



Source: Chart prepared by Dept. of Commerce, Bureau of the Census. Data from Interstate Commerce Commission.

FIG. XXXIII. PASSENGERS CARRIED BY PUBLIC TRANSPORTATION: 1940 TO 1966 [See table 832]



Source: Chart prepared by Dept. of Commerce, Bureau of the Census. Data from American Transit Association, Washington, D.C.

Section 21

Transportation—Land

This section presents statistics relating to the mileage, control, and financing of public roads and to the transportation of persons and goods by land. The modes of transport included are passenger car, truck, railroad, bus and streetcar, and pipeline.

The principal compiler of data on public roads and motor-vehicle registrations is Department of Transportation's Bureau of Public Roads, which, since 1945, has issued the annual *Highway Statistics*. Its *Highway Statistics, Summary to 1965*, presents public roads data carried back for 20 to 65 years. The principal sources of land transport data, other than for public roads and motor-vehicle registrations, are the Interstate Commerce Commission's *Annual Report* and its annual *Transport Statistics in the United States*, Part 1, which contains data on railroads. Other important publications of the Interstate Commerce Commission in the field of land transport include the annual *Statistics of Class I Motor Carriers* (issued as Part 7 of *Transport Statistics*); the annual *Statistics of Oil Pipe-Line Companies* (issued as Part 6 of *Transport Statistics*); and, for historical data on railroads, *Statistics of Railways in the United States*, published annually from 1887 through 1953. The annual *Accident Bulletin*, formerly published by the Commission, is now issued by the Federal Railroad Administration of the Department of Transportation. Another basic source of data is the *Census of Transportation* conducted by the Bureau of the Census.

Data from the 1963 census are included in *Commodity Transport Survey* and *Motor Carrier Survey* and data from both the 1963 and 1967 censuses in *National Travel Survey* and *Truck Inventory and Use Survey*. The *Census of Manufactures* and the *Annual Survey of Manufactures* of the Bureau of the Census contain statistics on the motor-vehicle and equipment industry. Data from these Bureau of the Census reports are included in section 28, Manufactures, of this volume.

Nongovernmental data can be found in the weekly and annual *Cars of Revenue Freight Loaded* and the annual *Yearbook of Railroad Facts*, both published by the Association of American Railroads, Washington, D.C.; *Bus Facts*, issued annually by the National Association of Motor Bus Owners, Washington; the *Transit Fact Book*, containing street railway and motorbus statistics, published annually by the American Transit Association, Washington; and *Transportation Facts and Trends*, issued by the Transportation Association of America, Washington. Useful annual handbooks in the field of motor-vehicle transport are *Automobile Facts and Figures* and *Motor Truck Facts*, both issued by the Automobile Manufacturers Association, Detroit; *American Trucking Trends*, issued by the American Trucking Association, Washington; and *Accident Facts*, issued by the National Safety Council, Chicago.

Rural and urban roads.—The terms "rural," "urban," and "municipal" are used in different ways in different tables in this section. Because of special problems and purposes, it is not possible to apply identical definitions and groupings to all types of data. Definitions are given in table headnotes where pertinent.

Highway systems.—The Federal-Aid Highway Act of 1916 provides for the sharing of highway construction costs between the States and the Federal Government with the initiative retained by each State for choosing projects and carrying them out. The planning and development of Federal-aid systems began in 1921. Federal funds share with State funds in costs of engineering, construction, and right-of-way acquisition on the designated systems while other charges, such as maintenance and policing, are borne entirely by the States and local agencies.

The Federal-aid primary system connects all of the principal cities, county seats, ports, manufacturing areas, and other traffic generating areas. In general, these are

the same as the main State trunkline roads. The Federal-aid secondary system consists of important feeder roads linking the farms, factories, distribution outlets, and smaller communities with the primary system.

Motor carriers.—Prior to 1950, class I for-hire motor carriers were classified by the Interstate Commerce Commission as those with \$100,000 or more of gross annual operating revenue. Beginning 1950, the class I minimum became \$200,000. Beginning 1957, the class I minimum for motor carriers of property was increased to \$1,000,000; however, the minimum for class I motor carriers of passengers remained at \$200,000.

Railroads.—The total railroad mileage of the United States comprises companies reporting to the Interstate Commerce Commission, grouped as follows: (1) Regular interstate carriers (and their nonoperating subsidiaries); (2) switching and terminal railroads; and (3) private railroads (identified by the Commission as "circular" because they report on brief circulars, or as "unofficial" when their reports are received too late for tabulation). For the most part, circular and unofficial companies, and switching and terminal railroads, are not included in the statistics.

Nonoperating subsidiaries comprise proprietary companies, which are covered by the reports of operating carriers, and lessor companies, which have no traffic and whose reports appear only in statistics of capitalization, dividends, and investment.

Operating railroads are classified on the basis of operating revenues. Prior to 1956, the classification was as follows: Class I, those having more than \$1,000,000 gross annual operating revenue; class II, from \$100,000 to \$1,000,000; and class III, less than \$100,000. From 1956 to 1964, the following classification was in effect: Class I, \$3,000,000 or more; and class II, under \$3,000,000. Effective January 1965, the classification was changed to the following: Class I, \$5,000,000 or more; and class II, under \$5,000,000.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

NO. 800. OPERATING REVENUES, BY TYPE OF TRANSPORT: 1940 TO 1966

[Excludes Alaska and Hawaii, except as noted]

| TRANSPORT AGENCY | 1940 | 1945 | 1950 | 1955 | 1960 | 1965 | 1966 |
|--|-------|-------|-------|--------|-------|--------|--------|
| REVENUES (mil. dol.) | | | | | | | |
| Pullman Company..... | 60 | 148 | 104 | 95 | 56 | 36 | 35 |
| Electric railways..... | 53 | 87 | 79 | 60 | 23 | 13 | 14 |
| Railway Express ¹ | 120 | 284 | 223 | 241 | 248 | 316 | 324 |
| Railroads ^{2,3} | 4,459 | 9,136 | 9,820 | 10,495 | 9,899 | 10,702 | 11,163 |
| Waterlines ⁴ | 113 | 173 | 330 | 452 | 427 | 426 | 460 |
| Pipelines (oil) ⁵ | 226 | 304 | 442 | 678 | 770 | 904 | 941 |
| Domestic scheduled air carriers ⁶ | 77 | 215 | 558 | 1,215 | 2,129 | 3,608 | 4,070 |
| Motor carriers of property ⁷ | 898 | 1,840 | 3,737 | 5,535 | 7,214 | 10,068 | 10,862 |
| Motor carriers of passengers ⁷ | 176 | 652 | 539 | 552 | 667 | 885 | 901 |
| INDEX (1957-59=100) | | | | | | | |
| Railroads ² | 43 | 88 | 95 | 101 | 96 | 103 | 108 |
| Pipelines (oil)..... | 31 | 41 | 60 | 92 | 104 | 122 | 128 |
| Domestic scheduled air carriers ⁶ | 4 | 12 | 32 | 70 | 22 | 207 | 234 |
| Motor carriers of property ⁷ | 14 | 28 | 58 | 85 | 111 | 156 | 168 |
| Motor carriers of passengers..... | 29 | 107 | 88 | 91 | 109 | 145 | 148 |

¹ After deducting payments to others for express privileges.

² Includes line-haul and switching and terminal companies. ³ Beginning 1960, includes Alaska and Hawaii.

⁴ Includes only revenues from domestic traffic of carriers under jurisdiction of Interstate Commerce Commission.

⁵ Beginning 1960, includes 1 pipeline operating in Alaska.

⁶ Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*.

Beginning 1955, includes Alaska and Hawaii. Revenues for scheduled passenger cargo operations.

⁷ Excludes motor-carrier revenues of electric railways, included under electric railways.

Source: Interstate Commerce Commission; *Annual Report, Statistics of Class I, II, and III Motor Carriers, 1899-1966* (Statement No. 539), and *Transport Economics*, except as noted.

No. 801. VOLUME OF DOMESTIC INTERCITY FREIGHT TRAFFIC, BY TYPE OF TRANSPORT: 1940 TO 1966

[In millions of ton-miles, except percent. Airways, prior to 1959, and other types of transportation, prior to 1960, exclude Alaska and Hawaii, except as noted. A ton-mile is the movement of 1 ton (2,000 pounds) of freight for the distance of 1 mile. Comprises public and private traffic, both revenue and nonrevenue. See also *Historical Statistics, Colonial Times to 1957*, series Q 1-11]

| YEAR | Total traffic, volume | RAILROADS ¹ | | MOTOR VEHICLES | | INLAND WATERWAYS ² | | OIL PIPELINES | | AIRWAYS ³ | |
|-----------|-----------------------|------------------------|------------------|----------------|------------------|-------------------------------|------------------|---------------|------------------|----------------------|------------------|
| | | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total |
| | | | | | | | | | | | |
| 1940----- | 651,204 | 411,813 | 63.24 | 62,043 | 9.53 | 118,057 | 18.13 | 59,277 | 9.10 | 14 | 0.002 |
| 1945----- | 1,072,490 | 736,184 | 68.64 | 66,948 | 6.24 | 142,737 | 13.31 | 126,530 | 11.80 | 91 | 0.008 |
| 1950----- | 1,094,160 | 628,463 | 57.44 | 172,860 | 15.80 | 163,344 | 14.93 | 129,175 | 11.81 | 318 | 0.029 |
| 1955----- | 1,298,060 | 654,573 | 50.43 | 223,254 | 17.20 | 216,508 | 16.68 | 203,244 | 15.66 | 481 | 0.037 |
| 1956----- | 1,376,320 | 676,974 | 49.19 | 248,846 | 18.08 | 219,978 | 15.98 | 229,950 | 16.71 | 563 | 0.041 |
| 1957----- | 1,354,012 | 644,746 | 47.62 | 254,174 | 18.77 | 231,792 | 17.12 | 222,728 | 16.45 | 572 | 0.042 |
| 1958----- | 1,231,184 | 574,756 | 46.68 | 255,544 | 20.76 | 189,016 | 15.35 | 211,289 | 17.16 | 579 | 0.047 |
| 1959----- | 1,302,570 | 599,347 | 46.01 | 278,934 | 21.41 | 196,559 | 15.09 | 226,991 | 17.43 | 739 | 0.057 |
| 1960----- | 1,329,995 | 594,855 | 44.73 | 285,483 | 21.46 | 220,253 | 16.56 | 228,626 | 17.19 | 778 | 0.058 |
| 1961----- | 1,325,816 | 585,558 | 44.17 | 296,485 | 22.36 | 209,706 | 15.82 | 233,172 | 17.69 | 895 | 0.068 |
| 1962----- | 1,387,228 | 615,720 | 44.38 | 309,407 | 22.30 | 223,089 | 16.08 | 237,723 | 17.14 | 1,289 | 0.093 |
| 1963----- | 1,468,733 | 643,664 | 43.82 | 336,170 | 22.89 | 234,172 | 15.94 | 253,431 | 17.26 | 1,296 | 0.088 |
| 1964----- | 1,555,793 | 679,171 | 43.65 | 356,298 | 22.90 | 250,165 | 16.08 | 268,655 | 17.27 | 1,504 | 0.096 |
| 1965----- | 1,650,997 | 721,055 | 43.67 | 359,218 | 21.76 | 262,421 | 15.89 | 306,393 | 18.56 | 1,910 | 0.116 |
| 1966----- | 1,743,029 | 761,944 | 43.71 | 380,917 | 21.85 | 265,000 | 15.20 | 332,916 | 19.10 | 2,282 | 0.129 |

¹ Includes electric railways, express, and mail.
² Includes Great Lakes. Includes Alaska for all years and Hawaii beginning 1959.
³ Domestic revenue service only. Includes express, mail, and excess baggage.
⁴ Includes Alaska and Hawaii.

Source: Interstate Commerce Commission; *Annual Report*, Statement No. 6103, *Intercity Ton-Miles, 1939-1959*, April 1961 and *Transport Economics*, December 1967.

No. 802. VOLUME OF DOMESTIC INTERCITY PASSENGER TRAFFIC, BY TYPE OF TRANSPORT: 1950 TO 1966

[In millions of passenger-miles, except percent. Airways, prior to 1959, and other types of transportation, prior to 1960, exclude Alaska and Hawaii. A passenger-mile is the movement of 1 passenger for the distance of 1 mile. Comprises public and private traffic, both revenue and nonrevenue]

| YEAR | Total traffic, volume | PRIVATE AUTOMOBILES | | AIRWAYS ¹ | | COMMERCIAL MOTOR CARRIERS | | RAILROADS ² | | INLAND WATERWAYS ³ | |
|-----------|-----------------------|---------------------|------------------|----------------------|------------------|---------------------------|------------------|------------------------|------------------|-------------------------------|------------------|
| | | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total | Volume | Percent of total |
| | | | | | | | | | | | |
| 1950----- | 508,472 | 438,293 | 86.20 | 10,072 | 1.98 | 26,436 | 5.20 | 32,481 | 6.39 | 1,190 | 0.23 |
| 1953----- | 655,338 | 575,763 | 87.86 | 17,430 | 2.66 | 28,397 | 4.33 | 32,261 | 4.92 | 1,487 | 0.23 |
| 1954----- | 673,404 | 597,054 | 88.66 | 19,568 | 2.91 | 25,614 | 3.80 | 29,467 | 4.38 | 1,701 | 0.25 |
| 1955----- | 716,062 | 637,369 | 89.01 | 22,741 | 3.18 | 25,619 | 3.56 | 28,695 | 4.01 | 1,738 | 0.24 |
| 1956----- | 750,861 | 669,679 | 89.19 | 25,523 | 3.40 | 25,189 | 3.35 | 28,610 | 3.81 | 1,860 | 0.25 |
| 1957----- | 748,248 | 670,484 | 89.61 | 28,128 | 3.76 | 21,465 | 2.87 | 26,251 | 3.51 | 1,930 | 0.26 |
| 1958----- | 759,848 | 684,892 | 90.14 | 28,522 | 3.75 | 20,766 | 2.73 | 23,605 | 3.11 | 2,073 | 0.27 |
| 1959----- | 764,735 | 687,406 | 89.89 | 32,566 | 4.26 | 20,364 | 2.66 | 22,373 | 2.93 | 2,026 | 0.26 |
| 1960----- | 783,626 | 706,079 | 90.10 | 33,958 | 4.33 | 19,327 | 2.47 | 21,574 | 2.75 | 2,688 | 0.34 |
| 1961----- | 791,386 | 713,636 | 90.18 | 34,599 | 4.37 | 20,279 | 2.56 | 20,527 | 2.59 | 2,345 | 0.30 |
| 1962----- | 818,140 | 735,931 | 89.95 | 37,491 | 4.58 | 21,801 | 2.66 | 20,181 | 2.47 | 2,736 | 0.33 |
| 1963----- | 852,575 | 765,877 | 89.83 | 42,765 | 5.02 | 22,538 | 2.64 | 18,632 | 2.19 | 2,763 | 0.32 |
| 1964----- | 895,537 | 801,796 | 89.53 | 49,185 | 5.49 | 23,344 | 2.61 | 18,374 | 2.05 | 2,888 | 0.32 |
| 1965----- | 920,179 | 817,663 | 88.86 | 58,083 | 6.31 | 23,775 | 2.58 | 17,557 | 1.91 | 3,101 | 0.34 |
| 1966----- | 971,021 | 856,368 | 88.19 | 69,356 | 7.14 | 24,592 | 2.53 | 17,288 | 1.78 | 3,447 | 0.35 |

¹ Includes domestic commercial revenue service and private pleasure and business flying.
² Includes electric railways.
³ Includes Great Lakes.

Source: Interstate Commerce Commission; *Annual Report*, and *Transport Economics*, December 1967.

No. 803. LARGEST TRANSPORTATION COMPANIES—REVENUES, ASSETS, INCOME, AND INVESTED CAPITAL, BY RANK OF OPERATING REVENUES: 1960, 1965, AND 1966

[In millions of dollars, except as indicated. As of December 31 or calendar year, as applicable. Companies listed derive at least 50 percent of their operating revenues from carrier operations; excludes companies primarily engaged in freight forwarding, express shipping, or vehicle rental]

| OPERATING REVENUE GROUP | 1960 | | 1965 | | 1966 | | | |
|-------------------------|---------------------------------|---------------------|---------------------------------|---------------------|---------------------------------|---------------------|------------|-------------------------------|
| | Operating revenues ¹ | Assets ² | Operating revenues ¹ | Assets ² | Operating revenues ¹ | Assets ² | Net income | Invested capital ³ |
| 50 largest..... | 11,795 | 30,684 | 15,702 | 35,606 | 17,539 | 38,846 | 1,467 | 20,165 |
| Lowest ten..... | 719 | 1,277 | 927 | 1,919 | 1,109 | 1,926 | 49 | 885 |
| Second ten..... | 1,111 | 1,905 | 1,268 | 1,733 | 1,514 | 1,766 | 110 | 788 |
| Third ten..... | 1,785 | 5,548 | 2,257 | 5,694 | 2,440 | 7,296 | 189 | 4,120 |
| Fourth ten..... | 2,718 | 7,589 | 3,690 | 8,331 | 4,204 | 8,190 | 387 | 4,000 |
| Highest ten..... | 5,461 | 14,366 | 7,569 | 17,930 | 8,272 | 19,668 | 731 | 10,392 |
| Percent of total..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lowest ten..... | 6.1 | 4.2 | 5.9 | 5.4 | 6.3 | 5.0 | 3.3 | 4.4 |
| Second ten..... | 9.4 | 6.2 | 8.0 | 4.9 | 8.6 | 4.5 | 7.5 | 3.8 |
| Third ten..... | 15.1 | 18.1 | 14.4 | 16.0 | 13.9 | 18.8 | 12.9 | 20.4 |
| Fourth ten..... | 23.0 | 24.7 | 23.5 | 23.4 | 24.0 | 21.1 | 26.4 | 19.8 |
| Highest ten..... | 46.3 | 46.8 | 48.2 | 50.4 | 47.2 | 50.6 | 49.8 | 51.6 |

¹ Gross receipts from transportation (including consolidated subsidiaries) for year. Trucking revenues from railroads included for those railroads that consolidate their trucking operations.

² Total assets employed in business, net of depreciation.

³ Capital stock, surplus, and retained earnings (i.e., net worth).

Source: Fortune, New York, N.Y.; adapted from *The Fortune Directory*, June 15, 1967. (Copyright, 1967, by Time Inc.)

No. 804. EMPLOYMENT IN TRANSPORTATION, BY TYPE OF TRANSPORT: 1960 TO 1967

[Annual averages]

| TYPE OF TRANSPORT | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| NUMBER (1,000) | | | | | | | | |
| Total..... | 2,550 | 2,460 | 2,472 | 2,469 | 2,488 | 2,531 | 2,596 | 2,657 |
| Railroad..... | 885 | 817 | 796 | 772 | 756 | 735 | 718 | 693 |
| Local and interurban passenger..... | 284 | 277 | 271 | 269 | 267 | 269 | 269 | 273 |
| Trucking and warehousing..... | 856 | 845 | 885 | 904 | 919 | 964 | 1,008 | 1,030 |
| Air..... | 191 | 196 | 197 | 202 | 213 | 229 | 247 | 293 |
| Pipeline..... | 23 | 22 | 22 | 21 | 20 | 20 | 19 | 19 |
| Other..... | 310 | 304 | 302 | 302 | 314 | 315 | 335 | 350 |
| PERCENT | | | | | | | | |
| Total..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Railroad..... | 34.7 | 33.2 | 32.2 | 31.3 | 30.4 | 29.0 | 27.7 | 26.1 |
| Local and interurban passenger..... | 11.2 | 11.3 | 11.0 | 10.9 | 10.7 | 10.6 | 10.4 | 10.3 |
| Trucking and warehousing..... | 33.6 | 34.4 | 35.8 | 36.6 | 36.9 | 38.1 | 38.8 | 38.8 |
| Air..... | 7.5 | 8.0 | 8.0 | 8.2 | 8.5 | 9.1 | 9.5 | 11.0 |
| Pipeline..... | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 |
| Other..... | 12.2 | 12.3 | 12.2 | 12.2 | 12.6 | 12.4 | 12.9 | 13.2 |

Source: Dept. of Labor, Bureau of Labor Statistics; *Employment and Earnings Statistics for the United States, 1960-66* (Bulletin No. 1312-4), and *Employment and Earnings and Monthly Report on the Labor Force*.

No. 805. RURAL AND MUNICIPAL HIGHWAY MILEAGE, BY GOVERNMENTAL CONTROL: 1930 TO 1966

[In thousands. As of December 31. Prior to 1960, excludes Alaska and Hawaii. Municipal roads are those within incorporated places, densely populated New England towns, and certain of the more populous unincorporated areas. All other roads are classed as rural. See *Historical Statistics, Colonial Times to 1957*, series Q 246, and, for similar but not exactly comparable data, series Q 247 and Q 251]

| MILEAGE AND CONTROL | 1930 | 1940 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total mileage | (NA) | (NA) | 3,313 | 3,418 | 3,546 | 3,620 | 3,644 | 3,690 | 3,698 |
| Rural mileage..... | 3,009 | 2,990 | 2,990 | 3,045 | 3,116 | 3,145 | 3,153 | 3,183 | 3,188 |
| Under State control..... | 324 | 524 | 581 | 619 | 659 | 678 | 682 | 687 | 695 |
| Under local control..... | 2,685 | 2,466 | 2,336 | 2,333 | 2,345 | 2,346 | 2,344 | 2,346 | 2,333 |
| Under Federal control..... | | | 73 | 93 | 112 | 121 | 127 | 150 | 160 |
| Municipal mileage..... | (NA) | (NA) | 323 | 373 | 430 | 475 | 491 | 507 | 510 |
| Under State control..... | (NA) | 27 | 36 | 42 | 50 | 59 | 62 | 65 | 66 |
| Under local control..... | (NA) | (NA) | 287 | 331 | 380 | 416 | 429 | 442 | 444 |

NA Not available.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*.

No. 806. HIGHWAY MILEAGE OF RURAL ROADS: 1930 TO 1966

[In thousands. As of December 31. Prior to 1960, excludes Alaska and Hawaii. For definition of rural roads, see headnote, table 805. See *Historical Statistics, Colonial Times to 1957*, series Q 247-250, for similar but not exactly comparable data]

| TYPE AND CONTROL | 1930 | 1940 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| All rural roads | 3,009 | 2,990 | 2,990 | 3,045 | 3,116 | 3,146 | 3,153 | 3,183 | 3,188 |
| Primary State highways..... | 324 | 329 | 363 | 387 | 403 | 409 | 411 | 414 | 418 |
| Secondary State highways..... | | 81 | 88 | 91 | 105 | 111 | 112 | 112 | 114 |
| County roads under State control..... | | - | 114 | 122 | 131 | 136 | 136 | 136 | 137 |
| County and local roads ¹ | 2,685 | 2,466 | 2,417 | 2,436 | 2,472 | 2,489 | 2,494 | 2,520 | 2,518 |
| Surfaced rural roads | 694 | 1,340 | 1,679 | 1,942 | 2,165 | 2,253 | 2,272 | 2,302 | 2,321 |
| Primary State highways..... | 227 | 302 | 351 | 381 | 399 | 405 | 406 | 410 | 414 |
| Secondary State highways..... | | 65 | 73 | 84 | 100 | 107 | 108 | 108 | 110 |
| County roads under State control..... | | - | 55 | 83 | 103 | 111 | 115 | 116 | 118 |
| County and local roads ¹ | 467 | 918 | 1,172 | 1,374 | 1,555 | 1,626 | 1,642 | 1,666 | 1,677 |
| Nonsurfaced rural roads² | 2,315 | 1,650 | 1,311 | 1,103 | 951 | 892 | 881 | 881 | 867 |
| Primary State highways..... | 97 | 27 | 12 | 6 | 4 | 4 | 5 | 4 | 4 |
| Secondary State highways..... | | 16 | 15 | 7 | 5 | 5 | 4 | 4 | 4 |
| County roads under State control..... | | - | 59 | 39 | 28 | 25 | 21 | 20 | 19 |
| County and local roads ^{1,2} | 2,218 | 1,548 | 1,245 | 1,062 | 917 | 863 | 852 | 854 | 841 |

- Represents zero. ¹ Includes mileage in national and State parks, forests, reservations, etc., not included as part of State or local systems. ² Includes mileage not classified by type of surface.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*.

No. 807. HIGHWAY CONSTRUCTION—CONTRACTS AWARDED: 1947 TO 1967

[In millions of dollars. Prior to 1960, excludes Alaska and Hawaii. Covers Federally and State owned highways only; includes force-account construction authorized to start]

| OWNERSHIP AND SOURCE OF FUNDS | 1947 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 |
|-------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total | 917 | 1,528 | 2,619 | 4,030 | 4,418 | 4,861 | 4,933 | 5,458 | 5,512 |
| Federally owned highways..... | 25 | 36 | 59 | 129 | 142 | 116 | 130 | 126 | 68 |
| State owned highways..... | 892 | 1,492 | 2,560 | 3,901 | 4,275 | 4,745 | 4,803 | 5,332 | 5,444 |
| Federally aided projects: | | | | | | | | | |
| Total value..... | 635 | 798 | 1,256 | 3,097 | 3,730 | 4,055 | 3,899 | 4,173 | 4,112 |
| Federal funds..... | 329 | 415 | 667 | 2,218 | 2,770 | 3,084 | 2,979 | 3,131 | 3,077 |
| Independent State projects: | | | | | | | | | |
| Total value..... | 257 | 694 | 1,304 | 804 | 546 | 690 | 904 | 1,159 | 1,332 |
| Toll facilities..... | (NA) | 228 | 695 | 165 | 27 | 82 | 49 | 135 | 213 |

NA Not available.

Source: Dept. of Commerce, Bureau of the Census. In Dept. of Commerce, Business and Defense Services Administration; *Construction Review*.

No. 808. MUNICIPAL AND RURAL HIGHWAY MILEAGE—STATES: 1966

[As of December 31. For definition of municipal and rural roads, see headnote, table 805. Compiled for latest available year from reports of State authorities and planning survey data.]

| STATE | Total municipal and rural | Municipal | RURAL | | | | | |
|----------------------------|---------------------------|----------------|------------------|------------------|----------------|----------------------|------------------|----------------------|
| | | | Total | Type | | Governmental control | | |
| | | | | Surfaced | Nonsurfaced | State ¹ | Local | Federal ² |
| United States | 3,697,950 | 510,235 | 3,187,715 | 2,321,154 | 866,561 | 3,694,960 | 2,332,511 | 160,244 |
| Alabama..... | 76,765 | 10,579 | 66,186 | 57,904 | 8,282 | 19,761 | 46,425 | - |
| Alaska..... | 6,582 | 6,542 | 6,020 | 2,316 | 3,704 | 4,269 | 1,655 | 96 |
| Arizona..... | 39,770 | 5,434 | 34,336 | 14,060 | 20,276 | 5,091 | 16,814 | 12,431 |
| Arkansas..... | 31,092 | 8,427 | 72,665 | 46,608 | 26,057 | 12,882 | 57,126 | 2,657 |
| California..... | 171,007 | 40,723 | 130,284 | 77,972 | 52,312 | 14,607 | 79,208 | 36,469 |
| Colorado..... | 80,360 | 6,175 | 74,185 | 40,803 | 33,382 | 8,127 | 65,977 | 81 |
| Connecticut..... | 17,860 | 12,604 | 5,256 | 5,165 | 91 | 1,512 | 3,744 | - |
| Delaware..... | 4,813 | 1,369 | 3,444 | 3,433 | 11 | 3,444 | - | - |
| Dist. of Columbia..... | 1,083 | 1,083 | (X) | (X) | (X) | (X) | (X) | (X) |
| Florida..... | 80,147 | 18,223 | 61,924 | 38,895 | 23,029 | 15,965 | 45,959 | - |
| Georgia..... | 96,973 | 13,581 | 83,392 | 52,160 | 31,232 | 15,124 | 68,217 | 51 |
| Hawaii..... | 3,373 | 804 | 2,469 | 2,289 | 180 | 1,018 | 1,360 | 91 |
| Idaho..... | 53,591 | 2,783 | 50,808 | 26,178 | 24,690 | 4,690 | 26,907 | 10,211 |
| Illinois..... | 128,389 | 25,883 | 102,506 | 95,291 | 7,215 | 13,068 | 89,438 | - |
| Indiana..... | 90,749 | 12,626 | 78,123 | 73,999 | 4,124 | 10,222 | 67,901 | - |
| Iowa..... | 112,308 | 12,616 | 99,692 | 92,252 | 7,440 | 9,104 | 90,588 | - |
| Kansas..... | 133,296 | 9,805 | 123,491 | 83,381 | 40,110 | 10,030 | 113,461 | - |
| Kentucky..... | 70,085 | 4,822 | 65,263 | 50,739 | 14,524 | 21,153 | 43,846 | 264 |
| Louisiana..... | 50,779 | 9,686 | 41,093 | 35,822 | 5,271 | 14,199 | 26,894 | - |
| Maine..... | 21,192 | 2,304 | 18,888 | 16,950 | 1,938 | 10,921 | 7,904 | 163 |
| Maryland..... | 25,325 | 3,898 | 21,427 | 21,359 | 68 | 4,879 | 16,435 | 113 |
| Massachusetts..... | 27,401 | 19,957 | 7,444 | 6,588 | 856 | 1,092 | 6,323 | 29 |
| Michigan..... | 113,590 | 18,566 | 95,024 | 76,412 | 18,612 | 7,986 | 87,038 | - |
| Minnesota..... | 126,385 | 15,831 | 110,554 | 98,139 | 12,415 | 11,300 | 97,439 | 1,815 |
| Mississippi..... | 65,416 | 6,164 | 59,252 | 56,212 | 3,040 | 9,786 | 49,274 | 192 |
| Missouri..... | 114,154 | 14,518 | 99,636 | 91,143 | 8,493 | 29,952 | 69,086 | 598 |
| Montana..... | 74,584 | 2,129 | 72,455 | 36,346 | 36,109 | 11,543 | 51,210 | 9,702 |
| Nebraska..... | 103,195 | 6,098 | 97,097 | 63,030 | 34,017 | 9,372 | 87,261 | 464 |
| Nevada..... | 46,778 | 1,728 | 45,050 | 13,181 | 31,869 | 6,212 | 38,837 | 1 |
| New Hampshire..... | 14,528 | 1,624 | 12,904 | 10,207 | 2,697 | 3,950 | 8,876 | 78 |
| New Jersey..... | 33,161 | 16,110 | 17,051 | 14,775 | 2,276 | 1,787 | 15,264 | - |
| New Mexico..... | 66,819 | 3,913 | 62,906 | 16,154 | 46,752 | 11,503 | 46,170 | 5,233 |
| New York..... | 102,132 | 16,856 | 85,276 | 76,103 | 9,173 | 14,059 | 71,207 | 10 |
| North Carolina..... | 34,405 | 12,756 | 71,649 | 62,851 | 8,798 | 69,812 | - | 1,837 |
| North Dakota..... | 106,884 | 3,010 | 103,874 | 62,864 | 41,010 | 6,344 | 96,986 | 544 |
| Ohio..... | 107,753 | 22,733 | 85,020 | 83,288 | 1,732 | 16,542 | 68,478 | - |
| Oklahoma..... | 106,769 | 12,675 | 94,094 | 63,789 | 30,305 | 11,432 | 82,662 | - |
| Oregon..... | 35,590 | 5,709 | 79,881 | 47,773 | 32,108 | 8,747 | 34,668 | 36,466 |
| Pennsylvania..... | 112,858 | 22,815 | 90,043 | 73,235 | 16,808 | 43,728 | 46,098 | 217 |
| Rhode Island..... | 4,654 | 3,831 | 823 | 758 | 65 | 337 | 486 | - |
| South Carolina..... | 58,740 | 6,074 | 52,666 | 31,248 | 21,418 | 29,293 | 23,373 | - |
| South Dakota..... | 83,864 | 2,870 | 80,994 | 54,514 | 26,480 | 8,609 | 70,730 | 1,655 |
| Tennessee..... | 76,860 | 8,966 | 67,894 | 66,236 | 1,658 | 8,180 | 58,742 | 972 |
| Texas..... | 237,910 | 40,744 | 197,166 | 130,151 | 67,015 | 58,694 | 138,472 | - |
| Utah..... | 38,352 | 4,229 | 34,123 | 17,123 | 17,000 | 5,156 | 20,099 | 8,868 |
| Vermont..... | 13,980 | 918 | 13,062 | 11,093 | 1,969 | 2,291 | 10,748 | 23 |
| Virginia..... | 59,319 | 7,691 | 51,628 | 50,416 | 1,212 | 49,105 | 752 | 1,771 |
| Washington..... | 72,955 | 9,632 | 63,323 | 50,831 | 12,492 | 10,755 | 39,512 | 13,056 |
| West Virginia..... | 35,659 | 3,550 | 32,109 | 22,501 | 9,608 | 31,234 | - | 875 |
| Wisconsin..... | 100,780 | 13,269 | 87,511 | 81,679 | 5,832 | 10,604 | 76,838 | 69 |
| Wyoming..... | 76,956 | 1,202 | 75,754 | 14,888 | 60,866 | 5,489 | 66,123 | 4,142 |

- Represents zero. X Not applicable.

¹ Includes 25,323 miles of State park, forest, institutional, and other roads, rural and municipal, that are not part of State or local highway systems. Also includes 4,021 miles of toll roads, bridges, tunnels, etc.² Comprises mileage of roads not forming a part of State or local highway systems.³ Includes mileage of county roads under State control in Alabama (10 counties), Delaware, Nevada, North Carolina, Virginia (all but 2 counties), and West Virginia; farm-to-market system in Louisiana; and the State-aid system in Maine.Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics, 1966*.

No. 809. MILEAGE AND COST OF DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS: 1917 TO 1967

[Prior to 1960, excludes Alaska; includes Puerto Rico. See also *Historical Statistics, Colonial Times to 1967*, series Q 261-264]

| PERIOD OR YEAR | MILES OF HIGHWAY (1,000) | | COST ³ (mil. dol.) | | | YEAR | MILES OF HIGHWAY (1,000) | | COST ³ (mil. dol.) | | |
|----------------|------------------------------|-------------------------------------|-------------------------------|---------------|-------------|-----------|------------------------------|-------------------------------------|-------------------------------|---------------|-------------|
| | Total exist-ent ¹ | Com-pleted during year ² | Total | Federal funds | State funds | | Total exist-ent ¹ | Com-pleted during year ² | Total | Federal funds | State funds |
| 1917-1921..... | (NA.) | 13 | 222 | 95 | 127 | 1960----- | 867 | 21 | 3,264 | 2,273 | 992 |
| 1925----- | 179 | 11 | 221 | 100 | 121 | 1961----- | 880 | 21 | 3,265 | 2,339 | 925 |
| 1930----- | 193 | 10 | 237 | 100 | 137 | 1962----- | 887 | 21 | 3,423 | 2,437 | 886 |
| 1935----- | 214 | 13 | 242 | 218 | 24 | 1963----- | 892 | 20 | 3,790 | 2,767 | 1,023 |
| 1940----- | 234 | 12 | 269 | 150 | 119 | 1964----- | 901 | 19 | 4,560 | 3,385 | 1,175 |
| 1945----- | 233 | 3 | 101 | 76 | 25 | 1965----- | 909 | 17 | 4,569 | 3,430 | 1,139 |
| 1950----- | 641 | 20 | 753 | 390 | 364 | 1966----- | 911 | 16 | 5,362 | 4,151 | 1,211 |
| 1955----- | 742 | 23 | 1,287 | 666 | 621 | 1967----- | (NA.) | 14 | 5,178 | 4,039 | 1,139 |

NA. Not available.

¹ Through 1945, total existing mileage of Federal-aid primary system; beginning 1950, includes secondary system. Through 1955, data as of June 30; thereafter, as of Dec. 31.

² Comprises construction and reconstruction mileage.

³ Represents actual expenditures of funds on calendar-year basis. Beginning 1935, includes money spent on public works and defense highways. Beginning 1940, includes secondary highways.

Source: Dept. of Transportation, Federal Highway Administration; annual reports, *Highway Statistics* and *Highway Progress, 1967*, and releases.

No. 810. FEDERAL-AID PAYMENTS TO STATE AND LOCAL GOVERNMENTS FOR HIGHWAY CONSTRUCTION—STATES AND PUERTO RICO: 1960 TO 1967

[In millions of dollars. For years ending June 30]

| STATE OR OTHER AREA | 1960 | 1965 | 1966 | 1967 | STATE OR OTHER AREA | 1960 | 1965 | 1966 | 1967 |
|---------------------|--------------|--------------|--------------|--------------|--------------------------|------|------|------|------|
| Total..... | 2,942 | 4,018 | 3,974 | 4,024 | Mont..... | 31 | 59 | 52 | 53 |
| U.S..... | 2,935 | 4,011 | 3,965 | 4,017 | Nebr..... | 27 | 37 | 36 | 45 |
| Ala..... | 51 | 91 | 93 | 94 | Nev..... | 10 | 42 | 35 | 44 |
| Alaska..... | 16 | 53 | 45 | 52 | N.H..... | 20 | 16 | 18 | 16 |
| Ariz..... | 31 | 66 | 66 | 81 | N.J..... | 53 | 65 | 65 | 104 |
| Ark..... | 32 | 39 | 53 | 51 | N. Mex..... | 26 | 48 | 62 | 56 |
| Calif..... | 172 | 324 | 343 | 338 | N.Y..... | 217 | 198 | 178 | 179 |
| Colo..... | 36 | 61 | 54 | 49 | N.C..... | 59 | 51 | 55 | 61 |
| Conn..... | 29 | 48 | 52 | 47 | N. Dak..... | 33 | 31 | 23 | 25 |
| Del..... | 8 | 17 | 20 | 15 | Ohio..... | 159 | 186 | 213 | 199 |
| D.C..... | 16 | 26 | 20 | 23 | Okla..... | 33 | 58 | 49 | 55 |
| Fla..... | 75 | 88 | 85 | 78 | Oreg..... | 54 | 77 | 76 | 76 |
| Ga..... | 61 | 81 | 80 | 112 | Pa..... | 117 | 142 | 193 | 189 |
| Hawaii..... | 4 | 10 | 19 | 23 | R.I..... | 13 | 25 | 14 | 14 |
| Idaho..... | 26 | 40 | 32 | 28 | S.C..... | 47 | 35 | 40 | 39 |
| Ill..... | 200 | 209 | 140 | 146 | S. Dak..... | 26 | 45 | 33 | 33 |
| Ind..... | 74 | 93 | 90 | 95 | Tenn..... | 67 | 108 | 103 | 95 |
| Iowa..... | 68 | 53 | 56 | 56 | Tex..... | 198 | 216 | 183 | 205 |
| Kans..... | 51 | 51 | 47 | 39 | Utah..... | 34 | 61 | 57 | 52 |
| Ky..... | 66 | 60 | 68 | 95 | Vt..... | 17 | 25 | 29 | 25 |
| La..... | 70 | 103 | 78 | 80 | Va..... | 53 | 163 | 149 | 123 |
| Maine..... | 20 | 24 | 27 | 22 | Wash..... | 44 | 75 | 94 | 92 |
| Md..... | 27 | 50 | 37 | 40 | W. Va..... | 47 | 56 | 69 | 72 |
| Mass..... | 67 | 78 | 72 | 83 | Wis..... | 61 | 54 | 48 | 51 |
| Mich..... | 96 | 133 | 143 | 161 | Wyo..... | 26 | 48 | 38 | 37 |
| Minn..... | 65 | 105 | 102 | 97 | Undist. to States, etc.. | 8 | 17 | 52 | 39 |
| Miss..... | 36 | 58 | 53 | 66 | P.R..... | 7 | 7 | 9 | 7 |
| Mo..... | 76 | 114 | 129 | 88 | | | | | |

¹ Includes \$11 million as follows: Appalachian highways, \$9 million, and \$1 million each for control of outdoor advertising and junkyards and for landscaping and scenic enhancement.

² Includes \$63 million as follows: Appalachian highways, \$40 million, control of outdoor advertising and junkyards, \$2 million, landscaping and scenic enhancement, \$20 million, and highway safety, \$1 million.

³ Deduct.

Source: Treasury Dept.; *Annual Report of the Secretary*.

No. 811. DESIGNATED FEDERAL-AID HIGHWAY SYSTEMS, 1966, AND PROJECTS, 1967—STATES AND PUERTO RICO

[Money figures in millions of dollars. Systems as of December 31, and projects as of June 30. Projects comprise those financed from the Federal-aid primary, secondary, urban, and interstate funds. See text, pp. 539 and 540]

| STATE OR OTHER AREA | SYSTEMS (miles), 1966 | | | | PROJECTS, 1967 ¹ | | | | | |
|---------------------------|-----------------------|--|-----------------|----------------|------------------------------|----------------|----------------|--------------------|-----------------|----------------|
| | Primary | | | Secondary | Completed during fiscal year | | | Under construction | | |
| | Total | National system of interstate highways | | | Miles | Total cost | Federal funds | Miles | Total cost | Federal funds |
| | | Total | Open to traffic | | | | | | | |
| Total..... | 268,427 | 240,956 | 23,476 | 642,293 | 16,895 | 5,680.8 | 4,392.0 | 21,479 | 11,441.6 | 8,939.2 |
| United States..... | 267,882 | 240,956 | 23,476 | 641,158 | 16,884 | 5,670.0 | 4,386.8 | 21,427 | 11,405.5 | 8,921.7 |
| Alabama..... | 6,608 | 880 | 426 | 25,015 | 454 | 165.5 | 129.3 | 448 | 255.1 | 207.0 |
| Alaska..... | 3,285 | - | - | 2,175 | 502 | 51.8 | 49.1 | 198 | 77.5 | 73.4 |
| Arizona..... | 3,484 | 1,167 | 712 | 4,032 | 374 | 98.6 | 85.6 | 285 | 98.9 | 86.6 |
| Arkansas..... | 4,110 | 2,520 | 245 | 14,022 | 371 | 59.4 | 44.4 | 505 | 119.4 | 90.2 |
| California..... | 9,766 | 2,165 | 1,136 | 13,666 | 434 | 774.7 | 632.4 | 670 | 1,016.4 | 813.1 |
| Colorado..... | 4,568 | 946 | 547 | 4,194 | 271 | 46.1 | 35.0 | 340 | 100.0 | 80.7 |
| Connecticut..... | 1,273 | 296 | 259 | 1,249 | 23 | 144.3 | 119.6 | 24 | 110.5 | 84.5 |
| Delaware..... | 664 | 41 | 20 | 1,476 | 73 | 29.5 | 21.1 | 45 | 67.9 | 55.0 |
| Dist. of Columbia..... | 167 | 30 | 11 | 126 | 4 | 6.1 | 4.6 | 5 | 128.0 | 110.1 |
| Florida..... | 5,499 | 1,154 | 565 | 15,064 | 317 | 118.5 | 90.5 | 235 | 178.9 | 137.5 |
| Georgia..... | 9,030 | 1,106 | 454 | 20,166 | 368 | 95.8 | 69.2 | 1,007 | 416.0 | 318.1 |
| Hawaii..... | 564 | 51 | 10 | 654 | 20 | 39.5 | 29.9 | 13 | 56.2 | 44.6 |
| Idaho..... | 3,282 | 608 | 383 | 5,675 | 44 | 11.5 | 8.9 | 340 | 81.4 | 67.5 |
| Illinois..... | 11,503 | 1,628 | 927 | 14,517 | 463 | 284.6 | 223.3 | 458 | 363.1 | 287.4 |
| Indiana..... | 6,053 | 1,115 | 586 | 17,500 | 163 | 163.5 | 123.4 | 355 | 277.9 | 216.7 |
| Iowa..... | 10,253 | 709 | 425 | 33,477 | 885 | 97.7 | 70.3 | 935 | 147.5 | 115.1 |
| Kansas..... | 7,800 | 799 | 627 | 24,305 | 1,037 | 83.5 | 54.9 | 914 | 103.5 | 72.9 |
| Kentucky..... | 4,582 | 733 | 344 | 15,210 | 150 | 106.8 | 83.6 | 206 | 197.0 | 160.4 |
| Louisiana..... | 3,361 | 671 | 236 | 8,879 | 183 | 73.9 | 57.1 | 330 | 441.6 | 357.8 |
| Maine..... | 1,969 | 312 | 235 | 2,511 | 121 | 30.7 | 23.3 | 134 | 45.1 | 33.1 |
| Maryland..... | 2,463 | 354 | 266 | 7,692 | 52 | 39.9 | 32.6 | 254 | 183.7 | 138.5 |
| Massachusetts..... | 2,364 | 451 | 334 | 2,305 | 44 | 135.7 | 104.4 | 115 | 255.9 | 199.2 |
| Michigan..... | 6,980 | 1,082 | 801 | 26,768 | 677 | 139.6 | 98.1 | 666 | 485.2 | 382.7 |
| Minnesota..... | 8,499 | 904 | 322 | 30,790 | 1,009 | 151.7 | 116.7 | 1,182 | 342.7 | 273.4 |
| Mississippi..... | 5,868 | 678 | 337 | 16,513 | 451 | 68.9 | 51.3 | 789 | 152.4 | 112.6 |
| Missouri..... | 8,919 | 1,120 | 753 | 23,152 | 264 | 70.9 | 47.6 | 369 | 351.9 | 280.9 |
| Montana..... | 6,447 | 1,185 | 494 | 9,663 | 351 | 78.1 | 63.1 | 304 | 125.4 | 99.8 |
| Nebraska..... | 5,916 | 478 | 300 | 17,825 | 672 | 79.1 | 58.1 | 435 | 58.4 | 40.4 |
| Nevada..... | 2,289 | 535 | 207 | 3,562 | 106 | 30.6 | 28.1 | 136 | 94.9 | 79.7 |
| New Hampshire..... | 1,269 | 215 | 146 | 1,702 | 41 | 27.5 | 21.4 | 53 | 34.3 | 26.7 |
| New Jersey..... | 2,194 | 373 | 161 | 2,231 | 57 | 136.8 | 107.3 | 94 | 412.7 | 314.7 |
| New Mexico..... | 4,037 | 1,003 | 577 | 5,886 | 268 | 88.2 | 76.0 | 184 | 84.5 | 67.1 |
| New York..... | 12,065 | 1,225 | 975 | 19,363 | 243 | 256.8 | 169.3 | 316 | 592.3 | 413.1 |
| North Carolina..... | 4,818 | 770 | 402 | 29,394 | 210 | 76.4 | 53.0 | 381 | 223.4 | 153.8 |
| North Dakota..... | 4,687 | 571 | 386 | 13,332 | 715 | 33.7 | 24.8 | 1,369 | 63.9 | 42.7 |
| Ohio..... | 8,196 | 1,530 | 998 | 21,316 | 226 | 325.6 | 259.4 | 316 | 440.2 | 344.0 |
| Oklahoma..... | 8,027 | 798 | 573 | 13,913 | 328 | 45.2 | 30.1 | 599 | 167.0 | 129.0 |
| Oregon..... | 4,065 | 734 | 632 | 8,218 | 173 | 132.4 | 107.6 | 106 | 113.6 | 94.3 |
| Pennsylvania..... | 8,489 | 1,573 | 975 | 13,509 | 152 | 142.8 | 106.8 | 434 | 727.1 | 570.2 |
| Rhode Island..... | 442 | 71 | 39 | 558 | 10 | 15.2 | 10.6 | 26 | 47.4 | 32.5 |
| South Carolina..... | 5,247 | 681 | 358 | 20,445 | 511 | 42.4 | 29.4 | 1,191 | 99.0 | 71.1 |
| South Dakota..... | 6,021 | 679 | 377 | 13,078 | 632 | 40.5 | 30.1 | 676 | 65.8 | 50.3 |
| Tennessee..... | 6,820 | 1,051 | 527 | 11,827 | 596 | 123.5 | 92.4 | 574 | 352.6 | 277.5 |
| Texas..... | 17,544 | 3,023 | 1,827 | 39,206 | 1,266 | 228.9 | 173.8 | 1,759 | 509.4 | 376.7 |
| Utah..... | 2,369 | 934 | 253 | 3,964 | 201 | 67.2 | 60.8 | 204 | 124.2 | 115.5 |
| Vermont..... | 1,577 | 321 | 131 | 1,891 | 53 | 20.2 | 14.4 | 84 | 59.4 | 48.1 |
| Virginia..... | 5,697 | 1,060 | 579 | 18,702 | 293 | 245.7 | 201.0 | 411 | 321.4 | 263.2 |
| Washington..... | 3,886 | 727 | 433 | 12,035 | 283 | 121.8 | 95.4 | 217 | 170.5 | 143.8 |
| West Virginia..... | 2,524 | 516 | 218 | 10,753 | 110 | 104.3 | 80.4 | 164 | 301.0 | 236.9 |
| Wisconsin..... | 6,353 | 459 | 323 | 19,125 | 443 | 74.4 | 50.8 | 370 | 126.6 | 88.9 |
| Wyoming..... | 3,929 | 914 | 537 | 2,527 | 189 | 43.8 | 36.6 | 241 | 60.5 | 52.1 |
| Puerto Rico..... | 545 | - | - | 1,135 | 11 | 10.8 | 5.2 | 62 | 36.1 | 17.7 |

- Represents zero.

¹ Excludes highway planning and research work financed with 1½ percent Federal-aid highway funds available pursuant to 23 U.S.C. 307(c)(2). (Completed, \$58.9 million total cost, \$42.5 million Federal funds; underway, \$195.3 million total cost, \$147.9 million Federal funds.)

² Full authorization 41,000 miles. The 44 mile difference between full authorization and miles reported includes routes for which final locations not yet determined.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Supplement to Highways & Human Values*, 1967.

State Highway Funds

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No. 812. DISBURSEMENTS OF STATE HIGHWAY FUNDS—STATES: 1940 TO 1966

[In millions of dollars. Comprises disbursements, whether from current revenues or proceeds of loans, for construction, maintenance, interest and principal payments on highway bonds, transfers to local units, and miscellaneous disbursements. Includes transactions by State toll authorities. Beginning 1965, excludes amounts allocated for collection and nonhighway purposes, and bonds redeemed by refunding.]

| STATE | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|--|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| United States¹ | 1,678 | 1,302 | 3,562 | 6,034 | 8,957 | 11,248 | 12,018 | 11,465 | 12,510 |
| Alabama..... | 28 | 26 | 49 | 87 | 174 | 162 | 214 | 228 | 227 |
| Alaska..... | (NA) | (NA) | (NA) | (NA) | 19 | 49 | 70 | 71 | 78 |
| Arizona..... | 9 | 6 | 20 | 33 | 72 | 95 | 101 | 106 | 151 |
| Arkansas..... | 18 | 15 | 46 | 55 | 95 | 128 | 110 | 119 | 135 |
| California..... | 99 | 138 | 268 | 558 | 786 | 1,047 | 1,242 | 1,110 | 1,200 |
| Colorado..... | 15 | 12 | 38 | 56 | 91 | 108 | 128 | 129 | 128 |
| Connecticut..... | 23 | 15 | 38 | 79 | 161 | 207 | 212 | 216 | 216 |
| Delaware..... | 4 | 3 | 32 | 26 | 36 | 68 | 83 | 87 | 88 |
| Dist. of Columbia..... | 7 | 4 | 11 | 24 | 48 | 53 | 59 | 42 | 42 |
| Florida..... | 39 | 36 | 93 | 152 | 316 | 374 | 406 | 316 | 348 |
| Georgia..... | 39 | 24 | 74 | 109 | 167 | 239 | 217 | 208 | 242 |
| Hawaii..... | (NA) | (NA) | (NA) | (NA) | 23 | 25 | 31 | 35 | 45 |
| Idaho..... | 8 | 6 | 19 | 27 | 44 | 64 | 57 | 66 | 58 |
| Illinois..... | 71 | 53 | 113 | 229 | 475 | 476 | 571 | 471 | 493 |
| Indiana..... | 40 | 35 | 69 | 200 | 241 | 253 | 300 | 286 | 302 |
| Iowa..... | 33 | 23 | 79 | 109 | 169 | 189 | 199 | 193 | 238 |
| Kansas..... | 21 | 16 | 50 | 110 | 109 | 124 | 141 | 134 | 134 |
| Kentucky..... | 26 | 20 | 67 | 102 | 138 | 280 | 225 | 223 | 273 |
| Louisiana..... | 30 | 22 | 71 | 115 | 204 | 257 | 257 | 240 | 265 |
| Maine..... | 14 | 10 | 24 | 65 | 62 | 72 | 73 | 80 | 84 |
| Maryland..... | 27 | 19 | 84 | 138 | 166 | 228 | 231 | 217 | 244 |
| Massachusetts..... | 38 | 21 | 98 | 203 | 237 | 283 | 357 | 284 | 281 |
| Michigan..... | 67 | 50 | 106 | 249 | 418 | 441 | 411 | 427 | 490 |
| Minnesota..... | 31 | 23 | 65 | 101 | 167 | 185 | 223 | 230 | 247 |
| Mississippi..... | 31 | 23 | 42 | 75 | 110 | 139 | 146 | 160 | 151 |
| Missouri..... | 28 | 21 | 53 | 105 | 165 | 234 | 254 | 241 | 242 |
| Montana..... | 12 | 7 | 22 | 30 | 54 | 81 | 86 | 86 | 88 |
| Nebraska..... | 20 | 16 | 36 | 59 | 95 | 106 | 106 | 97 | 119 |
| Nevada..... | 4 | 2 | 9 | 15 | 22 | 45 | 65 | 58 | 63 |
| New Hampshire..... | 8 | 7 | 14 | 30 | 50 | 51 | 51 | 51 | 57 |
| New Jersey..... | 58 | 46 | 188 | 303 | 221 | 388 | 416 | 291 | 318 |
| New Mexico..... | 13 | 8 | 26 | 39 | 64 | 82 | 82 | 101 | 104 |
| New York..... | 199 | 114 | 304 | 471 | 652 | 793 | 784 | 752 | 928 |
| North Carolina..... | 40 | 29 | 136 | 141 | 179 | 202 | 205 | 219 | 255 |
| North Dakota..... | 7 | 6 | 22 | 28 | 50 | 60 | 65 | 51 | 63 |
| Ohio..... | 93 | 76 | 147 | 383 | 523 | 600 | 603 | 661 | 733 |
| Oklahoma..... | 24 | 24 | 73 | 113 | 134 | 204 | 200 | 179 | 184 |
| Oregon..... | 18 | 14 | 50 | 79 | 113 | 161 | 179 | 185 | 181 |
| Pennsylvania..... | 128 | 73 | 279 | 350 | 423 | 555 | 625 | 667 | 693 |
| Rhode Island..... | 8 | 6 | 14 | 30 | 42 | 55 | 64 | 62 | 62 |
| South Carolina..... | 23 | 22 | 46 | 57 | 109 | 101 | 105 | 114 | 120 |
| South Dakota..... | 9 | 6 | 20 | 34 | 57 | 75 | 90 | 68 | 71 |
| Tennessee..... | 34 | 32 | 79 | 108 | 187 | 244 | 259 | 238 | 260 |
| Texas..... | 80 | 67 | 178 | 282 | 493 | 563 | 601 | 513 | 535 |
| Utah..... | 6 | 6 | 15 | 23 | 49 | 71 | 89 | 89 | 89 |
| Vermont..... | 8 | 4 | 10 | 17 | 43 | 47 | 47 | 53 | 61 |
| Virginia..... | 28 | 29 | 76 | 112 | 211 | 334 | 335 | 353 | 368 |
| Washington..... | 40 | 29 | 78 | 127 | 171 | 282 | 248 | 235 | 272 |
| West Virginia..... | 26 | 27 | 51 | 64 | 110 | 109 | 136 | 169 | 184 |
| Wisconsin..... | 41 | 28 | 68 | 109 | 171 | 212 | 188 | 189 | 236 |
| Wyoming..... | 6 | 3 | 14 | 22 | 44 | 57 | 71 | 65 | 64 |

NA. Not available.

¹ Prior to 1960, excludes Alaska and Hawaii.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*.

No. 813. STATE HIGHWAY FUNDS AVAILABLE, BY SOURCE, AND DISBURSEMENTS, BY PURPOSE—STATES: 1967

[In millions of dollars. Comprises receipts and disbursements of all State imposts on highway users, all other funds available to State highway departments, and State funds other than those of highway departments, which were reported as being applied to highway purposes. Includes transactions of interstate and intrastate toll authorities that are operated by State or quasi-State agencies. Excludes amounts allocated for collection and nonhighway purposes, and bonds redeemed by refunding. See also *Historical Statistics, Colonial Times to 1957*, series Q 266-278]

| STATE | FUNDS AVAILABLE | | | | | DISBURSEMENTS | | | | |
|------------------------|-----------------|--|---------------|----------------------------|--------------------------------|---------------|--|---|--------------------|---|
| | Total | Motor-vehicle fees, motor-fuel and motor-carrier taxes | Federal funds | Income from issue of bonds | All other sources ¹ | Total | For State-administered highways | | | For county and local roads and streets ⁴ |
| | | | | | | | Capital outlay, roads and bridges ² | Maintenance and traffic services ² | Other ³ | |
| United States.... | 16,389 | 6,577 | 4,230 | 1,148 | 4,434 | 12,510 | 7,056 | 1,402 | 1,858 | 2,194 |
| Alabama..... | 262 | 107 | 95 | 25 | 35 | 227 | 112 | 21 | 23 | 71 |
| Alaska..... | 90 | 9 | 63 | - | 18 | 78 | 61 | 11 | 6 | - |
| Arizona..... | 174 | 65 | 83 | - | 26 | 151 | 103 | 10 | 13 | 25 |
| Arkansas..... | 170 | 86 | 53 | - | 31 | 135 | 67 | 24 | 20 | 24 |
| California..... | 1,349 | 734 | 391 | - | 224 | 1,200 | 725 | 60 | 116 | 299 |
| Colorado..... | 162 | 72 | 54 | - | 36 | 128 | 68 | 18 | 14 | 28 |
| Connecticut..... | 317 | 86 | 59 | 35 | 137 | 216 | 116 | 26 | 93 | 11 |
| Delaware..... | 169 | 24 | 20 | 9 | 116 | 88 | 52 | 10 | 24 | 2 |
| Dist. of Columbia..... | 42 | 16 | 18 | 6 | 2 | 42 | (X) | (X) | (X) | 42 |
| Florida..... | 726 | 174 | 83 | 52 | 417 | 348 | 233 | 33 | 66 | 16 |
| Georgia..... | 370 | 128 | 94 | 27 | 121 | 242 | 137 | 18 | 30 | 57 |
| Hawaii..... | 51 | 16 | 24 | 1 | 10 | 45 | 25 | 4 | 10 | 6 |
| Idaho..... | 63 | 31 | 27 | - | 5 | 58 | 33 | 8 | 6 | 11 |
| Illinois..... | 704 | 301 | 152 | 14 | 237 | 493 | 214 | 54 | 76 | 149 |
| Indiana..... | 370 | 176 | 107 | - | 87 | 302 | 139 | 44 | 37 | 82 |
| Iowa..... | 289 | 146 | 70 | - | 73 | 238 | 117 | 18 | 15 | 88 |
| Kansas..... | 184 | 77 | 48 | - | 59 | 134 | 71 | 24 | 10 | 20 |
| Kentucky..... | 511 | 114 | 90 | 157 | 150 | 273 | 167 | 36 | 56 | 14 |
| Louisiana..... | 381 | 106 | 82 | 60 | 133 | 265 | 138 | 27 | 43 | 57 |
| Maine..... | 98 | 40 | 25 | - | 33 | 84 | 41 | 19 | 21 | 3 |
| Maryland..... | 335 | 140 | 39 | 45 | 111 | 244 | 99 | 18 | 73 | 54 |
| Massachusetts..... | 411 | 142 | 98 | 17 | 154 | 281 | 120 | 39 | 102 | 20 |
| Michigan..... | 629 | 270 | 151 | 24 | 184 | 400 | 227 | 31 | 84 | 148 |
| Minnesota..... | 355 | 135 | 106 | 2 | 112 | 247 | 144 | 30 | 14 | 59 |
| Mississippi..... | 197 | 79 | 60 | 10 | 48 | 151 | 71 | 10 | 22 | 48 |
| Missouri..... | 319 | 148 | 121 | - | 50 | 242 | 158 | 41 | 23 | 20 |
| Montana..... | 95 | 31 | 56 | - | 8 | 88 | 71 | 8 | 4 | 5 |
| Nebraska..... | 116 | 65 | 46 | - | 5 | 119 | 64 | 12 | 7 | 36 |
| Nevada..... | 65 | 21 | 34 | - | 10 | 63 | 48 | 5 | 5 | 5 |
| New Hampshire..... | 60 | 29 | 19 | - | 12 | 57 | 30 | 12 | 13 | 2 |
| New Jersey..... | 593 | 100 | 88 | 177 | 228 | 318 | 159 | 38 | 102 | 10 |
| New Mexico..... | 114 | 41 | 64 | 3 | 6 | 104 | 76 | 14 | 9 | 5 |
| New York..... | 1,130 | 504 | 192 | 75 | 359 | 928 | 501 | 120 | 168 | 130 |
| North Carolina..... | 332 | 185 | 54 | - | 93 | 255 | 140 | 64 | 42 | 9 |
| North Dakota..... | 71 | 27 | 29 | - | 15 | 63 | 37 | 6 | 5 | 15 |
| Ohio..... | 879 | 381 | 214 | 75 | 199 | 733 | 403 | 43 | 119 | 108 |
| Oklahoma..... | 324 | 104 | 55 | 94 | 71 | 184 | 90 | 19 | 25 | 60 |
| Oregon..... | 203 | 80 | 61 | - | 42 | 181 | 98 | 18 | 22 | 43 |
| Pennsylvania..... | 875 | 379 | 208 | 127 | 161 | 693 | 402 | 114 | 119 | 58 |
| Rhode Island..... | 103 | 20 | 13 | 52 | 18 | 62 | 46 | 7 | 8 | 1 |
| South Carolina..... | 160 | 80 | 39 | (Z) | 41 | 120 | 74 | 23 | 14 | 9 |
| South Dakota..... | 80 | 32 | 35 | - | 13 | 71 | 45 | 7 | 6 | 13 |
| Tennessee..... | 305 | 144 | 97 | 41 | 23 | 260 | 147 | 18 | 26 | 69 |
| Texas..... | 714 | 336 | 199 | - | 179 | 535 | 377 | 89 | 31 | 38 |
| Utah..... | 95 | 32 | 55 | - | 8 | 89 | 67 | 10 | 7 | 5 |
| Vermont..... | 50 | 23 | 27 | - | (Z) | 61 | 38 | 8 | 8 | 7 |
| Virginia..... | 454 | 169 | 139 | - | 146 | 368 | 237 | 53 | 62 | 16 |
| Washington..... | 277 | 126 | 100 | - | 51 | 272 | 158 | 26 | 37 | 51 |
| West Virginia..... | 224 | 74 | 75 | 20 | 55 | 184 | 135 | 26 | 23 | - |
| Wisconsin..... | 258 | 144 | 55 | - | 59 | 296 | 127 | 22 | 15 | 72 |
| Wyoming..... | 84 | 18 | 43 | - | 23 | 64 | 48 | 6 | 5 | 5 |

- Represents zero. X Not applicable. Z Less than \$500,000.

¹ Balances from 1965, totaling \$3,319 million, and other current revenues, totaling \$1,115 million.

² Includes some administration, engineering, and miscellaneous disbursements.

³ Includes disbursements of \$537 million for administration and miscellaneous, \$415 million for highway law enforcement, \$394 million for bond interest, and \$512 million for bond redemption.

⁴ Expenditures on county roads under State control in Ala. (10 counties), Del., N.C., Va. (all except 2 counties), and W. Va. included with those for State-administered highways.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics, 1968*.

No. 814. FEDERAL AND STATE MOTOR-FUEL TAX—STATES: 1940 TO 1967

[Cents per gallon. Where 2 figures appear in a cell, the former is tax in effect at beginning of year, the latter is tax at end of year. See also *Historical Statistics, Colonial Times to 1967*, series Q 323-325]

| STATE | 1940 | 1950 | 1960 | 1965 | 1967 ¹ | STATE | 1940 | 1950 | 1960 | 1965 | 1967 ¹ |
|----------------------------------|-------|------|------|-----------|-------------------|-------------------|------|------|-------|-------|-------------------|
| Federal tax..... | 1-1.5 | 1.5 | 4 | 4 | 4 | Mississippi..... | 6 | 6-7 | 4 7 | 4 7 | 4 5 7 |
| State average ² | 3.96 | 4.65 | 5.94 | 6.41 | (NA) | Missouri..... | 2 | 2 | 3 | 5 | 5 |
| Alabama..... | 6 | 6 | 7 | 7 | 7 | Montana..... | 5 | 6 | 4 6 | 4 6 | 4 6-6.5 |
| Alaska..... | (3) | (3) | 5-7 | 8 | 8 | Nebraska..... | 5 | 6-5 | 7 | 7-7.5 | 7.5 |
| Arizona..... | 5 | 5 | 5 | 6-7 | 7 | Nevada..... | 4 | 4.5 | 6 | 6 | 6 6 |
| Arkansas..... | 6.5 | 6.5 | 6.5 | 4 6.5-7.5 | 4 7.5 | New Hampshire... | 3 | 4 | 7 | 7 | 7 |
| California..... | 3 | 4.5 | 4 6 | 7-8-7 | 5 7 | New Jersey..... | 3 | 3 | 5 | 6 | 6 |
| Colorado..... | 4 | 6 | 6 | 6-7 | 6 | New Mexico..... | 5 | 7 | 6 | 6 | 6-7 |
| Connecticut..... | 3 | 4 | 6 | 6 | 6-7 | New York..... | 4 | 4 | 4 6 | 4 6 | 4 6 |
| Delaware..... | 4 | 4 | 5 | 6-7 | 7 | North Carolina... | 6 | 7 | 7 | 7 | 7 |
| Dist. of Col..... | 2 | 4 | 6 | 6 | 7 | North Dakota..... | 4 | 4 | 6 | 6 | 6 |
| Florida..... | 7 | 7 | 7 | 7 | 7 | Ohio..... | 4 | 4 | 7 | 7 | 7 |
| Georgia..... | 6 | 7 | 6.5 | 6.5 | 6.5 | Oklahoma..... | 4 | 6.5 | 6.5 | 6.5 | 6.5 |
| Hawaii..... | 4 | 4 | 6.5 | 6.5 | 6.5 | Oregon..... | 5 | 6 | 6 | 6 | 6-7 |
| Idaho..... | 5.1 | 6 | 6 | 6 | 6 | Pennsylvania..... | 4 | 5 | 5 | 7 | 7 |
| Illinois..... | 3 | 3 | 5 | 5 | 5-6 | Rhode Island..... | 3 | 4 | 6-7 | 7 | 7 |
| Indiana..... | 4 | 4 | 6 | 6 | 6 | South Carolina... | 6 | 6-7 | 7 | 7 | 7 |
| Iowa..... | 3 | 4 | 4 6 | 4 6-7 | 4 7 | South Dakota..... | 4 | 4 | 4 6 | 4 6 | 4 6 |
| Kansas..... | 3 | 5 | 4 5 | 4 5 | 4 5 | Tennessee..... | 7 | 7 | 7 | 7 | 7 |
| Kentucky..... | 5 | 7 | 7 7 | 7 7 | 7 7 | Texas..... | 4 | 4 | 4 5 | 4 5 | 4 5 |
| Louisiana..... | 7 | 9 | 7 | 7 | 7 | Utah..... | 4 | 4 | 6 | 6 | 6 |
| Maine..... | 4 | 6 | 7 | 7 | 7 | Vermont..... | 4 | 5 | 4 6.5 | 4 6.5 | 4 6.5 |
| Maryland..... | 4 | 5 | 6 | 7 | 7 | Virginia..... | 5 | 6 | 7 6-7 | 7 7 | 7 7 |
| Massachusetts... | 3 | 3 | 5.5 | 5.5-6.5 | 6.5 | Washington..... | 5 | 6.5 | 6.5 | 7.5 | 7.5-9 |
| Michigan..... | 3 | 3 | 6 | 6 | 6 | West Virginia... | 5 | 5 | 7 | 7 | 7 |
| Minnesota..... | 4-3 | 5 | 5 | 6 | 6-7 | Wisconsin..... | 4 | 4 | 6 | 6 | 7 |
| | | | | | | Wyoming..... | 4 | 4 | 4 5 | 4 5 | 4 5-6 |

NA Not available. ¹ In effect Dec. 31.
² Weighted average, based on net gallons taxed. Prior to 1960, excludes Alaska and Hawaii. ³ No tax.
⁴ Tax on diesel fuel, and usually other special fuels for highway vehicles, is higher than gasoline tax shown.
⁵ The State tax rate on liquefied petroleum gas is 6 cents per gallon in California, 8 cents per gallon in Mississippi, and 5 cents per gallon in Wyoming.
⁶ State tax rate in Hawaii is 8 cents per gallon in Hawaii County and 5 cents per gallon in other counties; in Nevada, the State tax rate is 6 cents per gallon, and effective July 1, 1960, all counties have the option of levying an additional 1 cent tax.
⁷ Trucks or combinations with more than 2 axles pay motor-fuel tax rates of 9 cents per gallon in Kentucky and Virginia. (Prior to July 1, 1960, the tax in Virginia was 8 cents.)
 Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*.

No. 815. PUBLIC HIGHWAY DEBT—LONG-TERM HIGHWAY OBLIGATIONS OF STATE AND LOCAL GOVERNMENTS: 1950 TO 1968

[In millions of dollars. State data are for calendar years; local data are for varying fiscal years. Prior to 1960, excludes Alaska and Hawaii. Excludes duplicated and interunit obligations, except as noted. Municipal obligations include data for all municipalities and other political subdivisions urban in character. See *Historical Statistics, Colonial Times to 1967*, series Q 279, for State obligations outstanding]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 (prel.) | 1968 est. |
|---|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total debt issued¹..... | 652 | 1,174 | 1,206 | 981 | 1,097 | 1,070 | 1,637 | 1,306 | 1,675 |
| State obligations..... | 400 | 646 | 680 | 458 | 634 | 586 | 1,152 | 808 | 1,215 |
| County and local rural obligations..... | 90 | 205 | 190 | 114 | 155 | 169 | 170 | 173 | 175 |
| Municipal obligations..... | 162 | 323 | 336 | 409 | 307 | 315 | 315 | 325 | 285 |
| Total debt redeemed²..... | 322 | 421 | 616 | 732 | 752 | 855 | 932 | 968 | 1,013 |
| State obligations..... | 143 | 191 | 300 | 382 | 381 | 459 | 519 | 538 | 571 |
| County and local rural obligations..... | 83 | 89 | 96 | 114 | 116 | 123 | 128 | 130 | 132 |
| Municipal obligations..... | 96 | 141 | 220 | 236 | 255 | 273 | 285 | 300 | 310 |
| Total debt outstanding..... | 4,436 | 9,658 | 13,166 | 14,773 | 15,114 | 15,316 | 16,025 | 16,363 | 17,023 |
| State obligations..... | 2,096 | 6,619 | 9,384 | 10,525 | 10,778 | 10,905 | 11,542 | 11,812 | 12,454 |
| County and local rural obligations..... | 872 | 1,027 | 1,280 | 1,281 | 1,317 | 1,363 | 1,405 | 1,448 | 1,491 |
| Municipal obligations..... | 1,468 | 2,012 | 2,502 | 2,967 | 3,019 | 3,048 | 3,078 | 3,103 | 3,078 |

¹ Excludes refunding issues.
² Excludes redemptions by refunding.
 Source: Dept. of Transportation, Federal Highway Administration; releases.

Transportation—Land

No. 816. MOTOR-VEHICLE TRAVEL, BY TYPE OF VEHICLE: 1940 TO 1966

[In millions of vehicle-miles, except averages. Prior to 1960, estimates for total United States travel based on automatic traffic recorder data from 48 States and District of Columbia. Urban travel includes all travel in municipalities and most travel in urbanized areas. All other travel is classed as rural. See also *Historical Statistics, Colonial Times to 1967*, series Q 321-327]

| ITEM | 1940 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 est. |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total travel | 302,188 | 458,246 | 603,434 | 718,845 | 805,423 | 846,500 | 887,812 | 930,497 |
| TYPE OF VEHICLE | | | | | | | | |
| Passenger vehicles..... | 252,267 | 367,694 | 492,047 | 592,436 | 640,854 | 682,229 | 716,376 | 756,592 |
| Rural..... | 121,988 | 183,218 | 265,667 | 305,538 | 322,775 | 330,474 | 335,983 | 354,010 |
| Urban..... | 130,269 | 184,476 | 226,380 | 286,898 | 327,079 | 342,755 | 380,393 | 402,573 |
| Passenger cars ¹ | 249,600 | 363,613 | 487,540 | 588,063 | 645,371 | 677,613 | 711,594 | 751,740 |
| Rural..... | 120,540 | 181,095 | 263,088 | 303,283 | 320,378 | 336,068 | 333,412 | 351,372 |
| Urban..... | 129,060 | 182,518 | 224,452 | 284,800 | 324,993 | 340,645 | 378,182 | 400,368 |
| Buses..... | 2,667 | 4,081 | 4,507 | 4,353 | 4,483 | 4,616 | 4,782 | 4,852 |
| Rural..... | 1,448 | 2,123 | 2,579 | 2,255 | 2,397 | 2,506 | 2,571 | 2,647 |
| Urban..... | 1,209 | 1,958 | 1,928 | 2,098 | 2,086 | 2,110 | 2,211 | 2,205 |
| Trucks and combinations..... | 49,931 | 90,552 | 111,387 | 126,409 | 155,569 | 164,271 | 171,436 | 173,905 |
| Rural..... | 30,207 | 56,780 | 70,486 | 81,722 | 97,226 | 101,940 | 102,789 | 106,701 |
| Urban..... | 19,724 | 33,772 | 40,901 | 44,687 | 58,343 | 62,331 | 68,647 | 67,204 |
| AVERAGE MILES PER VEHICLE | | | | | | | | |
| Passenger vehicles..... | 9,129 | 9,078 | 9,400 | 9,474 | 9,265 | 9,311 | 9,310 | 9,407 |
| Passenger cars ¹ | 9,080 | 9,020 | 9,359 | 9,446 | 9,240 | 9,286 | 9,286 | 9,384 |
| Buses..... | 18,580 | 20,910 | 17,658 | 16,004 | 15,049 | 15,115 | 15,215 | 15,012 |
| Trucks and combinations..... | 10,626 | 10,776 | 10,697 | 10,583 | 11,644 | 11,723 | 11,587 | 11,207 |

¹ Includes taxicabs and motorcycles.

Source: Dept. of Transportation, Federal Highway Administration; releases.

No. 817. MOTOR FUEL CONSUMPTION, BY USE: 1940 TO 1966

[In millions of gallons, except averages. Prior to 1960, excludes Alaska and Hawaii. Comprises gasoline and all other fuels under State motor fuel laws. Excludes exports and Federal purchases for military use. Obtained chiefly from reports of State authorities. See *Historical Statistics, Colonial Times to 1967*, series Q 318-320, for highway and nonhighway usage]

| ITEM | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 est. |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total consumption ¹ | 24,404 | 22,304 | 40,280 | 53,116 | 63,714 | 64,516 | 67,901 | 71,104 | 74,623 |
| Passenger vehicles..... | 16,759 | 14,023 | 25,037 | 34,319 | 41,996 | 46,084 | 48,431 | 51,169 | 54,208 |
| Passenger cars ² | 16,323 | 13,323 | 24,305 | 33,548 | 41,169 | 45,246 | 47,567 | 56,275 | 53,312 |
| Buses ³ | 436 | 700 | 732 | 771 | 827 | 838 | 864 | 894 | 896 |
| Trucks and combinations..... | 5,156 | 5,055 | 10,566 | 13,308 | 15,822 | 18,432 | 19,470 | 19,935 | 20,415 |
| Average gallons consumed per vehicle..... | 678 | 617 | 728 | 759 | 777 | 773 | 778 | 775 | 778 |
| Passenger cars ² | 594 | 517 | 603 | 644 | 661 | 648 | 652 | 666 | 666 |
| Buses ³ | 3,049 | 4,294 | 3,752 | 3,021 | 3,040 | 2,813 | 2,829 | 2,844 | 2,772 |
| Trucks and combinations..... | 1,097 | 1,020 | 1,257 | 1,278 | 1,330 | 1,380 | 1,389 | 1,347 | 1,316 |
| Average mileage per gallon, per vehicle..... | 13.79 | 13.12 | 12.87 | 12.67 | 12.42 | 12.48 | 12.47 | 12.40 | 12.47 |
| Passenger cars ² | 15.29 | 15.03 | 14.95 | 14.53 | 14.28 | 14.26 | 14.25 | 14.15 | 14.10 |
| Buses ³ | 6.09 | 5.48 | 5.57 | 5.85 | 5.26 | 5.35 | 5.34 | 5.35 | 5.42 |
| Trucks and combinations..... | 9.69 | 9.09 | 8.57 | 8.37 | 7.06 | 8.44 | 8.43 | 8.60 | 8.52 |

¹ Through 1960, includes nonhighway usage and losses allowed for evaporation, handling, etc.; thereafter, highway usage only.

² Includes taxicabs and motorcycles. ³ Includes school buses.

Source: Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*.

No. 818. SPEED OF MOTOR VEHICLES: 1945 TO 1966

[Excludes Alaska and Hawaii. Based on actual speed of each vehicle recorded on tangent sections of main rural highways during off-peak hours]

| ITEM | 1945 ¹ | 1950 | 1955 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
|--|-------------------|------|------|------|------|------|------|------|------|------|------|
| Number of vehicles recorded.....1,000..... | 96 | 280 | 395 | 396 | 459 | 574 | 602 | 539 | 569 | 552 | 519 |
| Average speed, all vehicles.....m.p.h..... | 44.0 | 47.6 | 50.7 | 52.0 | 52.6 | 52.6 | 53.8 | 55.8 | 55.9 | 56.4 | 57.3 |
| Passenger cars.....m.p.h..... | 45.0 | 48.7 | 52.1 | 53.3 | 53.8 | 53.7 | 55.1 | 57.1 | 57.2 | 57.8 | 58.8 |
| Trucks.....m.p.h..... | 39.8 | 43.0 | 45.8 | 47.3 | 48.2 | 48.2 | 49.4 | 51.3 | 51.0 | 51.8 | 52.0 |
| Buses.....m.p.h..... | 45.5 | 49.8 | 52.6 | 53.5 | 55.5 | 55.3 | 56.0 | 58.1 | 57.8 | 57.4 | 58.8 |
| Vehicles exceeding-- | | | | | | | | | | | |
| 40 m.p.h.....percent..... | 64 | 77 | 87 | 90 | 92 | 92 | 93 | 95 | 95 | 95 | 96 |
| 46 m.p.h.....percent..... | 42 | 58 | 73 | 77 | 80 | 80 | 84 | 88 | 87 | 88 | 89 |
| 50 m.p.h.....percent..... | 24 | 37 | 51 | 56 | 58 | 60 | 64 | 72 | 71 | 73 | 76 |
| 55 m.p.h.....percent..... | 11 | 20 | 31 | 36 | 37 | 38 | 43 | 52 | 53 | 56 | 59 |
| 60 m.p.h.....percent..... | 5 | 8 | 15 | 16 | 16 | 18 | 21 | 29 | 32 | 34 | 40 |

¹ Aug. 15 to Dec. 31.

Source: Dept. of Transportation, Federal Highway Administration; *Traffic Speed Trends*, and unpublished data.

No. 819. MOTOR VEHICLES—FACTORY SALES AND REGISTRATIONS: 1900 TO 1967
 [Prior to 1960, registrations exclude Alaska and Hawaii, except as noted. See also *Historical Statistics, Colonial Times to 1957*, series Q 310-317]

| YEAR | FACTORY SALES ¹ | | | | | | | | REGISTRATIONS ⁵ (1,000) | | |
|-----------|----------------------------|----------------|-------------------------------|--|----------------|----------------------|-------------------------------|----------------------|------------------------------------|---------------------------------------|-------------------------------|
| | Number (1,000) | | | Wholesale value ³ (mil. dol.) | | | | | Total | Passenger cars and taxis ⁶ | Trucks and buses ⁴ |
| | Total | Passenger cars | Trucks and buses ² | Total | Passenger cars | | Trucks and buses ² | | | | |
| | | | | | Total | Average ⁴ | Total | Average ⁴ | | | |
| 1900..... | 4 | 4 | - | 5 | 5 | 1,250 | - | - | 8 | 8 | - |
| 1910..... | 187 | 181 | 6 | 225 | 215 | 1,188 | 10 | 1,667 | 7 470 | 458 | 10 |
| 1920..... | 2,227 | 1,906 | 322 | 2,232 | 1,809 | 949 | 423 | 1,314 | 7 9,251 | 8,131 | 1,108 |
| 1930..... | 3,363 | 2,787 | 575 | 2,035 | 1,644 | 590 | 391 | 680 | 7 26,794 | 23,035 | 3,715 |
| 1940..... | 4,472 | 3,717 | 755 | 2,938 | 2,371 | 638 | 568 | 752 | 7 32,525 | 27,466 | 4,987 |
| 1945..... | 725 | 70 | 656 | 1,239 | 57 | 814 | 1,182 | 1,802 | 7 31,106 | 25,797 | 5,238 |
| 1950..... | 8,003 | 6,666 | 1,337 | 10,176 | 8,468 | 1,270 | 1,708 | 1,277 | 7 49,300 | 40,339 | 8,823 |
| 1955..... | 9,169 | 7,920 | 1,249 | 14,474 | 12,453 | 1,572 | 2,021 | 1,618 | 7 62,870 | 52,145 | 10,544 |
| 1960..... | 7,869 | 6,675 | 1,194 | 14,515 | 12,164 | 1,822 | 2,351 | 1,969 | 73,869 | 61,682 | 12,187 |
| 1964..... | 9,292 | 7,752 | 1,540 | 18,061 | 14,837 | 1,914 | 3,224 | 2,094 | 86,301 | 71,983 | 14,318 |
| 1965..... | 11,057 | 9,306 | 1,752 | 22,114 | 18,380 | 1,975 | 3,734 | 2,131 | 90,358 | 75,258 | 15,100 |
| 1966..... | 10,329 | 8,598 | 1,731 | 21,508 | 17,554 | 2,042 | 3,953 | 2,284 | 94,193 | 78,354 | 15,839 |
| 1967..... | 8,976 | 7,437 | 1,539 | 19,200 | 15,600 | 2,098 | 3,600 | 2,339 | 96,989 | 80,458 | 16,531 |

- Represents zero. ¹ Includes military vehicles.
² A substantial part of the trucks and buses reported comprises chassis without body; hence, excludes the value of bodies for these chassis. ³ Beginning 1940, includes value of standard equipment.
⁴ Averages do not indicate price changes since total values may reflect changes in number of makes, models, and/or body types from year to year. ⁵ Includes publicly owned vehicles.
⁶ Prior to 1930, buses included with passenger cars. ⁷ Includes Hawaii; not shown in detail.
 Source: Factory sales—Automobile Manufacturers Association, Detroit, Mich.; *Automobile Facts and Figures*. Registrations—Dept. of Transportation, Federal Highway Administration; annual report, *Highway Statistics*, and unpublished data.

No. 820. MOTOR VEHICLES—ESTABLISHMENTS, PAYROLL, AND EMPLOYMENT FOR SELECTED KINDS OF BUSINESS: 1958 AND 1963
 [For 1958, Alaska and Hawaii included only in totals, except as noted]

| KIND OF BUSINESS | ESTABLISHMENTS ¹ (1,000) | | ANNUAL PAYROLL ² (mil. dol.) | | PAID EMPLOYEES ³ (1,000) | |
|---|-------------------------------------|-------|---|-------|-------------------------------------|-------|
| | 1958 | 1963 | 1958 | 1963 | 1958 | 1963 |
| RETAIL TRADE | | | | | | |
| Automotive dealers..... | 93.9 | 98.5 | 3,040 | 4,111 | 723.1 | 794.2 |
| Passenger car dealers, franchised..... | 38.6 | 33.8 | 2,485 | 3,326 | 565.7 | 612.1 |
| Passenger car dealers, nonfranchised..... | 25.3 | 28.0 | 154 | 184 | 44.2 | 44.3 |
| Tire, battery, and accessory dealers..... | 20.9 | 25.9 | 317 | 474 | 90.7 | 110.5 |
| Miscellaneous aircraft, marine, and automotive dealers..... | 8.9 | 11.8 | 74 | 127 | 20.2 | 27.2 |
| Gasoline service stations..... | 206.8 | 211.5 | 1,138 | 1,510 | 467.7 | 519.8 |
| WHOLESALE TRADE | | | | | | |
| Motor vehicles and automotive equipment..... | 4 23.1 | 28.9 | 4 1,135 | 1,650 | 4 245.1 | 292.0 |
| Automobiles and other motor vehicles..... | 3.9 | 4.6 | 391 | 507 | 73.5 | 79.9 |
| Automotive equipment..... | 17.1 | 22.1 | 619 | 997 | 145.6 | 187.5 |
| Tires and tubes..... | 2.1 | 2.2 | 125 | 146 | 26.0 | 24.6 |
| SERVICES | | | | | | |
| Automobile repairs, services, and garages..... | 125.7 | 139.6 | 857 | 1,135 | 257.1 | 288.0 |
| Automobile repair shops..... | 103.7 | 114.5 | 596 | 778 | 170.5 | 184.4 |
| Automobile parking..... | 11.0 | 11.3 | 106 | 114 | 35.4 | 34.9 |
| Motor vehicle and trailer rentals and lease services..... | 4.7 | 7.4 | 94 | 161 | 20.2 | 32.7 |
| Other automobile services, except repair..... | 5.8 | 6.5 | 58 | 81 | 29.8 | 36.0 |
| MANUFACTURING | | | | | | |
| Motor vehicles and equipment..... | 2.3 | 2.8 | 3,339 | 5,193 | 581.7 | 693.8 |
| Motor vehicles and parts..... | 1.6 | 2.0 | 3,169 | 4,947 | 548.0 | 649.9 |
| Truck and bus bodies..... | 0.6 | 0.6 | 91 | 133 | 20.0 | 24.5 |
| Truck trailers..... | 0.2 | 0.2 | 78 | 113 | 15.7 | 19.4 |

¹ As of Dec. 31; except for manufacturing, represents any establishment employing 1 or more workers at any time during the year. ² Comprises salaries, wages, commissions, bonuses, vacation pay, and other remuneration.
³ During workweek ended nearest Nov. 15, except quarterly average for manufacturing.
⁴ Includes Alaska and Hawaii in kind of business detail.
 Source: Dept. of Commerce, Bureau of the Census; *Census of Business: 1963*, Vols. I, IV, and VI, and *Census of Manufactures: 1963*, Vol. II.

No. 821. MOTOR VEHICLES—SUMMARY STATISTICS: 1950 TO 1967

[Number in thousands; money figures in millions of dollars. Excludes Alaska and Hawaii, except as noted]

| ITEM | 1950 | 1955 | 1960 | 1964 | 1965 | 1966 | 1967 |
|---|---------|---------|---------|----------------------|----------------------|----------------------|----------------------|
| SALES, EXPORTS, IMPORTS, AND SCRAPPAGE ¹ | | | | | | | |
| Passenger car factory sales..... | 6,666 | 7,920 | 6,675 | 7,752 | 9,306 | 8,598 | 7,437 |
| 4-door sedans..... | 3,247 | 3,944 | 2,697 | 2,511 | 2,744 | 2,333 | 1,851 |
| 2-door sedans, coaches and coupes ² | 2,794 | 1,691 | 1,094 | 907 | 793 | 546 | 395 |
| 2-door and 4-door "hard-tops"..... | 267 | 2,199 | 1,517 | 2,054 | 4,251 | 4,438 | 4,153 |
| Convertibles (except "hard-top")..... | 208 | 240 | 305 | 489 | 509 | 305 | 306 |
| Station wagons ³ | 142 | 759 | 1,059 | 884 | 1,001 | 881 | 727 |
| Chassis..... | 9 | 18 | 3 | 6 | 7 | 6 | 5 |
| Truck and bus factory sales..... | 1,337 | 1,249 | 1,194 | 1,540 | 1,752 | 1,731 | 1,539 |
| Passenger cars (new), exported..... | 153 | 254 | 145 | 198 | 205 | 261 | 366 |
| Passenger cars (new), imported..... | 21 | 57 | 444 | 537 | 559 | 913 | 1,021 |
| Exports, value..... | 794 | 1,367 | 1,411 | 1,900 | 2,197 | 2,474 | 2,887 |
| Passenger cars (new)..... | 179 | 380 | 235 | 347 | 393 | 564 | 812 |
| Trucks and buses (new)..... | 217 | 340 | 382 | 347 | 328 | 360 | 408 |
| Rubber tires and tubes..... | 47 | 82 | 77 | 70 | 55 | 50 | 40 |
| Parts and accessories (incl. used vehicles)..... | 350 | 565 | 717 | 1,136 | 1,421 | 1,499 | 1,628 |
| Imports of new passenger cars, value..... | 21 | 69 | 513 | 579 | 640 | 1,237 | 1,695 |
| Vehicles scrapped ^{4,5} | 3,234 | 4,392 | 4,783 | 6,833 | 6,841 | (NA) | (NA) |
| Passenger cars ^{4,5} | 2,598 | 3,773 | 4,200 | 6,064 | 5,933 | (NA) | (NA) |
| Trucks and buses ^{4,5} | 636 | 619 | 583 | 769 | 908 | (NA) | (NA) |
| AUTOMOTIVE PARTS AND CHEMICAL SHIPMENTS | | | | | | | |
| Tires, passenger car, ⁶ total..... | 84,423 | 93,730 | 105,687 | 132,139 | 148,497 | 150,957 | 151,184 |
| Original equipment..... | 36,678 | 42,674 | 36,278 | 42,512 | 51,413 | 47,362 | 40,881 |
| Replacement..... | 47,103 | 50,189 | 68,475 | 88,163 | 94,893 | 101,812 | 108,066 |
| Export..... | 642 | 966 | 934 | 1,464 | 2,191 | 1,783 | 1,657 |
| Tires, truck and bus, ⁶ total..... | 15,164 | 14,769 | 13,911 | 18,262 | 20,440 | 22,664 | 21,762 |
| Original equipment..... | 4,671 | 4,800 | 3,925 | 5,507 | 6,943 | 7,401 | 6,756 |
| Replacement..... | 9,705 | 9,057 | 9,210 | 12,149 | 12,819 | 14,613 | 14,539 |
| Export..... | 788 | 912 | 776 | 609 | 678 | 650 | 467 |
| Replacement automobile batteries ⁷ | 24,442 | 25,828 | 26,329 | 30,627 | 30,528 | 32,124 | ⁸ 32,062 |
| Sealed-beam lamps ⁹ | 35,776 | 44,911 | 67,416 | ⁹ 74,437 | ⁸ 85,506 | ⁸ 82,064 | ⁸ 75,106 |
| Other automotive lamps ⁹ | 251,216 | 331,448 | 323,449 | ⁹ 435,636 | ⁸ 522,608 | ⁸ 535,911 | ⁸ 517,676 |
| Antifreeze ¹⁰ 1,000 gal..... | (NA) | 110,000 | 120,902 | 132,550 | 143,067 | 140,261 | (NA) |
| Other cooling system chemicals ¹⁰ | (NA) | (NA) | 32,437 | 28,465 | 25,418 | 27,563 | (NA) |
| Heavy duty brake fluid ¹⁰ 1,000 gal ^{11,12} | (NA) | 5,682 | 9,425 | 8,471 | 7,983 | 8,986 | (NA) |
| SPECIAL MOTOR-VEHICLE TAXES ¹³ | | | | | | | |
| Federal excise ¹⁴ | 1,479 | 2,736 | 4,397 | 5,635 | 5,716 | 5,424 | ⁸ 5,505 |
| State gross registration receipts ¹⁵ | 948 | 1,483 | 1,924 | 2,364 | 2,512 | 2,760 | ⁸ 2,903 |
| State gasoline, net ¹⁵ | 1,667 | 2,543 | 3,396 | 4,217 | 4,495 | 4,762 | ⁸ 4,975 |
| MOTOR VEHICLE REGISTRATIONS ¹⁶ | | | | | | | |
| World..... | 70,424 | 95,896 | 126,908 | 166,089 | 177,395 | 190,306 | (NA) |
| United States..... | 49,161 | 62,689 | 73,869 | 86,301 | 90,360 | 94,193 | 97,527 |
| Other North and Central America..... | 3,154 | 4,942 | 6,759 | 8,200 | 8,235 | 9,180 | (NA) |
| South America..... | 1,270 | 1,835 | 2,995 | 4,536 | 5,103 | 5,573 | (NA) |
| Europe..... | 12,529 | 19,611 | 33,751 | 51,255 | 56,483 | 61,097 | (NA) |
| Africa..... | 1,241 | 1,829 | 2,450 | 3,156 | 3,394 | 3,509 | (NA) |
| Asia..... | 1,221 | 2,212 | 3,556 | 8,314 | 9,739 | 11,817 | (NA) |
| Oceania..... | 1,848 | 2,778 | 3,528 | 4,327 | 4,681 | 4,967 | (NA) |

NA Not available.

¹ Source: Exports and imports from Dept. of Commerce. ² Includes business coupes.³ Excludes station wagons on commercial vehicle chassis. ⁴ Estimated. ⁵ Includes Alaska and Hawaii.⁶ Source: The Rubber Manufacturers Association, Inc. Beginning 1965, figures for "Tires, passenger car" include motorcycle tires.⁷ Source: Association of American Battery Manufacturers. ⁸ Preliminary.⁹ Source: Bureau of the Census. ¹⁰ Source: Chemical Specialties Manufacturers Association, Inc.¹¹ Individual consumer size (1-treatment) packages.¹² Figures represent fluid compounded rather than sold.¹³ Special taxes on motor-vehicle users. Excludes income and property taxes on motor vehicle, body, parts and tire factories; garages; dealers; repair shops; terminal and truck, including taxicab and bus, operating companies.¹⁴ Source: Dept. of the Treasury and Dept. of Transportation. Includes amounts collected on use of vehicles over 28,000 pounds as follows: 1960, \$44,539,000; 1964, \$100,996,000; 1965, \$103,000,000; 1966, \$106,000,000; 1967, \$110,000,000.¹⁵ Source: Dept. of Transportation.¹⁶ Includes cars, trucks, and buses. Source: Dept. of State and overseas sources.Source: Automobile Manufacturers Association, Detroit, Mich.; *Automobile Facts and Figures*. Includes data compiled from sources cited in footnotes.

Motor-Vehicle Registration

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No. 822. MOTOR-VEHICLE REGISTRATIONS, 1950 TO 1967, AND DRIVERS LICENSES, 1966, BY STATES

[In thousands, except as indicated. Motor-vehicle registrations include publicly owned vehicles; for uniformity, figures have been adjusted to a calendar-year basis as registration years in States differ; figures represent net numbers where possible, excluding re-registrations and nonresident registrations]

| STATE | AUTOMOBILES, TRUCKS, AND BUSES | | | | | | | Motor-cycles (incl. official), 1957 | DRIVERS LICENSES, 1966 | | |
|-------------------|--------------------------------|--------|--------|--------|--------|---------------------------------------|--------------------|---|------------------------|------------------------|------------------------|
| | 1950 | 1955 | 1960 | 1965 | 1967 | | Total ² | | Percent | | |
| | | | | | Total | Private and commercial | | | Male drivers | Drivers under 25 years | |
| | | | | | | Auto-mob- iles (incl. taxicabs) | | | | | Trucks and buses |
| U.S. ³ | 49,300 | 62,870 | 73,869 | 90,358 | 36,989 | 80,059 | 15,523 | 1,953.0 | 100,959 | 58.9 | (NA) |
| Ala..... | 686 | 1,041 | 1,282 | 1,663 | 1,735 | 1,393 | 318 | 25.0 | 1,554 | 58.8 | (NA) |
| Alaska..... | (NA) | (NA) | 81 | 109 | 110 | 74 | 32 | 4.1 | 108 | 59.3 | 19.3 |
| Ariz..... | 271 | 415 | 624 | 825 | 890 | 680 | 191 | 20.4 | 941 | 58.7 | 24.9 |
| Ark..... | 477 | 584 | 708 | 914 | 933 | 682 | 289 | 14.5 | 933 | 58.8 | (NA) |
| Calif..... | 4,620 | 6,189 | 7,799 | 9,989 | 10,850 | 9,035 | 1,663 | 358.6 | 10,356 | 58.1 | 18.4 |
| Colo..... | 564 | 737 | 924 | 1,158 | 1,242 | 940 | 280 | 26.1 | 1,227 | 62.1 | 26.9 |
| Conn..... | 716 | 921 | 1,107 | 1,415 | 1,545 | 1,369 | 159 | 23.4 | 1,843 | 58.1 | 18.6 |
| Del..... | 106 | 154 | 192 | 244 | 268 | 225 | 39 | 3.2 | 286 | 56.3 | 20.9 |
| D.C..... | 195 | 197 | 206 | 236 | 247 | 219 | 19 | 2.7 | 344 | 58.7 | (NA) |
| Fla..... | 985 | 1,616 | 2,367 | 3,037 | 3,393 | 2,946 | 398 | 60.9 | 3,237 | 60.5 | (NA) |
| Ga..... | 898 | 1,239 | 1,612 | 1,990 | 2,164 | 1,739 | 396 | 26.5 | 2,208 | 58.8 | (NA) |
| Hawaii..... | 138 | 181 | 231 | 310 | 336 | 295 | 35 | 10.6 | 380 | 58.7 | (NA) |
| Idaho..... | 272 | 338 | 375 | 434 | 455 | 310 | 132 | 22.7 | 419 | 60.6 | (NA) |
| Ill..... | 2,651 | 3,268 | 3,776 | 4,437 | 4,818 | 4,187 | 578 | 93.9 | 5,821 | 58.3 | 22.0 |
| Ind..... | 1,435 | 1,763 | 2,046 | 2,427 | 2,632 | 2,119 | 487 | 66.4 | 2,752 | 56.5 | 21.5 |
| Iowa..... | 1,072 | 1,195 | 1,325 | 1,549 | 1,645 | 1,293 | 329 | 37.6 | 1,613 | 57.8 | 19.7 |
| Kans..... | 853 | 1,048 | 1,263 | 1,369 | 1,441 | 1,036 | 382 | 31.5 | 1,364 | 54.6 | 23.0 |
| Ky..... | 784 | 1,032 | 1,198 | 1,500 | 1,632 | 1,293 | 319 | 26.0 | 1,383 | 62.1 | 21.5 |
| La..... | 707 | 952 | 1,177 | 1,442 | 1,634 | 1,300 | 312 | 20.1 | 1,595 | 58.9 | (NA) |
| Maine..... | 276 | 323 | 374 | 424 | 452 | 361 | 85 | 6.3 | 474 | 58.0 | 19.3 |
| Md..... | 685 | 938 | 1,155 | 1,481 | 1,612 | 1,401 | 194 | 22.9 | 1,793 | 60.6 | 20.8 |
| Mass..... | 1,280 | 1,546 | 1,803 | 2,104 | 2,223 | 1,983 | 201 | 32.9 | 2,739 | 60.1 | (NA) |
| Mich..... | 2,433 | 3,114 | 3,306 | 3,991 | 4,133 | 3,570 | 505 | 90.3 | 4,418 | 56.8 | 24.3 |
| Minn..... | 1,169 | 1,365 | 1,592 | 1,890 | 1,997 | 1,608 | 362 | 55.9 | 2,036 | 57.1 | 22.6 |
| Miss..... | 484 | 637 | 723 | 921 | 1,012 | 748 | 248 | 10.0 | 871 | 58.9 | (NA) |
| Mo..... | 1,261 | 1,490 | 1,720 | 2,085 | 2,211 | 1,748 | 439 | 41.1 | 2,296 | 58.1 | 17.6 |
| Mont..... | 265 | 331 | 373 | 429 | 451 | 298 | 143 | 15.5 | 394 | 57.6 | 20.6 |
| Nebr..... | 569 | 662 | 734 | 849 | 888 | 647 | 226 | 17.4 | 902 | 56.4 | (NA) |
| Nev..... | 77 | 124 | 175 | 266 | 287 | 214 | 63 | 11.1 | 287 | 57.8 | 21.4 |
| N.H..... | 172 | 212 | 267 | 331 | 349 | 290 | 50 | 8.2 | 379 | 60.2 | (NA) |
| N.J..... | 1,579 | 2,061 | 2,401 | 2,980 | 3,200 | 2,850 | 307 | 45.6 | 3,529 | 57.4 | 19.2 |
| N. Mex..... | 238 | 340 | 426 | 525 | 571 | 418 | 141 | 12.8 | 534 | 58.6 | (NA) |
| N.Y..... | 3,735 | 4,643 | 5,067 | 5,939 | 6,060 | 5,378 | 586 | 67.2 | 7,609 | 60.8 | 17.1 |
| N.C..... | 1,056 | 1,437 | 1,720 | 2,156 | 2,423 | 1,907 | 450 | 30.7 | 2,430 | 60.0 | 23.8 |
| N. Dak..... | 276 | 309 | 345 | 396 | 405 | 260 | 137 | 9.0 | 360 | 59.2 | 24.7 |
| Ohio..... | 2,795 | 3,526 | 4,087 | 4,935 | 5,305 | 4,715 | 538 | 109.8 | 5,511 | 60.5 | 19.7 |
| Okla..... | 831 | 1,026 | 1,184 | 1,438 | 1,542 | 1,107 | 413 | 31.4 | 1,421 | 57.4 | 23.2 |
| Oreg..... | 689 | 802 | 919 | 1,119 | 1,242 | 1,009 | 208 | 32.9 | 1,087 | 55.2 | 20.8 |
| Pa..... | 3,010 | 3,737 | 4,287 | 4,968 | 5,335 | 4,647 | 632 | 100.0 | 6,301 | 61.4 | 20.4 |
| R.I..... | 251 | 308 | 341 | 406 | 434 | 384 | 45 | 6.8 | 434 | 60.1 | (NA) |
| S.C..... | 579 | 782 | 879 | 1,094 | 1,180 | 960 | 199 | 12.2 | 1,188 | 60.8 | 26.1 |
| S. Dak..... | 290 | 325 | 354 | 398 | 407 | 282 | 116 | 9.7 | 400 | 58.0 | 23.8 |
| Tenn..... | 858 | 1,102 | 1,307 | 1,655 | 1,870 | 1,517 | 325 | 29.6 | 1,905 | 58.9 | (NA) |
| Tex..... | 2,968 | 3,869 | 4,457 | 5,610 | 5,893 | 4,577 | 1,231 | 88.4 | 5,553 | 56.9 | 22.8 |
| Utah..... | 247 | 336 | 417 | 525 | 562 | 432 | 119 | 15.6 | 560 | 58.0 | 21.8 |
| Vt..... | 121 | 136 | 152 | 175 | 194 | 159 | 32 | 6.0 | 213 | 60.1 | (NA) |
| Va..... | 918 | 1,243 | 1,426 | 1,800 | 1,932 | 1,617 | 281 | 21.3 | 2,186 | 60.5 | (NA) |
| Wash..... | 924 | 1,164 | 1,377 | 1,659 | 1,852 | 1,444 | 371 | 53.6 | 1,606 | 58.6 | 20.8 |
| W. Va..... | 482 | 552 | 601 | 696 | 765 | 611 | 143 | 17.2 | 823 | 61.2 | 22.7 |
| Wis..... | 1,201 | 1,386 | 1,600 | 1,839 | 1,954 | 1,624 | 299 | 60.8 | 2,185 | 58.4 | 20.8 |
| Wyo..... | 145 | 174 | 207 | 225 | 226 | 146 | 74 | 6.8 | 221 | 60.6 | (NA) |

NA Not available.

¹ Excludes vehicles owned by military services.

² Estimated from data reported by States for current and previous years; no allowance made for deaths, emigration, or revocation.

³ Incomplete data for some States.

Source: Dept. of Transportation, Federal Highway Administration; annual reports, *Highway Statistics, Drivers Licenses—1966*, and unpublished data.

No. 823. NEW PASSENGER CAR PRODUCTION AND IMPORTS: 1961 TO 1967

[For years ending September 30, except as noted]

| ITEM | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|-------|-------|-------|-------|-------|-------|--------------------|
| Value of production ¹ (bil. dol.): | | | | | | | |
| Gross auto product ² ----- | 17.9 | 22.5 | 25.1 | 25.8 | 31.4 | 29.8 | ³ 27.7 |
| Gross national product ⁴ ----- | 520.1 | 560.3 | 590.5 | 632.4 | 683.9 | 743.3 | ³ 785.1 |
| Gross auto product as percent of GNP----- | 3.4 | 4.0 | 4.3 | 4.1 | 4.6 | 4.0 | 3.5 |
| Production and imports (1,000 units): | | | | | | | |
| Total----- | 5,803 | 7,025 | 7,730 | 8,345 | 9,381 | 9,248 | 8,397 |
| Domestic production----- | 5,408 | 6,687 | 7,340 | 7,892 | 8,843 | 8,606 | 7,658 |
| Imports ⁵ ----- | 395 | 338 | 390 | 453 | 538 | 642 | 739 |
| Production, by retail price lines ⁶ (percent): | | | | | | | |
| \$2,500 and less----- | 68.2 | 67.2 | 51.7 | 48.7 | 47.4 | 40.5 | 32.7 |
| \$2,501 to \$3,000----- | 21.8 | 21.9 | 35.6 | 39.0 | 39.2 | 43.0 | 47.4 |
| \$3,001 to \$3,500----- | 3.3 | 3.5 | 5.1 | 5.3 | 6.4 | 8.3 | 10.4 |
| \$3,501 and over----- | 6.7 | 7.4 | 7.6 | 7.0 | 7.0 | 8.2 | 9.5 |

¹ Calendar-year data.² Value of domestically produced cars plus net value added by distribution of new, used, and imported cars.³ Preliminary. ⁴ For definition, see text, p. 310.⁵ Based on registrations of foreign-type cars. Excludes domestic-type cars produced in Canada.⁶ Prices are exclusive of optional equipment, Federal excise and other taxes, transportation costs, and dealers' delivery and handling charges.Source: Dept. of Commerce, Office of Business Economics; *Survey of Current Business*, October 1967 and January 1968.

No. 824. HOUSEHOLD EXPENDITURES ON NEW AND USED CARS: 1966 TO 1968

[Seasonally adjusted quarterly totals at annual rates. Expenditures and prices are net of trade-in allowance and State and Federal taxes. Based on sample]

| MONTH AND YEAR | EXPENDITURES (bil. dol.) | | | AVERAGE PRICE (dollars) | |
|----------------------|--------------------------|----------|-----------|-------------------------|----------|
| | Total | New cars | Used cars | New car | Used car |
| Oct.-Dec. 1966----- | 29.3 | 17.8 | 11.5 | 2,589 | 885 |
| Jan.-Mar. 1967----- | 31.2 | 20.0 | 11.2 | 2,650 | 843 |
| Apr.-June 1967----- | 31.3 | 20.7 | 10.6 | 2,741 | 800 |
| July-Sept. 1967----- | 31.2 | 19.6 | 11.6 | 2,764 | 858 |
| Oct.-Dec. 1967----- | 28.2 | 17.5 | 10.7 | 2,769 | 859 |
| Jan.-Mar. 1968----- | 33.6 | 21.3 | 12.3 | 2,792 | 927 |

Source: Dept. of Commerce, Bureau of the Census; *Current Population Reports*, Series P-65, Nos. 21 and 22.

No. 825. AUTOMOBILES—FACTORY INSTALLATION OF SELECTED TYPES OF EQUIPMENT: 1956 TO 1967

[Refers to model-year production. For certain items, such as air conditioning, a significant number of units are installed on new vehicles after they leave the factory]

| EQUIPMENT | UNITS INSTALLED (1,000) | | | | PERCENT OF TOTAL CARS PRODUCED | | | |
|--|-------------------------|-------|-------|-------|--------------------------------|------|------|------|
| | 1956 | 1960 | 1965 | 1967 | 1956 | 1960 | 1965 | 1967 |
| Automatic transmission----- | 4,709 | 4,306 | 7,134 | 6,578 | 74.8 | 71.6 | 80.7 | 86.9 |
| Manual transmission----- | 1,586 | 1,706 | 1,709 | 974 | 25.2 | 28.4 | 19.3 | 12.9 |
| V-8 engine----- | 5,122 | 3,409 | 6,492 | 6,374 | 81.4 | 56.7 | 73.4 | 84.2 |
| 6-cylinder engine----- | 1,173 | 2,603 | 2,350 | 1,194 | 18.6 | 43.3 | 26.6 | 15.8 |
| Power brakes----- | 1,529 | 1,948 | 2,856 | 2,911 | 24.3 | 32.4 | 32.3 | 33.5 |
| Power steering----- | 1,720 | 2,357 | 5,270 | 5,651 | 27.3 | 39.2 | 59.6 | 74.7 |
| Power windows ¹ ----- | 412 | 376 | 1,261 | 1,267 | 6.6 | 6.3 | 14.3 | 16.7 |
| Air conditioning----- | 164 | 414 | 2,061 | 2,906 | 2.6 | 6.9 | 23.3 | 38.4 |
| Tinted glass (windshield and other)----- | 1,988 | 1,688 | 4,572 | 4,957 | 31.6 | 27.7 | 51.7 | 65.5 |

¹ Includes power operated station wagon rear windows.Source: *Annual Statistical Issue, Automotive Industries*. Published by Chilton Company, Philadelphia, Pa. (Copyright.)

Automobile Ownership and Insurance

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No. 826. AUTOMOBILE OWNERSHIP, AGE, AND FINANCING: 1950 TO 1967
 [Excludes Alaska and Hawaii. For definition of family unit, see headnote, table 470]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 |
|---|------|-------|-------|-------|-------|-------|-------|-------|
| Total number of families in U.S. ¹ | 45.2 | 49.1 | 53.4 | 56.5 | 56.8 | 58.4 | 59.1 | 60.2 |
| Families owning automobiles | 59 | 70 | 77 | 80 | 78 | 79 | 79 | 78 |
| Owning 1 automobile..... | 52 | 60 | 62 | 58 | 55 | 55 | 54 | 53 |
| Owning 2 or more automobiles..... | 7 | 10 | 15 | 22 | 22 | 24 | 25 | 25 |
| Automobiles owned, by age: ² | | | | | | | | |
| Less than 2 years old..... | 17 | 12 | 14 | 13 | 13 | 16 | 16 | 17 |
| 2 and 3 years old..... | 19 | 22 | 20 | 18 | 20 | 21 | 22 | 22 |
| 4 to 7 years old..... | 6 | 43 | 41 | 36 | 33 | 33 | 34 | 33 |
| 8 years old and over..... | 58 | 23 | 25 | 33 | 34 | 30 | 28 | 28 |
| Total automobiles purchased ³ | | | | | | | | |
| New cars..... | | 13.6 | 14.1 | 18.9 | 17.3 | 18.3 | 19.3 | 19.1 |
| Average price paid..... | (NA) | 4.4 | 5.2 | 5.9 | 6.0 | 7.2 | 7.9 | 7.6 |
| Used cars..... | | 2,730 | 3,140 | 2,990 | 3,130 | 3,140 | 3,260 | 3,250 |
| Average price paid, gross..... | | 9.2 | 9.1 | 13.0 | 11.3 | 11.1 | 11.4 | 11.5 |
| | | 780 | 980 | 840 | 920 | 920 | 910 | 880 |
| Method of financing purchases: | | | | | | | | |
| All passenger cars ⁴ | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Full cash (including trade-in allowance)..... | 47 | 38 | 38 | 45 | 47 | 48 | 48 | 48 |
| Installment credit and other borrowing..... | 52 | 60 | 62 | 55 | 53 | 52 | 52 | 52 |
| New passenger-car buyers ⁴ | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Full cash (including trade-in allowance)..... | 54 | 39 | 33 | 38 | 40 | 40 | 37 | 38 |
| Installment credit and other borrowing..... | 46 | 60 | 67 | 62 | 60 | 60 | 63 | 62 |
| Used passenger cars ⁴ | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Full cash (including trade-in allowance)..... | 41 | 37 | 41 | 49 | 51 | 53 | 52 | 53 |
| Installment credit and other borrowing..... | 57 | 60 | 59 | 51 | 49 | 47 | 48 | 47 |

NA Not available. ¹ At time of survey, early in year indicated. ² Age is determined by subtracting model year from year of survey. ³ Covers family units buying cars during preceding calendar year and still owning them at time of survey (January-February of year indicated). ⁴ Refers to purchases during preceding year. Includes cars received as gifts, whether cash or credit purchased. Buyers for whom method of financing was not ascertained are excluded from the detail on purchases.
 Source: The University of Michigan, Survey Research Center; *Survey of Consumer Finances*.

No. 827. AUTOMOBILE INSURANCE: 1950 TO 1966

[Money figures in millions of dollars. Prior to 1960, excludes Alaska and Hawaii. 1950, net basis; 1955, direct writing basis; and, beginning 1960, direct premiums earned and direct losses incurred]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|---|-------|-------|-------|-------|-------|-------|-------|
| Total insurance: | | | | | | | |
| Premiums written..... | 2,625 | 4,644 | 6,448 | 7,341 | 7,582 | 8,358 | 9,444 |
| Losses paid..... | 1,069 | 2,122 | 3,645 | 4,459 | 4,787 | 5,221 | 5,646 |
| Percent losses paid of premiums written..... | 40.7 | 45.7 | 56.5 | 60.7 | 63.1 | 62.5 | 59.8 |
| Automobile liability, bodily injury: | | | | | | | |
| Premiums written..... | 931 | 1,735 | 2,841 | 3,333 | 3,612 | 3,948 | 4,400 |
| Losses paid..... | 396 | 820 | 1,697 | 2,017 | 2,266 | 2,459 | 2,730 |
| Percent losses paid of premiums written..... | 42.5 | 47.3 | 59.7 | 60.5 | 62.7 | 62.3 | 62.0 |
| Automobile liability, property damage:¹ | | | | | | | |
| Premiums written..... | 482 | 896 | 1,219 | 1,328 | 1,418 | 1,567 | 1,799 |
| Losses paid..... | 231 | 415 | 675 | 826 | 940 | 1,025 | 1,189 |
| Percent losses paid of premiums written..... | 47.9 | 46.3 | 55.4 | 62.2 | 66.3 | 65.4 | 63.3 |
| Physical damage:² | | | | | | | |
| Premiums written..... | 1,212 | 2,013 | 2,388 | 2,680 | 2,552 | 2,843 | 3,245 |
| Losses paid..... | 442 | 887 | 1,273 | 1,616 | 1,581 | 1,737 | 1,777 |
| Percent losses paid of premiums written..... | 36.5 | 43.6 | 53.3 | 60.3 | 62.0 | 61.1 | 54.8 |

¹ Covers real property against damage by autos. ² Covers auto fire, theft, collision, and comprehensive.
 Source: The Spectator, Philadelphia, Pa.; *Insurance Yearbook*, and, beginning 1955, *Insurance by States*.

No. 828. CARS AND TRUCKS IN USE, BY AGE: 1950 TO 1967

[As of July 1. Prior to 1960, excludes Alaska and Hawaii. Excludes vehicles for which age was not known]

| AGE | 1950 | | 1955 | | 1960 | | 1965 | | 1967 | | | |
|--------------------------------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|--------------|-------|------|
| | Number (1,000) | Per- cent | | |
| Total cars¹..... | 35,824 | 100.0 | 47,123 | 100.0 | 56,935 | 100.0 | 68,935 | 100.0 | 72,907 | 100.0 | | |
| Under 3 years..... | 10,957 | 30.6 | 14,448 | 30.7 | 14,186 | 24.9 | 21,578 | 31.3 | 23,630 | 32.4 | | |
| 3 to 5 years..... | } 6,083 | 17.0 | 15,164 | 32.2 | 18,346 | 32.2 | 18,013 | 26.1 | 21,320 | 29.2 | | |
| 6 to 8 years..... | | | 10,146 | 21.5 | 12,380 | 21.7 | 13,571 | 19.7 | 14,529 | 19.9 | | |
| 9 to 11 years..... | | | 9,233 | 25.8 | } 7,365 | 15.6 | 9,199 | 16.2 | 9,862 | 14.3 | 7,352 | 10.1 |
| 12 years and over..... | | | 9,551 | 26.7 | | | 2,825 | 5.0 | 5,911 | 8.6 | 6,076 | 8.3 |
| Total trucks¹..... | 7,525 | 100.0 | 9,111 | 100.0 | 10,771 | 100.0 | 13,106 | 100.0 | 14,964 | 100.0 | | |
| Under 3 years..... | 2,476 | 32.9 | 2,039 | 22.4 | 2,046 | 19.0 | 3,222 | 24.6 | 3,941 | 26.3 | | |
| 3 to 5 years..... | 1,719 | 22.8 | 2,767 | 30.4 | 2,418 | 22.4 | 2,476 | 18.9 | 3,203 | 21.4 | | |
| 6 to 8 years..... | 362 | 4.8 | 2,319 | 25.5 | 2,077 | 19.3 | 1,950 | 14.9 | 2,280 | 14.9 | | |
| 9 to 11 years..... | 1,342 | 17.8 | 702 | 7.7 | 2,332 | 21.7 | 1,844 | 14.1 | 1,618 | 10.8 | | |
| 12 years and over..... | 1,626 | 21.6 | 1,285 | 14.1 | 1,898 | 17.6 | 3,614 | 27.6 | 3,972 | 26.5 | | |

¹ For 1965 and earlier years, Willys jeeps included in "Cars"; thereafter, in "Trucks."
 Source: Compiled from data furnished by R. L. Polk & Co., Detroit, Mich. Further reproduction prohibited without Polk permission.

No. 829. MOTORTRUCKS, BY SIZE-CLASS, AREA OF OPERATION, AND MAJOR USE—
STATES: 1963

[In thousands. Includes private and commercial single-unit trucks and combinations. Based on a probability sample of truck license holders, and subject to sampling variability]

| STATE | Total | SIZE-CLASS ¹ | | | AREA OF OPERATION ² | | | MAJOR USE | | | | |
|---------------------|---------------|-------------------------|--------------|--------------|--------------------------------|--------------|---------------|--------------|--------------|-------------------------------|-----------------------|------------|
| | | Light | Medium | Heavy | Local | Intermediate | Long distance | Agriculture | Personal | Wholesale and retail business | Contract construction | Services |
| U.S. | 12,726 | 8,853 | 1,128 | 2,094 | 8,751 | 895 | 193 | 3,528 | 3,114 | 1,664 | 1,198 | 930 |
| N.E. | 505 | 312 | 59 | 113 | 373 | 43 | 4 | 72 | 108 | 101 | 71 | 51 |
| Maine..... | 75 | 49 | 6 | 18 | 54 | 7 | (Z) | 17 | 20 | 11 | 8 | 6 |
| N.H..... | 47 | 30 | 6 | 9 | 32 | 5 | 1 | 8 | 12 | 8 | 6 | 4 |
| Vt..... | 30 | 18 | 5 | 7 | 21 | 3 | 0 | 9 | 6 | 5 | 2 | 2 |
| Mass..... | 185 | 105 | 23 | 48 | 143 | 15 | 2 | 16 | 25 | 47 | 28 | 21 |
| R.I..... | 88 | 23 | 5 | 8 | 27 | 3 | (Z) | 3 | 7 | 9 | 5 | 5 |
| Conn..... | 129 | 86 | 15 | 25 | 95 | 9 | 1 | 19 | 38 | 20 | 21 | 13 |
| M.A. | 1,336 | 814 | 137 | 299 | 977 | 93 | 18 | 160 | 235 | 270 | 179 | 146 |
| N.Y..... | 524 | 294 | 67 | 128 | 398 | 31 | 4 | 67 | 72 | 110 | 69 | 64 |
| N.J..... | 273 | 164 | 24 | 64 | 190 | 20 | 4 | 21 | 38 | 54 | 47 | 38 |
| Pa..... | 539 | 356 | 47 | 108 | 388 | 41 | 10 | 71 | 126 | 106 | 62 | 44 |
| E.N.C. | 1,976 | 1,286 | 224 | 356 | 1,397 | 139 | 31 | 575 | 343 | 298 | 200 | 140 |
| Ohio..... | 449 | 281 | 54 | 87 | 316 | 32 | 8 | 116 | 63 | 79 | 53 | 36 |
| Ind..... | 386 | 264 | 36 | 67 | 257 | 30 | 10 | 117 | 95 | 51 | 32 | 21 |
| Ill..... | 462 | 290 | 57 | 90 | 341 | 27 | 5 | 130 | 64 | 71 | 50 | 35 |
| Mich..... | 406 | 269 | 44 | 67 | 286 | 26 | 6 | 97 | 95 | 62 | 39 | 30 |
| Wis..... | 272 | 182 | 33 | 44 | 196 | 23 | 3 | 114 | 26 | 36 | 25 | 19 |
| W.N.C. | 1,672 | 1,094 | 176 | 325 | 1,187 | 97 | 19 | 811 | 253 | 157 | 114 | 91 |
| Minn..... | 290 | 180 | 37 | 57 | 201 | 16 | 4 | 115 | 44 | 33 | 24 | 18 |
| Iowa..... | 264 | 189 | 24 | 38 | 197 | 11 | 1 | 129 | 33 | 30 | 21 | 15 |
| Mo..... | 383 | 252 | 33 | 75 | 270 | 25 | 6 | 144 | 68 | 43 | 31 | 25 |
| N. Dak..... | 119 | 69 | 23 | 23 | 88 | 6 | 1 | 86 | 9 | 7 | 5 | 3 |
| S. Dak..... | 105 | 72 | 10 | 20 | 70 | 9 | 1 | 60 | 17 | 8 | 5 | 5 |
| Nebr..... | 192 | 124 | 18 | 43 | 135 | 12 | 3 | 105 | 27 | 17 | 12 | 8 |
| Kans..... | 320 | 207 | 31 | 67 | 226 | 18 | 3 | 171 | 55 | 20 | 16 | 18 |
| S.A. | 1,729 | 1,197 | 156 | 279 | 1,139 | 126 | 38 | 426 | 408 | 248 | 163 | 140 |
| Del..... | 59 | 34 | 6 | 14 | 37 | 4 | 3 | 11 | 13 | 7 | 7 | 5 |
| Md..... | 149 | 93 | 16 | 29 | 102 | 11 | 1 | 22 | 29 | 26 | 20 | 15 |
| D.C..... | 17 | 9 | 3 | 4 | 14 | (Z) | (Z) | (Z) | 1 | 8 | 3 | 3 |
| Va..... | 237 | 160 | 23 | 40 | 160 | 17 | 5 | 65 | 57 | 28 | 21 | 16 |
| W. Va..... | 127 | 92 | 7 | 20 | 79 | 11 | 2 | 23 | 45 | 18 | 7 | 9 |
| N.C..... | 351 | 254 | 28 | 55 | 231 | 26 | 11 | 119 | 73 | 48 | 25 | 21 |
| S.C..... | 157 | 123 | 11 | 17 | 101 | 10 | 1 | 54 | 42 | 16 | 17 | 8 |
| Ga..... | 311 | 218 | 30 | 44 | 197 | 24 | 5 | 85 | 78 | 46 | 20 | 20 |
| Fla..... | 322 | 214 | 32 | 56 | 217 | 22 | 9 | 46 | 71 | 56 | 43 | 42 |
| E.S.C. | 957 | 672 | 84 | 150 | 588 | 63 | 15 | 380 | 203 | 114 | 51 | 56 |
| Ky..... | 261 | 178 | 26 | 43 | 163 | 17 | 3 | 105 | 52 | 30 | 15 | 16 |
| Tenn..... | 247 | 164 | 25 | 48 | 152 | 16 | 6 | 105 | 40 | 30 | 16 | 15 |
| Ala..... | 250 | 180 | 17 | 37 | 153 | 16 | 5 | 77 | 70 | 32 | 15 | 16 |
| Miss..... | 199 | 149 | 16 | 23 | 120 | 14 | 1 | 93 | 41 | 21 | 6 | 10 |
| W.S.C. | 1,812 | 1,346 | 111 | 250 | 1,193 | 131 | 30 | 566 | 487 | 190 | 132 | 113 |
| Ark..... | 251 | 180 | 16 | 24 | 150 | 14 | 2 | 95 | 68 | 20 | 12 | 11 |
| La..... | 241 | 148 | 20 | 48 | 150 | 24 | 2 | 51 | 52 | 37 | 17 | 18 |
| Okla..... | 335 | 232 | 25 | 56 | 208 | 21 | 7 | 125 | 76 | 31 | 22 | 20 |
| Tex..... | 1,005 | 786 | 49 | 123 | 684 | 71 | 19 | 296 | 290 | 102 | 80 | 65 |
| Mt. | 968 | 733 | 63 | 135 | 650 | 78 | 11 | 268 | 365 | 87 | 75 | 56 |
| Mont..... | 126 | 86 | 14 | 21 | 88 | 9 | 1 | 59 | 31 | 10 | 7 | 6 |
| Idaho..... | 122 | 87 | 8 | 20 | 78 | 9 | 2 | 51 | 38 | 8 | 5 | 5 |
| Wyo..... | 68 | 49 | 6 | 10 | 41 | 10 | 1 | 21 | 23 | 3 | 6 | 4 |
| Colo..... | 231 | 176 | 12 | 37 | 161 | 15 | 2 | 73 | 83 | 22 | 15 | 13 |
| N. Mex..... | 116 | 87 | 6 | 17 | 70 | 12 | 2 | 23 | 52 | 10 | 7 | 8 |
| Ariz..... | 153 | 122 | 9 | 15 | 109 | 9 | 2 | 15 | 64 | 21 | 19 | 13 |
| Utah..... | 97 | 80 | 6 | 8 | 65 | 10 | 1 | 20 | 44 | 10 | 9 | 4 |
| Nev..... | 55 | 46 | 2 | 5 | 38 | 4 | (Z) | 6 | 30 | 4 | 6 | 4 |
| Pac. | 1,771 | 1,399 | 119 | 188 | 1,247 | 124 | 28 | 270 | 711 | 198 | 214 | 136 |
| Wash..... | 273 | 200 | 25 | 37 | 198 | 18 | 5 | 73 | 104 | 24 | 21 | 16 |
| Oreg..... | 176 | 123 | 15 | 25 | 114 | 13 | 4 | 46 | 64 | 19 | 10 | 7 |
| Calif..... | 1,265 | 1,035 | 73 | 116 | 892 | 88 | 19 | 143 | 524 | 147 | 174 | 108 |
| Alaska..... | 28 | 21 | 2 | 4 | 21 | 2 | (Z) | 1 | 13 | 3 | 4 | 2 |
| Hawaii..... | 30 | 19 | 3 | 6 | 22 | 2 | (Z) | 6 | 6 | 5 | 5 | 3 |

Z Less than 500 trucks.

¹ Based on physical characteristics of vehicles reported; approximates following classification in terms of gross vehicle weight (empty weight of vehicle plus load it was designed to carry): Light—10,000 lb. or less; Medium—10,001 to 19,500 lb.; Light-heavy—19,501 to 26,000 lb.; Heavy-heavy—over 26,000 lb.

² Local—in or around city and suburbs or within a short distance of the farm, factory, or home base of the vehicle; Intermediate—beyond local limits but usually not more than 200 miles, one way, from home base of vehicle; Long distance—trips usually more than 200 miles, one way, from home base. U.S. total for trucks not reported, 2,236,000.

Source: Dept. of Commerce, Bureau of the Census; 1963 Census of Transportation, Vol. II, *Truck Inventory and Use Survey*.

No. 830. TRUCK CARRIERS—SELECTED OPERATING STATISTICS: 1963

[Represents motor carriers of property that render trucking services to the public, but are not subject to the Interstate Commerce Commission economic regulations. Covers carriers engaged in intrastate or local service and interstate carriers of nonmanufactured agricultural products and fish. These carriers account for 74 percent of all truck carriers and 21 percent of total operating revenues. Based on a sample and subject to sampling variability; see source for detailed explanation]

| ITEM | Number of carriers | Total revenue (mil. dol.) | Number of employees, Nov. 15 (1,000) | VEHICLES OWNED OR LEASED (1,000) | | |
|---|--------------------|---------------------------|--------------------------------------|----------------------------------|----------------|--------------------------|
| | | | | Trucks | Truck tractors | Trailers (semi and full) |
| Total | 42,986 | 2,299 | 199.3 | 111.8 | 60.9 | 84.0 |
| FORM OF OWNERSHIP | | | | | | |
| Corporation (incl. cooperatives)..... | 6,977 | 1,026 | 74.7 | 32.0 | 27.5 | 40.8 |
| Individual owners..... | 31,581 | 1,001 | 96.5 | 64.7 | 26.3 | 33.8 |
| Partnership..... | 4,428 | 272 | 28.1 | 15.1 | 7.1 | 9.4 |
| TYPE OF OPERATION | | | | | | |
| Common carrier..... | 36,194 | 1,892 | 166.9 | 94.7 | 49.0 | 69.4 |
| Contract carrier..... | 6,792 | 407 | 32.4 | 17.1 | 11.9 | 14.6 |
| AREA OF SERVICE | | | | | | |
| Local..... | 29,330 | 1,269 | 129.9 | 88.2 | 22.9 | 30.8 |
| Inter-city..... | 13,656 | 1,030 | 69.4 | 23.6 | 38.0 | 53.2 |
| LOCATION OF HOME OFFICE (geographic divisions)¹ | | | | | | |
| New England..... | 2,124 | 76 | 8.2 | 5.2 | 1.4 | 1.8 |
| Middle Atlantic..... | 8,499 | 474 | 41.8 | 23.4 | 9.7 | 11.1 |
| East North Central..... | 8,699 | 467 | 39.7 | 23.2 | 14.0 | 20.7 |
| West North Central..... | 5,868 | 244 | 22.6 | 13.7 | 7.7 | 9.0 |
| South Atlantic..... | 4,858 | 231 | 22.3 | 13.1 | 5.3 | 5.7 |
| East South Central..... | 2,424 | 106 | 10.1 | 5.9 | 3.0 | 3.6 |
| West South Central..... | 3,336 | 187 | 16.9 | 8.0 | 6.7 | 7.9 |
| Mountain..... | 1,414 | 102 | 7.6 | 2.9 | 3.5 | 5.5 |
| Pacific..... | 5,864 | 412 | 30.1 | 16.4 | 9.6 | 18.7 |

¹ For composition of geographic divisions, see fig. I, p. xii.

No. 831. BUS CARRIERS—SELECTED OPERATING STATISTICS: 1963

[Based on a complete canvass made of bus firms listed from the active records of the Internal Revenue Service as subject to payment of Federal Insurance Contribution Act (FICA) taxes (i.e., employers of 1 or more persons). Represents nongovernmentally owned motor carriers of passengers, except those that are subject to the Interstate Commerce Commission economic regulations. They are engaged largely in local service. These carriers account for 86 percent of all bus carriers and 37 percent of total operating revenues]

| ITEM | Number of carriers | Total revenue (\$1,000) | Total expenses (\$1,000) | Number of paid employees ¹ | Number of buses |
|---|--------------------|-------------------------|--------------------------|---------------------------------------|------------------|
| Total | 1,320 | 400,032 | 371,589 | 47,201 | 25,292 |
| PRINCIPAL TYPE OF SERVICE | | | | | |
| Local..... | 895 | 351,314 | 326,109 | 42,078 | 21,623 |
| Inter-city..... | 199 | 21,227 | 20,017 | 2,203 | 1,663 |
| Charter..... | 125 | 10,155 | 8,729 | 1,156 | 1,031 |
| Other..... | 101 | 17,336 | 16,734 | 1,764 | 975 |
| CLASS OF OWNERSHIP | | | | | |
| Corporations..... | 925 | 384,193 | 356,773 | 44,883 | (²) |
| Individual proprietorships, partnerships, cooperatives..... | 395 | 15,839 | 14,816 | 2,318 | (²) |
| LOCATION OF HOME OFFICE (geographic divisions)³ | | | | | |
| New England..... | 74 | 15,634 | 15,232 | 2,059 | 1,399 |
| Middle Atlantic..... | 497 | 140,058 | 123,157 | 17,250 | 7,420 |
| East North Central..... | 177 | 65,713 | 63,025 | 7,720 | 4,523 |
| West North Central..... | 69 | 26,433 | 24,980 | 2,935 | 1,809 |
| South Atlantic..... | 164 | 47,754 | 46,238 | 5,547 | 3,294 |
| East South Central..... | 69 | 20,470 | 19,325 | 2,515 | 1,347 |
| West South Central..... | 81 | 32,359 | 31,119 | 3,683 | 2,304 |
| Mountain..... | 55 | 13,355 | 11,460 | 1,422 | 846 |
| Pacific..... | 134 | 38,225 | 37,053 | 4,070 | 2,350 |

¹ As of Nov. 15, 1963. ² Data not requested. ³ For composition of geographic divisions, see fig. I, p. xii.

Source of tables 830 and 831: Dept. of Commerce, Bureau of the Census; 1963 Census of Transportation, Vol. IV, *Motor Carrier Survey*.

No. 832. TRANSIT INDUSTRY—SUMMARY: 1940 TO 1966

[Money figures in millions of dollars, except as indicated. Prior to 1960, excludes Alaska and Hawaii. Comprises all privately and publicly owned organized local passenger transportation agencies except taxicabs, suburban railroads, and sightseeing and school buses. Covers (a) local motorbus lines, (b) electric street railways, (c) elevated and subway lines, (d) interurban electric railways and (e) trolley coach lines. Based on financial and statistical reports received by American Transit Association from transit companies representing more than 85 percent of the industry. See also *Historical Statistics, Colonial Times to 1957*, series Q 330-340]

| ITEM | 1940 | 1945 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|--|--------|--------|--------|--------|---------|------------------|------------------|------------------|------------------|
| Operating companies | (NA) | 1,253 | 1,406 | 1,483 | 1,251 | 1,186 | 1,152 | 1,148 | 1,134 |
| Motorbus companies ¹ | (NA) | 1,164 | 1,354 | 1,450 | 1,236 | 1,183 | 1,149 | 1,145 | 1,131 |
| Miles of route operated (Dec. 31): | | | | | | | | | |
| Electric railway—single track..... | 19,600 | 17,732 | 10,813 | 6,197 | 3,935 | 2,236 | 2,178 | 2,173 | 2,153 |
| Surface..... | 18,360 | 16,480 | 9,590 | 4,976 | 2,692 | 990 | 918 | 918 | 898 |
| Subway and elevated..... | 1,240 | 1,252 | 1,223 | 1,221 | 1,243 | 1,246 | 1,255 | 1,255 | 1,255 |
| Trolley coach—negative overhead wire..... | 1,925 | 2,368 | 3,482 | 3,428 | 2,196 | 1,119 | 986 | 766 | 676 |
| Motorbus—route round trip..... | 78,000 | 90,400 | 98,000 | 99,800 | 108,700 | 117,400 | 118,300 | 120,900 | 122,100 |
| Passenger vehicles owned (Dec. 31): | | | | | | | | | |
| Electric railway cars..... | 75,464 | 90,141 | 86,867 | 73,089 | 65,292 | 62,180 | 61,689 | 61,717 | 62,136 |
| Surface..... | 37,662 | 36,755 | 23,543 | 14,532 | 11,866 | 10,625 | 10,624 | 10,664 | 10,680 |
| Subway and elevated..... | 26,630 | 26,680 | 13,800 | 5,300 | 2,856 | 1,756 | 1,580 | 1,549 | 1,407 |
| Trolley coaches..... | 11,032 | 10,075 | 9,743 | 9,232 | 9,010 | 8,869 | 9,064 | 9,115 | 9,273 |
| Motorbuses..... | 2,802 | 3,716 | 6,504 | 6,157 | 3,826 | 2,155 | 1,865 | 1,453 | 1,326 |
| | 35,000 | 49,670 | 56,820 | 52,400 | 49,600 | 49,400 | 49,200 | 49,600 | 50,130 |
| Investment (Dec. 31) | 4,096 | 4,262 | 3,918 | 3,821 | 3,937 | 4,025 | 4,106 | 4,225 | 4,350 |
| Electric railway..... | 3,588 | 3,620 | 3,060 | 2,902 | 3,003 | 3,076 | 3,144 | 3,243 | 3,321 |
| Surface..... | 1,574 | 1,570 | 913 | 616 | 367 | 175 | 165 | 165 | 149 |
| Subway and elevated..... | 2,014 | 2,050 | 2,147 | 2,286 | 2,636 | 2,901 | 2,979 | 3,078 | 3,172 |
| Trolley coach..... | 58 | 76 | 144 | 160 | 117 | 70 | 65 | 49 | 43 |
| Motorbus..... | 450 | 566 | 714 | 759 | 817 | 879 | 897 | 933 | 986 |
| Operating finances: | | | | | | | | | |
| Operating revenue..... | 737 | 1,380 | 1,452 | 1,428 | 1,407 | 1,390 | 1,408 | 1,444 | 1,479 |
| Electric railway..... | 456 | 710 | 678 | 440 | 369 | 348 | 351 | 366 | 365 |
| Surface..... | 328 | 558 | 362 | 176 | 88 | 61 | 56 | 56 | 59 |
| Subway and elevated..... | 128 | 151 | 216 | 264 | 282 | 287 | 296 | 310 | 307 |
| Trolley coach..... | 25 | 88 | 122 | 131 | 82 | 56 | 46 | 42 | 39 |
| Motorbus..... | 256 | 603 | 752 | 856 | 956 | 986 | 1,010 | 1,036 | 1,074 |
| Operating expenses..... | 598 | 1,067 | 1,297 | 1,277 | 1,290 | 1,315 | 1,343 | 1,374 | 1,424 |
| Percent of revenue..... | 81.1 | 77.3 | 89.3 | 89.6 | 91.7 | 94.6 | 95.4 | 95.2 | 96.3 |
| Net revenue..... | 139 | 313 | 155 | 149 | 117 | 75 | 66 | 70 | 55 |
| Taxes (all)..... | 63 | 165 | 89 | 93 | 87 | 79 | 78 | 81 | 92 |
| Operating income..... | 76 | 149 | 66 | 56 | 31 | 2 1/2 | 2 1/2 | 2 1/2 | 2 1/2 |
| Percent of revenue..... | 10.4 | 10.8 | 4.6 | 3.9 | 2.2 | (²) | (²) | (²) | (²) |
| Revenue vehicle-miles operated | | | | | | | | | |
| millions..... | 2,596 | 3,254 | 3,008 | 2,448 | 2,143 | 2,022 | 2,016 | 2,008 | 1,984 |
| Electric railway..... millions..... | 1,316 | 1,398 | 907 | 561 | 466 | 436 | 439 | 437 | 422 |
| Surface..... millions..... | 845 | 940 | 463 | 178 | 75 | 49 | 43 | 42 | 43 |
| Subway and elevated..... millions..... | 471 | 458 | 443 | 383 | 391 | 387 | 396 | 395 | 379 |
| Trolley coach..... millions..... | 86 | 133 | 206 | 177 | 101 | 62 | 49 | 43 | 40 |
| Motorbus..... millions..... | 1,195 | 1,722 | 1,895 | 1,710 | 1,576 | 1,523 | 1,528 | 1,528 | 1,522 |
| Passengers carried millions..... | 13,098 | 23,254 | 17,246 | 11,529 | 9,395 | 8,400 | 8,328 | 8,253 | 8,083 |
| Electric railway..... millions..... | 8,325 | 12,124 | 6,168 | 3,077 | 2,313 | 2,165 | 2,166 | 2,134 | 2,035 |
| Surface..... millions..... | 5,943 | 9,426 | 3,904 | 1,207 | 463 | 329 | 289 | 276 | 282 |
| Subway and elevated..... millions..... | 2,382 | 2,698 | 2,264 | 1,870 | 1,850 | 1,836 | 1,877 | 1,858 | 1,753 |
| Trolley coach..... millions..... | 534 | 1,244 | 1,658 | 1,202 | 657 | 413 | 349 | 305 | 284 |
| Motorbus..... millions..... | 4,239 | 9,886 | 9,420 | 7,250 | 6,425 | 5,822 | 5,813 | 5,814 | 5,764 |
| Revenue passengers carried | | | | | | | | | |
| millions..... | 10,504 | 18,982 | 13,845 | 9,189 | 7,521 | 6,915 | 6,854 | 6,798 | 6,671 |
| Electric railway..... millions..... | 6,464 | 9,636 | 4,903 | 2,586 | 2,005 | 1,899 | 1,911 | 1,882 | 1,795 |
| Surface..... millions..... | 4,183 | 7,081 | 2,790 | 845 | 335 | 238 | 213 | 204 | 211 |
| Subway and elevated..... millions..... | 2,282 | 2,555 | 2,113 | 1,741 | 1,670 | 1,661 | 1,698 | 1,678 | 1,584 |
| Trolley coach..... millions..... | 419 | 1,001 | 1,261 | 869 | 447 | 264 | 214 | 186 | 174 |
| Motorbus..... millions..... | 3,820 | 8,345 | 7,681 | 5,734 | 5,069 | 4,752 | 4,729 | 4,730 | 4,702 |
| Number of employees (average) | | | | | | | | | |
| 1,000..... | 203 | 242 | 240 | 198 | 156 | 147 | 145 | 145 | 144 |
| Subway and elevated..... | | 34 | 30 | 41 | 35 | 34 | 35 | 36 | 36 |
| Surface railway—trolley coach and motorbus..... | 203 | 208 | 201 | 157 | 121 | 113 | 110 | 109 | 108 |
| Payroll..... | 360 | 632 | 835 | 864 | 857 | 892 | 917 | 964 | 995 |
| Average annual earnings per employee..... dollars..... | 1,773 | 2,612 | 3,479 | 4,364 | 5,481 | 6,062 | 6,332 | 6,645 | 6,895 |

NA Not available. ¹ Comprises companies operating motorbuses exclusively and companies with combined services such as trolley coach and motorbus, etc.

² Deficit, not computed as percent of operating revenue.

Source: American Transit Association, Washington, D.C.; annual report, *Transit Fact Book*.

No. 833. INTERCITY BUS LINES—SUMMARY OF OPERATIONS: 1960 TO 1967

| ITEM | 1960 | 1964 | 1965 | 1966 | 1967 est. |
|---|---------|---------|---------|---------|-----------|
| Operating companies..... | 1,150 | 1,100 | 1,100 | 1,100 | 1,100 |
| Buses..... | 20,974 | 21,152 | 20,600 | 21,200 | 21,400 |
| Miles of highway served (Dec. 31) ¹ | 265,000 | 260,000 | 262,000 | 263,000 | 263,000 |
| Employees (Dec. 31) ² | 45,000 | 46,800 | 45,000 | 46,200 | 46,600 |
| Total bus miles.....millions..... | 1,092 | 1,183 | 1,157 | 1,200 | 1,210 |
| Revenue passengers.....millions..... | 366.2 | 360.3 | 370.0 | 384.0 | 384.0 |
| Revenue passenger-miles.....millions..... | 19,300 | 23,300 | 23,800 | 24,600 | 24,600 |
| Operating revenue, all services.....\$1,000..... | 556,200 | 686,700 | 700,500 | 739,800 | 772,800 |
| Operating expenses.....\$1,000..... | 494,800 | 594,900 | 599,500 | 637,200 | 684,900 |
| Net operating revenue before income taxes.....\$1,000..... | 61,400 | 91,800 | 101,000 | 102,600 | 87,900 |
| Taxes assignable to operations ³\$1,000..... | 52,600 | 62,700 | 58,400 | 64,500 | 67,000 |

¹ Includes duplication between carriers. ² Operating companies only. ³ Excludes income taxes.

Source: National Association of Motor Bus Owners, Washington, D.C.; *Bus Facts*.

No. 834. CLASS I INTERCITY MOTOR CARRIERS OF PROPERTY AND PASSENGERS—SUMMARY STATISTICS: 1950 TO 1966

[Money figures in millions of dollars, except as indicated. Prior to 1960, excludes Alaska and Hawaii. See text, p. 640, for explanation of class limits]

| ITEM | 1950 | 1955 | 1960 | 1964 | 1965 | 1966 |
|---|---------|---------|---------|---------|-------|-------|
| PROPERTY | | | | | | |
| Carriers reporting..... | 1,621 | 2,244 | 935 | 1,025 | 1,122 | 1,155 |
| Operating revenue..... | 2,380 | 4,030 | 4,763 | 6,199 | 7,097 | 7,882 |
| Common carrier..... | 2,181 | 3,622 | 4,384 | 5,835 | 6,602 | 7,316 |
| Contract carrier and other..... | 199 | 408 | 380 | 365 | 495 | 566 |
| Expenses..... | 2,215 | 3,870 | 4,645 | 5,918 | 6,675 | 7,447 |
| Percent of operating revenue..... | 93.1 | 96.0 | 97.5 | 95.5 | 94.1 | 94.5 |
| Net operating revenue..... | 165 | 160 | 119 | 282 | 422 | 436 |
| Net income before income taxes..... | 159 | 148 | 81 | 240 | 333 | 336 |
| Net income after income taxes..... | 93 | 82 | 37 | 152 | 212 | 217 |
| Owned revenue vehicles ¹ | 191,243 | 288,668 | 279,305 | 317,859 | (NA) | (NA) |
| Trucks..... | 28,990 | 37,472 | 30,560 | 32,785 | (NA) | (NA) |
| Truck tractors..... | 61,060 | 92,073 | 87,933 | 94,713 | (NA) | (NA) |
| Semitrailers..... | 96,639 | 153,604 | 157,657 | 187,431 | (NA) | (NA) |
| Intercity vehicle-miles.....millions..... | 5,352 | 7,559 | 7,203 | 8,209 | (NA) | (NA) |
| Tons of intercity revenue freight carried ²millions..... | 213 | 314 | 276 | 366 | (NA) | (NA) |
| Miles per owned vehicle..... | 53,833 | 53,008 | 59,690 | 65,678 | (NA) | (NA) |
| Revenue per vehicle-mile (intercity)..... | \$0.43 | \$0.52 | \$0.64 | \$0.74 | (NA) | (NA) |
| Expense per vehicle-mile (intercity) ³ | \$0.41 | \$0.51 | \$0.65 | \$0.72 | (NA) | (NA) |
| Employees, average number ⁴ | 224,215 | 332,188 | 326,626 | 364,930 | (NA) | (NA) |
| Compensation..... | 855 | 1,690 | 2,103 | 2,754 | (NA) | (NA) |
| PASSENGERS | | | | | | |
| Carriers reporting ⁵ | 172 | 146 | 143 | 161 | 155 | 166 |
| Operating revenue..... | 351 | 362 | 463 | 655 | 635 | 646 |
| Passenger revenue ⁶ | 325 | 315 | 382 | 521 | 491 | 491 |
| Special bus revenue and other..... | 27 | 47 | 81 | 134 | 144 | 155 |
| Expenses..... | 315 | 331 | 405 | 570 | 538 | 543 |
| Percent of operating revenue..... | 89.7 | 91.4 | 87.5 | 87.0 | 84.7 | 84.1 |
| Net operating revenue..... | 36 | 31 | 58 | 85 | 90 | 90 |
| Net income before income taxes..... | 35 | 29 | 55 | 85 | 90 | 90 |
| Net income after income taxes..... | 19 | 16 | 28 | 52 | 52 | 52 |
| Passenger vehicles, total ⁷ | 14,566 | 13,127 | 12,680 | 16,157 | (NA) | (NA) |
| Owned end of year..... | 13,200 | 11,547 | 10,946 | 14,274 | (NA) | (NA) |
| Passenger vehicles (intercity) ⁸ | 13,621 | 12,057 | 11,142 | 10,442 | (NA) | (NA) |
| Vehicle-miles, passenger ⁹millions..... | 959 | 859 | 843 | 1,056 | (NA) | (NA) |
| Number of revenue passengers carried.....millions..... | 390 | 293 | 268 | 608 | (NA) | (NA) |
| Miles per vehicle, average ⁹ | 65,411 | 64,128 | 65,567 | 67,671 | (NA) | (NA) |
| Average fare per passenger, per carrier (intercity)..... | \$1.01 | \$1.37 | \$2.12 | \$2.43 | (NA) | (NA) |
| Passenger revenue per vehicle-mile, regular-route..... | \$0.35 | \$0.38 | \$0.49 | \$0.53 | (NA) | (NA) |
| Expense per vehicle-mile ² | \$0.33 | \$0.38 | \$0.48 | \$0.54 | (NA) | (NA) |
| Employees, average number..... | 40,148 | 35,709 | 34,514 | 43,455 | (NA) | (NA) |
| Compensation..... | 139 | 159 | 196 | 288 | (NA) | (NA) |

- Represents zero. NA Not available. ¹ Includes full trailers, not shown separately. Excludes equipment used under lease, including operations conducted under "purchased transportation" arrangements. ² Includes duplication on account of tonnage received from connecting motor carriers. ³ Basic figures include expenses of operating vehicles in local services not available separately. ⁴ Excludes drivers of equipment engaged to perform "purchased transportation" service. ⁵ Excludes carriers subject to ICC jurisdiction engaged preponderantly in local or suburban service and carriers engaged in transportation of both property and passengers. ⁶ Regular route intercity and local revenue. ⁷ Average number operated in intercity service during year and number owned in local operations at close of year. ⁸ Vehicles owned, leased, and operated under "purchase transportation" arrangements, operated in intercity revenue service. ⁹ Owned and leased vehicles.

Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 7.

No. 835. MOTOR-VEHICLE ACCIDENTS—PERSONS KILLED OR INJURED, BY CHARACTERISTICS OF ACCIDENTS: 1950 TO 1967

[Number in thousands. Estimates based on summaries of motor vehicle accidents prepared by various States]

| CHARACTERISTIC | PERSONS KILLED | | | | | PERSONS INJURED | | | | |
|--------------------------|----------------|-------|-------|-------|-------|-----------------|-------|-------|-------|-------|
| | 1950 | 1960 | 1965 | 1966 | 1967 | 1950 | 1960 | 1965 | 1966 | 1967 |
| Number | 36 | 38 | 49 | 53 | 52 | 1,800 | 3,078 | 4,100 | 4,400 | 4,200 |
| Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| TYPE OF ACCIDENT | | | | | | | | | | |
| Collision with— | | | | | | | | | | |
| Automobile | 35.0 | 39.5 | 41.2 | 40.9 | 40.6 | 57.5 | 74.9 | 72.5 | 74.4 | 75.3 |
| Pedestrian | 26.5 | 20.0 | 18.6 | 18.3 | 18.2 | 16.6 | 8.3 | 6.7 | 6.3 | 6.1 |
| Fixed object | 8.5 | 10.7 | 10.5 | 11.4 | 12.3 | 6.5 | 4.5 | 5.1 | 5.3 | 5.5 |
| Other ¹ | 6.0 | 4.8 | 4.5 | 4.6 | 5.0 | 3.2 | 2.1 | 2.4 | 2.2 | 2.4 |
| Noncollision | 24.0 | 25.0 | 25.2 | 24.8 | 23.9 | 16.2 | 9.9 | 13.3 | 11.8 | 10.7 |
| WEATHER CONDITION | | | | | | | | | | |
| Clear | 81.3 | 87.4 | 84.8 | 86.9 | 83.5 | 78.4 | 83.9 | 78.6 | 82.0 | 79.1 |
| Fog | 2.8 | 1.2 | 2.0 | 1.9 | 1.7 | 1.8 | 0.7 | 1.5 | 1.2 | 1.1 |
| Rain | 14.0 | 9.0 | 11.0 | 9.9 | 12.1 | 16.2 | 10.6 | 15.4 | 13.5 | 14.9 |
| Snow | 1.9 | 2.4 | 2.2 | 1.3 | 2.7 | 3.6 | 4.8 | 4.5 | 3.3 | 4.9 |
| ROAD CONDITION | | | | | | | | | | |
| Dry | 75.1 | 79.2 | 77.4 | 78.7 | 77.4 | 68.7 | 71.5 | 69.1 | 69.6 | 68.6 |
| Wet | 21.4 | 15.1 | 17.9 | 17.0 | 18.0 | 24.5 | 16.5 | 22.4 | 22.2 | 22.9 |
| Snowy | 1.5 | 2.8 | 1.4 | 1.3 | 2.1 | 3.0 | 5.8 | 2.6 | 2.7 | 3.9 |
| Icy | 2.0 | 2.9 | 3.3 | 3.0 | 2.5 | 3.8 | 6.2 | 5.9 | 5.5 | 4.6 |
| DAY OF ACCIDENT | | | | | | | | | | |
| Sunday | 20.1 | 17.7 | 18.7 | 18.3 | 17.5 | 17.7 | 15.2 | 13.6 | 14.0 | 13.0 |
| Monday | 12.4 | 11.5 | 10.9 | 10.6 | 11.6 | 13.2 | 13.5 | 13.2 | 13.5 | 12.4 |
| Tuesday | 10.8 | 11.6 | 10.0 | 10.3 | 10.6 | 11.8 | 12.2 | 11.9 | 11.7 | 11.9 |
| Wednesday | 11.6 | 10.5 | 11.2 | 11.0 | 10.4 | 12.1 | 12.1 | 12.9 | 12.2 | 12.9 |
| Thursday | 11.3 | 11.2 | 11.9 | 11.5 | 12.0 | 12.4 | 13.5 | 13.9 | 13.0 | 13.7 |
| Friday | 13.6 | 16.0 | 15.4 | 16.7 | 15.7 | 14.7 | 16.0 | 16.5 | 17.2 | 16.4 |
| Saturday | 20.2 | 21.5 | 21.9 | 21.6 | 22.2 | 18.1 | 17.5 | 18.0 | 18.4 | 18.8 |
| HOUR OF ACCIDENT | | | | | | | | | | |
| Midnight to 6 a.m. | 21.6 | 22.3 | 22.2 | 19.6 | 22.5 | 12.7 | 10.9 | 10.7 | 10.5 | 11.3 |
| 6 a.m. to noon | 14.8 | 15.6 | 14.8 | 17.6 | 15.2 | 19.2 | 22.0 | 21.8 | 20.7 | 20.8 |
| Noon to 6 p.m. | 28.3 | 27.8 | 28.7 | 30.0 | 28.2 | 38.6 | 40.5 | 39.7 | 40.0 | 39.7 |
| 6 p.m. to midnight | 35.3 | 34.3 | 34.3 | 32.8 | 34.1 | 29.5 | 26.6 | 27.8 | 28.8 | 28.2 |
| AGE OF VICTIMS | | | | | | | | | | |
| Under 10 years | (NA) | (NA) | 7.6 | 7.2 | 7.3 | (NA) | (NA) | 8.9 | 8.7 | 8.3 |
| 10 to 19 years | (NA) | (NA) | 15.9 | 17.7 | 17.4 | (NA) | (NA) | 21.4 | 22.0 | 24.6 |
| 20 to 34 years | (NA) | (NA) | 28.4 | 28.6 | 28.7 | (NA) | (NA) | 31.6 | 31.6 | 32.5 |
| 35 to 54 years | (NA) | (NA) | 24.3 | 22.9 | 24.0 | (NA) | (NA) | 25.7 | 25.3 | 23.0 |
| 55 years and over | (NA) | (NA) | 23.8 | 23.6 | 22.6 | (NA) | (NA) | 12.4 | 12.4 | 11.6 |

NA Not available. ¹ Railroad train, bicycle, other vehicle, and miscellaneous.

Source: The Travelers Insurance Companies, Hartford, Conn.; annual report, *The Travelers Book of Street and Highway Accident Data*.

No. 836. DEATHS FROM MOTOR-VEHICLE ACCIDENTS, BY TYPE OF ACCIDENT: 1950 TO 1967

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 (prel.) | 1967 (prel.) |
|---|--------|--------|--------|--------|--------|--------|--------------|--------------|
| Traffic deaths ¹ | 34,800 | 38,400 | 38,100 | 43,600 | 47,700 | 49,200 | 53,000 | 53,000 |
| Noncollision accidents | 10,600 | 12,100 | 11,900 | 13,800 | 14,600 | 14,900 | 16,300 | 17,100 |
| Collision accidents: | | | | | | | | |
| With other motor vehicles | 11,700 | 14,500 | 14,800 | 17,600 | 19,600 | 20,800 | 22,300 | 21,700 |
| With pedestrians | 9,000 | 8,200 | 7,800 | 8,200 | 9,000 | 8,900 | 9,300 | 9,300 |
| With other vehicles or objects | 3,500 | 3,600 | 3,600 | 4,000 | 4,500 | 4,600 | 5,100 | 4,900 |
| Traffic death rates: | | | | | | | | |
| Per 100,000 population ² | 23.0 | 23.4 | 21.2 | 23.1 | 24.9 | 25.4 | 27.0 | 26.8 |
| Per 10,000 motor vehicles | 7.1 | 6.1 | 5.1 | 5.2 | 5.5 | 5.4 | 5.5 | 5.3 |
| Per 100 million vehicle miles | 7.6 | 6.4 | 5.3 | 5.4 | 5.6 | 5.5 | 5.7 | 5.5 |

¹ Totals do not equal sums of various types because the estimates are generally made only to nearest 10 deaths, and to nearest 50 deaths for certain types.

² Based on Bureau of the Census estimated population as of July 1, excluding Armed Forces abroad.

Source: National Safety Council, Chicago, Ill.: annual report, *Accident Facts*. (Copyright.)

No. 837. DRIVER AND PEDESTRIAN ACTION IN ACCIDENTS: 1950 TO 1967

[Percent distribution. See headnote, table 835]

| TYPE OF ACTION | PERSONS KILLED | | | | PERSONS INJURED | | | |
|-------------------------------------|----------------|--------|--------|--------|-----------------|-----------|-----------|-----------|
| | 1950 | 1960 | 1965 | 1967 | 1950 | 1960 | 1965 | 1967 |
| DRIVER ACTION | | | | | | | | |
| Number..... | 26,700 | 30,400 | 41,600 | 52,200 | 1,210,000 | 2,600,000 | 3,682,000 | 4,200,000 |
| Percent..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Exceeded speed limit..... | 49.8 | 36.1 | 41.1 | 39.0 | 39.3 | 38.5 | 42.2 | 20.9 |
| On wrong side of road..... | 17.8 | 17.0 | 16.4 | 13.1 | 8.7 | 6.7 | 6.8 | 5.2 |
| Had not right-of-way..... | 10.4 | 12.8 | 13.0 | 14.3 | 26.6 | 22.5 | 18.9 | 20.1 |
| Drove off roadway..... | 5.2 | 16.6 | 10.5 | 13.2 | 2.9 | 8.3 | 6.9 | 8.9 |
| Reckless driving..... | 8.5 | 12.5 | 14.9 | 15.4 | 9.0 | 13.5 | 19.2 | 38.9 |
| Other ¹ | 8.3 | 5.0 | 4.1 | 5.0 | 13.5 | 10.5 | 6.0 | 6.0 |
| PEDESTRIAN ACTION | | | | | | | | |
| Number of pedestrians.. | 9,400 | 7,600 | 9,000 | 9,500 | 299,500 | 255,500 | 274,700 | 256,900 |
| Percent..... | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Crossing at intersection: | | | | | | | | |
| With signal..... | 4.6 | 6.2 | 4.8 | 5.5 | 10.1 | 11.9 | 8.6 | 10.9 |
| Against signal..... | 6.3 | 7.1 | 8.6 | 8.5 | 9.4 | 8.5 | 9.5 | 11.5 |
| No signal..... | 13.5 | 15.9 | 7.4 | 9.6 | 12.6 | 12.3 | 8.1 | 8.3 |
| Crossing between intersections..... | 39.8 | 37.1 | 40.8 | 41.6 | 26.1 | 32.2 | 31.6 | 23.8 |
| Children playing in street..... | 5.8 | 5.3 | 3.3 | 2.9 | 16.6 | 6.6 | 6.3 | 6.0 |
| At work in road..... | 3.1 | 2.9 | 2.8 | 2.4 | 2.7 | 2.2 | 1.8 | 1.8 |
| Coming from behind parked car..... | 6.7 | 6.2 | 6.9 | 3.4 | 9.1 | 15.7 | 16.8 | 13.2 |
| Walking on rural highway..... | 13.0 | 10.0 | 15.6 | 14.1 | 2.3 | 2.4 | 7.6 | 7.7 |
| Not on roadway..... | 3.5 | 4.2 | 4.7 | 4.2 | 6.5 | 4.5 | 3.6 | 4.8 |
| Other ² | 3.7 | 5.1 | 5.1 | 7.8 | 3.6 | 3.7 | 6.1 | 12.0 |

¹ Cutting in; improper passing; no or improper signalling; movement of driverless car; miscellaneous.

² Standing on safety isle; getting on or off other vehicle; riding or hitching on vehicle; miscellaneous.

Source: The Travelers Insurance Companies, Hartford, Conn.; annual report, *The Travelers Book of Street and Highway Accident Data*.

No. 838. DEATHS FROM MOTOR-VEHICLE ACCIDENTS—PLACE OF DEATH, BY STATES: 1950 TO 1966

| STATE | 1950 | 1955 | 1960 | 1965 | 1966 | STATE | 1950 | 1955 | 1960 | 1965 | 1966 |
|-------------------------|--------|--------|--------|--------|--------|-------------|-------|-------|-------|-------|-------|
| U.S. ¹ | 34,763 | 38,426 | 38,137 | 49,163 | 53,041 | Mo..... | 902 | 1,079 | 1,078 | 1,349 | 1,418 |
| Ala..... | 859 | 859 | 926 | 1,237 | 1,204 | Mont..... | 209 | 244 | 231 | 278 | 268 |
| Alaska..... | 22 | 31 | 43 | 57 | 72 | Nebr..... | 317 | 331 | 310 | 397 | 443 |
| Ariz..... | 333 | 384 | 507 | 498 | 563 | Nev..... | 122 | 186 | 182 | 173 | 177 |
| Ark..... | 365 | 447 | 449 | 657 | 669 | N.H..... | 103 | 110 | 103 | 138 | 131 |
| Calif..... | 3,082 | 3,524 | 3,837 | 4,952 | 5,288 | N.J..... | 715 | 815 | 764 | 1,138 | 1,161 |
| Colo..... | 415 | 455 | 443 | 532 | 598 | N. Mex..... | 340 | 383 | 427 | 425 | 403 |
| Conn..... | 287 | 353 | 303 | 439 | 458 | N. Y..... | 1,961 | 2,163 | 2,034 | 2,874 | 3,102 |
| Del..... | 84 | 112 | 91 | 110 | 132 | N. C..... | 1,153 | 1,222 | 1,281 | 1,636 | 1,740 |
| D. C..... | 102 | 99 | 82 | 140 | 126 | N. Dak..... | 105 | 153 | 166 | 178 | 211 |
| Fla..... | 882 | 1,048 | 1,303 | 1,660 | 1,823 | Ohio..... | 1,850 | 2,089 | 1,933 | 2,369 | 2,612 |
| Ga..... | 928 | 1,122 | 1,079 | 1,400 | 1,562 | Okla..... | 504 | 569 | 686 | 759 | 809 |
| Hawaii..... | 74 | 64 | 111 | 94 | 106 | Oreg..... | 461 | 434 | 469 | 670 | 712 |
| Idaho..... | 243 | 184 | 231 | 235 | 256 | Pa..... | 1,656 | 1,872 | 1,685 | 2,288 | 2,318 |
| Ill..... | 1,953 | 1,877 | 1,664 | 2,311 | 2,661 | R.I..... | 87 | 94 | 60 | 115 | 125 |
| Ind..... | 1,136 | 1,189 | 1,164 | 1,531 | 1,603 | S. C..... | 627 | 696 | 690 | 849 | 933 |
| Iowa..... | 620 | 613 | 644 | 813 | 934 | S. Dak..... | 193 | 200 | 241 | 252 | 281 |
| Kansas..... | 546 | 613 | 555 | 677 | 709 | Tenn..... | 801 | 968 | 899 | 1,149 | 1,260 |
| Ky..... | 753 | 907 | 808 | 876 | 1,052 | Tex..... | 2,499 | 2,602 | 2,316 | 3,122 | 3,513 |
| La..... | 585 | 703 | 849 | 1,071 | 1,216 | Utah..... | 199 | 211 | 269 | 299 | 320 |
| Maine..... | 161 | 177 | 181 | 216 | 222 | Vt..... | 69 | 87 | 104 | 131 | 111 |
| Md..... | 480 | 500 | 527 | 742 | 744 | Va..... | 929 | 909 | 782 | 1,037 | 1,085 |
| Mass..... | 492 | 621 | 621 | 905 | 957 | Wash..... | 534 | 514 | 597 | 822 | 873 |
| Mich..... | 1,627 | 2,036 | 1,634 | 2,264 | 2,436 | W. Va..... | 400 | 398 | 371 | 484 | 501 |
| Minn..... | 558 | 613 | 750 | 908 | 1,043 | Wis..... | 857 | 954 | 926 | 1,054 | 1,125 |
| Miss..... | 525 | 562 | 669 | 724 | 840 | Wyo..... | 149 | 145 | 182 | 128 | 130 |

¹ Prior to 1960, excludes Alaska and Hawaii.

Source: Dept. of Health, Education, and Welfare, Public Health Service; annual report, *Vital Statistics of the United States*.

No. 839. RAILROADS—SUMMARY STATISTICS: 1930 TO 1966

[As of December 31. Prior to 1960, excludes Alaska and Hawaii. Includes intercorporate duplications. See also *Historical Statistics, Colonial Times to 1957*, series Q 44-124]

| ITEM | 1930 | 1940 | 1950 | 1960 | 1963 | 1964 | 1965 | 1966 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Operating companies ¹number.. | 775 | 574 | 471 | 407 | 395 | 380 | 372 | 375 |
| Road owned, first track ²miles.. | 249,052 | 233,670 | 223,779 | 217,552 | 214,387 | 212,059 | 211,384 | 210,573 |
| Miles operated: ³ | | | | | | | | |
| Total, reporting railroads ⁴ | 429,883 | 405,975 | 396,380 | 381,745 | 374,522 | 372,300 | 370,636 | 370,104 |
| Road, first track ⁴ | 260,440 | 245,740 | 236,857 | 230,169 | 227,282 | 226,753 | 226,015 | 225,528 |
| Other main tracks..... | 42,742 | 41,373 | 40,456 | 34,800 | 32,153 | 31,535 | 31,113 | 30,905 |
| Yardtrack and sidings..... | 126,701 | 118,862 | 119,067 | 116,776 | 115,087 | 114,012 | 113,508 | 113,870 |
| Miles of road operated by receivers or trustees..... | 9,486 | 75,270 | 12,223 | 1,259 | 1,748 | 1,732 | 1,690 | 1,612 |
| Equipment: | | | | | | | | |
| Locomotives in service.....number.. | 60,189 | 44,333 | 42,951 | 31,178 | 30,506 | 30,296 | 30,061 | 30,124 |
| Average tractive effort ⁵pounds. | 45,225 | 50,905 | 57,075 | 61,314 | 61,533 | 62,311 | 63,096 | 70,900 |
| Cars in service: | | | | | | | | |
| Passenger-train.....number.. | 53,584 | 38,308 | 37,359 | 25,746 | 22,616 | 21,510 | 20,022 | 18,974 |
| Freight train ⁷1,000.. | 2,322 | 1,684 | 1,746 | 1,690 | 1,542 | 1,518 | 1,515 | 1,624 |
| Average capacity ⁸ tons.. | 46.9 | 50.0 | 52.6 | 55.4 | 56.8 | 58.2 | 59.8 | 61.4 |
| Capital and property investment: ⁹ | | | | | | | | |
| Road and equipment, book value ⁹ | | | | | | | | |
| mil. dol.. | 26,051 | 25,646 | 30,174 | 35,513 | 34,519 | 34,869 | 35,489 | 36,618 |
| Depreciation reserve ¹⁰mil. dol.. | 2,361 | 3,095 | 6,629 | 8,532 | 9,143 | 9,265 | 9,342 | 9,479 |
| Capitalization outstanding ¹¹ | | | | | | | | |
| mil. dol.. | 22,783 | 21,047 | 18,274 | 16,134 | 15,011 | 14,876 | 14,857 | 14,800 |
| Capital surplus and retained income | | | | | | | | |
| mil. dol.. | 5,345 | 2,783 | 7,037 | 11,356 | 12,511 | 12,584 | 12,945 | 13,338 |
| Stock paying dividends.....mil. dol.. | 7,702 | 3,741 | 6,769 | 5,617 | 4,462 | 4,927 | 4,845 | 4,709 |
| Dividends declared.....mil. dol.. | 603 | 217 | 349 | 412 | 413 | 492 | 533 | 548 |
| Interest accrued on funded debt | | | | | | | | |
| mil. dol.. | 589 | 547 | 367 | 387 | 378 | 384 | 403 | 423 |
| Income and expenses: | | | | | | | | |
| Operating revenues.....mil. dol.. | 5,356 | 4,355 | 9,587 | 9,642 | 9,685 | 9,985 | 10,425 | 10,880 |
| Operating expenses.....mil. dol.. | 3,994 | 3,132 | 7,135 | 7,657 | 7,542 | 7,830 | 8,003 | 8,277 |
| Tax accruals.....mil. dol.. | 354 | 403 | 1,212 | 1,020 | 906 | 891 | 949 | 1,002 |
| Net railway operating income | | | | | | | | |
| mil. dol.. | 874 | 691 | 1,055 | 595 | 816 | 828 | 980 | 1,065 |
| Net income ⁸mil. dol.. | 578 | 243 | 855 | 473 | 681 | 733 | 866 | 957 |
| Passenger service: | | | | | | | | |
| Passenger revenue.....mil. dol.. | 731 | 418 | 815 | 641 | 590 | 579 | 556 | 547 |
| Passengers carried.....railroads.. | 708 | 456 | 488 | 327 | 311 | 314 | 306 | 308 |
| Passenger-miles.....millions.. | 26,876 | 23,816 | 31,790 | 21,284 | 18,519 | 18,271 | 17,454 | 17,162 |
| Commutation ¹²millions.. | 6,669 | 3,997 | 4,990 | 4,197 | 4,101 | 4,199 | 4,128 | 4,193 |
| Coach ¹²millions.. | (NA) | 12,485 | 17,443 | 13,422 | 11,785 | 11,632 | 11,069 | 10,799 |
| Parlor and sleeping car ¹²millions.. | (NA) | 7,288 | 9,338 | 3,643 | 2,611 | 2,416 | 2,191 | 2,104 |
| Revenue per passenger-mile...cents.. | 2.72 | 1.76 | 2.56 | 3.01 | 3.18 | 3.17 | 3.19 | 3.19 |
| Average journey per passenger | | | | | | | | |
| miles.. | 37.96 | 52.22 | 65.14 | 65.05 | 59.55 | 58.12 | 57.07 | 55.72 |
| Freight service: | | | | | | | | |
| Freight revenue.....mil. dol.. | 4,145 | 3,584 | 7,934 | 8,152 | 8,271 | 8,575 | 9,037 | 9,487 |
| Revenue-tons originated.....millions.. | 1,220 | 1,069 | 1,421 | 1,301 | 1,347 | 1,420 | 1,479 | 1,544 |
| Tons carried one mile.....millions.. | 385,815 | 375,369 | 591,550 | 575,360 | 625,170 | 662,089 | 705,705 | 746,699 |
| Revenue ton-miles per mile of road | | | | | | | | |
| 1,000.. | 1,481 | 1,526 | 2,497 | 2,497 | 2,750 | 2,918 | 3,121 | 3,312 |
| Revenue per ton-mile.....cents.. | 1.074 | 0.955 | 1.341 | 1.417 | 1.323 | 1.295 | 1.281 | 1.271 |
| Haul per ton.....miles.. | 316.21 | 351.13 | 416.32 | 442.14 | 463.97 | 466.17 | 477.15 | 483.70 |
| Number of employees, average.....1,000.. | 1,517 | 1,046 | 1,237 | 793 | 691 | 675 | 655 | 645 |
| Compensation of employees | | | | | | | | |
| mil. dol.. | 2,589 | 1,991 | 4,645 | 4,957 | 4,690 | 4,758 | 4,887 | 4,975 |
| Accidents: ¹³ | | | | | | | | |
| Persons killed.....number.. | 5,665 | 4,740 | 3,398 | 2,248 | 2,140 | 2,423 | 2,399 | 2,684 |
| Persons injured.....number.. | 49,443 | 29,606 | 33,255 | 19,577 | 27,456 | 27,614 | 25,789 | 25,552 |

NA Not available.

¹ Line-haul operating.

² Excludes all duplications; also excludes some mileage in Canada.

³ Includes some duplication under trackage rights and some mileage in Canada.

⁴ Excludes circular and unofficial.

⁵ 1930-1950 average for steam locomotives only; beginning 1960, all locomotives.

⁶ Covers class I railroads, excluding switch and terminal companies. ⁷ Excludes caboose cars. ⁸ Includes lessors.

⁹ Increase in investment over a period of years cannot be obtained accurately by subtraction of 1 year's investment from that of another owing to reorganization, sale or abandonment, reclassification, etc. Includes lessor and proprietary companies.

¹⁰ For 1950 and later years, includes amortization of defense projects and proprietary companies.

¹¹ Comprises common stock, preferred stock, and funded debt unmaturing. ¹² Class I railroads.

¹³ Includes highway grade crossing casualties.

Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1, and *Accident Bulletin*.

No. 840. RAILROAD COMPANIES, BY CLASS: 1950 TO 1966

[Prior to 1960, excludes Alaska and Hawaii. See text, p. 540, for explanation of class limits]

| CLASS OF COMPANY | 1950 | 1955 | 1960 | 1962 | 1963 | 1964 | 1965 | 1966 |
|---|--------------|------------|------------|------------|------------|------------|------------|------------|
| Total | 1,038 | 935 | 842 | 814 | 807 | 772 | 763 | 758 |
| Class I line-haul operating..... | 127 | 126 | 106 | 103 | 102 | 98 | 76 | 76 |
| Lessors to class I..... | 179 | 155 | 128 | 124 | 121 | 122 | 116 | 116 |
| Class II line-haul operating..... | 171 | 155 | 304 | 292 | 290 | 287 | 302 | 302 |
| Lessors to class II..... | 6 | 8 | 8 | 8 | 10 | 10 | 15 | 15 |
| Class III ¹ | 175 | 163 | (X) | (X) | (X) | (X) | (X) | (X) |
| Switching and terminal ² | 253 | 237 | 221 | 215 | 215 | 207 | 205 | 202 |
| Proprietary ³ | 100 | 67 | 53 | 50 | 47 | 46 | 45 | 44 |
| Circular..... | 18 | 18 | 21 | 18 | 17 | - | - | - |
| Unofficial..... | 9 | 6 | 1 | 4 | 5 | 2 | 4 | 3 |

X Not applicable. ¹ Classification terminated in 1956.

² Includes operating, lessor, proprietary, circular, and unofficial companies.

³ Excludes those in systems which file consolidated reports combining mileage, investment, and other items on a net system basis.

Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and, beginning 1955, *Transport Statistics in the United States*, Part 1.

No. 841. RAILROADS—EQUIPMENT IN SERVICE: 1950 TO 1966

[Prior to 1960, excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series Q 53-65]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|---|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Locomotives | 42,951 | 33,533 | 31,178 | 30,506 | 30,296 | 30,061 | 30,124 |
| Steam..... | 26,680 | 6,266 | 374 | 112 | 93 | 89 | 76 |
| Electric..... | 827 | 639 | 498 | 438 | 402 | 365 | 347 |
| Diesel..... | 15,396 | 26,563 | 30,240 | 29,898 | 29,745 | 29,552 | 29,644 |
| Other..... | 48 | 65 | 66 | 58 | 56 | 55 | 57 |
| New units installed ¹ | 3,215 | 1,097 | 389 | 834 | 963 | 1,387 | 1,154 |
| Freight cars ² | 1,745,778 | 1,723,747 | 1,690,396 | 1,542,456 | 1,517,564 | 1,515,169 | 1,523,741 |
| Box..... | 718,150 | 723,962 | 700,331 | 625,400 | 603,828 | 593,198 | 591,999 |
| Gondola and hopper..... | 874,801 | 845,809 | 831,473 | 760,192 | 753,957 | 753,892 | 756,201 |
| Other..... | 152,827 | 153,976 | 158,592 | 156,864 | 159,779 | 168,079 | 175,547 |
| Aggregate capacity ¹ 1,000 tons..... | 90,465 | 91,229 | 91,948 | 85,943 | 86,672 | 88,323 | 91,441 |
| Average capacity ¹ tons..... | 52.6 | 53.7 | 55.4 | 56.8 | 58.2 | 59.8 | 61.4 |
| New units installed ¹ | 40,032 | 29,070 | 54,032 | 33,245 | 52,308 | 62,859 | 56,480 |
| Passenger-train cars | 37,359 | 32,118 | 25,746 | 22,616 | 21,510 | 20,022 | 18,974 |
| Coaches..... | 16,488 | 13,543 | 10,287 | 9,286 | 8,739 | 8,086 | 7,754 |
| Average seating capacity ¹ | 75 | 75 | 76 | 78 | 79 | 76 | 76 |
| Baggage, express, and other non-passenger..... | 13,817 | 13,388 | 10,077 | 9,027 | 8,334 | 8,411 | 7,943 |
| Other..... | 7,054 | 5,187 | 5,382 | 4,303 | 3,937 | 3,525 | 3,277 |
| New units installed ¹ | 1,078 | 412 | 251 | 156 | 399 | 666 | 113 |
| Air-conditioned cars ³ | 16,747 | 14,784 | 11,787 | 9,950 | 8,980 | 8,079 | 7,589 |

¹ Class I railroads. ² Excludes caboose cars. ³ Class I railroads and Pullman Company.

Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1.

No. 842. RAILROADS (CLASS I)—FUEL AND POWER CONSUMED AND RAILS AND TIES LAID: 1950 TO 1966

[Line-haul railroads only. See text, p. 540, for explanation of class limits. See *Historical Statistics, Colonial Times to 1957*, series Q 128-137, for related data]

| ITEM | 1950 | 1955 | 1960 | 1964 | 1965 | 1966 |
|---|--------|--------|--------|--------|--------|--------|
| Fuel and power consumed: | | | | | | |
| Coal..... 1,000 short tons..... | 55,452 | 11,427 | 39 | 7 | 4 | 3 |
| Fuel oil..... mil. gal..... | 2,284 | 376 | 89 | 85 | 77 | 65 |
| Diesel oil..... mil. gal..... | 1,827 | 3,393 | 3,472 | 3,630 | 3,742 | 3,925 |
| Electricity..... mil. kw.-hr..... | 2,280 | 2,082 | 1,641 | 1,515 | 1,509 | 1,498 |
| Rails and ties laid: | | | | | | |
| Rails (replacement and betterment)..... 1,000 short tons..... | 2,454 | 1,890 | 915 | 1,009 | 1,022 | 1,108 |
| Ties (in previously constructed tracks): | | | | | | |
| Cross-ties..... 1,000..... | 30,404 | 24,149 | 14,319 | 14,738 | 14,760 | 15,324 |
| Switch and bridge ties..... 1,000 board ft..... | 98,400 | 79,098 | 49,902 | 49,333 | 48,169 | 46,753 |

Source: Interstate Commerce Commission; *Annual Report*.

NO. 843. RAILROADS—MILES OF ROAD OWNED, STATES: 1940 TO 1966

[As of December 31. Data are for actual length of line in each State without duplication]

| STATE | 1940 | 1950 | 1960 | 1966 | STATE | 1940 | 1950 | 1960 | 1966 |
|-----------------------|---------|---------|---------|---------|-------------------|--------|--------|--------|--------|
| U. S. | 234,398 | 224,371 | 217,552 | 210,573 | S. A.—Con. | | | | |
| N. E. | 6,677 | 6,396 | 6,088 | 5,677 | W. Va..... | 3,831 | 3,719 | 3,681 | 3,581 |
| Maine..... | 1,882 | 1,830 | 1,784 | 1,680 | N. C..... | 4,668 | 4,435 | 4,310 | 4,275 |
| N. H..... | 1,002 | 936 | 854 | 815 | S. C..... | 3,466 | 3,223 | 3,284 | 3,237 |
| Vt..... | 919 | 889 | 811 | 770 | Ga..... | 6,334 | 6,043 | 5,854 | 5,510 |
| Mass..... | 1,793 | 1,726 | 1,633 | 1,524 | Fla..... | 5,218 | 4,793 | 4,655 | 4,584 |
| R. I..... | 194 | 185 | 181 | 154 | E. S. C. | 16,179 | 15,574 | 15,233 | 15,128 |
| Conn..... | 887 | 830 | 825 | 734 | Ky..... | 3,691 | 3,641 | 3,526 | 3,545 |
| M. A. | 20,175 | 19,180 | 17,469 | 16,186 | Tenn..... | 3,573 | 3,471 | 3,402 | 3,351 |
| N. Y..... | 7,739 | 7,493 | 6,463 | 5,783 | Ala..... | 4,996 | 4,723 | 4,046 | 4,598 |
| N. J..... | 2,108 | 1,992 | 1,914 | 1,818 | Miss..... | 3,919 | 3,739 | 3,650 | 3,634 |
| Pa..... | 10,328 | 9,695 | 9,092 | 8,585 | W. S. C. | 31,497 | 29,771 | 28,341 | 27,313 |
| E. N. C. | 41,281 | 39,851 | 38,949 | 37,923 | Ark..... | 4,482 | 4,104 | 3,872 | 3,639 |
| Ohio..... | 8,501 | 8,418 | 8,322 | 8,084 | La..... | 4,357 | 4,070 | 3,937 | 3,800 |
| Ind..... | 6,889 | 6,652 | 6,593 | 6,491 | Okla..... | 6,302 | 5,977 | 5,777 | 5,514 |
| Ill..... | 11,949 | 11,643 | 11,201 | 10,950 | Tex..... | 16,356 | 15,011 | 14,755 | 14,351 |
| Mich..... | 7,303 | 6,803 | 6,640 | 6,392 | Mt. | 23,518 | 22,101 | 21,355 | 20,884 |
| Wis..... | 6,639 | 6,335 | 6,193 | 6,006 | Mont..... | 5,149 | 5,050 | 4,962 | 4,938 |
| W. N. C. | 48,293 | 47,108 | 46,367 | 45,271 | Idaho..... | 2,746 | 2,743 | 2,685 | 2,608 |
| Minn..... | 8,421 | 8,333 | 8,174 | 8,002 | Wyo..... | 2,008 | 1,925 | 1,882 | 1,848 |
| Iowa..... | 8,950 | 8,585 | 8,561 | 8,345 | Colo..... | 4,552 | 4,273 | 3,786 | 3,748 |
| Mo..... | 7,042 | 6,735 | 6,582 | 6,386 | N. Mex..... | 2,812 | 2,496 | 2,473 | 2,225 |
| N. Dak..... | 5,266 | 5,256 | 5,194 | 5,194 | Ariz..... | 2,228 | 2,197 | 2,184 | 2,051 |
| S. Dak..... | 4,006 | 3,958 | 3,920 | 3,866 | Utah..... | 2,082 | 1,788 | 1,736 | 1,771 |
| Nebr..... | 6,044 | 5,800 | 5,721 | 5,548 | Nev..... | 1,941 | 1,650 | 1,647 | 1,635 |
| Kans..... | 8,564 | 8,441 | 8,215 | 7,930 | Pac. | 17,303 | 16,466 | 16,388 | 15,493 |
| S. A. | 29,475 | 27,924 | 27,362 | 26,698 | Wash..... | 5,243 | 5,124 | 4,987 | 4,936 |
| Del..... | 295 | 295 | 293 | 292 | Oreg..... | 3,385 | 3,217 | 3,174 | 3,090 |
| Md..... | 1,367 | 1,309 | 1,141 | 1,130 | Calif..... | 7,947 | 7,533 | 7,650 | 7,447 |
| D. C..... | 35 | 34 | 31 | 31 | Alaska..... | 536 | 567 | 572 | 20 |
| Va..... | 4,261 | 4,073 | 4,113 | 4,049 | Hawaii..... | 192 | 25 | 25 | - |

- Represents zero.

Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and, beginning 1960, *Transport Statistics in the United States*, Part 1.

NO. 844. RAILROADS (CLASS I)—REVENUES, EXPENSES, INCOME, AND CAPITAL EXPENDITURES: 1950 TO 1967

[In millions of dollars. See text, p. 540, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 103-117]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 (prel.) |
|--|-------|--------|-------|-------|-------|--------|--------|--------------|
| Operating revenues..... | 9,473 | 10,106 | 9,514 | 9,560 | 9,857 | 10,208 | 10,661 | 10,366 |
| Freight..... | 7,817 | 8,538 | 8,025 | 8,146 | 8,455 | 8,836 | 9,287 | 9,130 |
| Passenger..... | 813 | 743 | 640 | 588 | 578 | 553 | 544 | 485 |
| Mail..... | 374 | 287 | 331 | 339 | 329 | 311 | 304 | 264 |
| Express..... | 81 | 118 | 100 | 80 | 80 | 77 | 67 | 61 |
| Other..... | 387 | 420 | 417 | 407 | 414 | 431 | 450 | 426 |
| Operating expenses..... | 7,059 | 7,646 | 7,565 | 7,452 | 7,738 | 7,850 | 8,118 | 8,203 |
| Maintenance..... | 2,995 | 3,175 | 2,952 | 2,914 | 2,990 | 3,011 | 3,148 | 3,155 |
| Way and structures..... | 1,287 | 1,387 | 1,192 | 1,183 | 1,226 | 1,236 | 1,304 | 1,288 |
| Equipment..... | 1,708 | 1,788 | 1,760 | 1,732 | 1,764 | 1,775 | 1,844 | 1,867 |
| Traffic..... | 192 | 235 | 258 | 252 | 258 | 262 | 265 | 269 |
| Transportation, rail line..... | 3,491 | 3,770 | 3,833 | 3,771 | 3,921 | 4,020 | 4,139 | 4,186 |
| Miscellaneous operations..... | 110 | 108 | 82 | 71 | 68 | 67 | 66 | 60 |
| General..... | 271 | 357 | 441 | 443 | 501 | 490 | 500 | 534 |
| Net revenue from railway operations..... | 2,414 | 2,466 | 1,951 | 2,108 | 2,119 | 2,358 | 2,539 | 2,163 |
| Tax accruals..... | 1,195 | 1,081 | 999 | 886 | 871 | 916 | 968 | 910 |
| Operating income..... | 1,219 | 1,385 | 952 | 1,221 | 1,248 | 1,442 | 1,570 | 1,252 |
| Net railway operating income..... | 1,040 | 1,128 | 584 | 806 | 818 | 962 | 1,049 | 677 |
| Ratio of expenses to revenues (percent)..... | 74.5 | 75.6 | 79.5 | 78.0 | 78.5 | 76.9 | 76.2 | 79.1 |
| Expenditures for capital improvements.... | 1,065 | 908 | 919 | 1,044 | 1,417 | 1,631 | 1,963 | 1,622 |
| Equipment..... | 779 | 568 | 633 | 785 | 1,140 | 1,304 | 1,564 | 1,148 |
| Roadway and structures..... | 286 | 340 | 286 | 259 | 278 | 327 | 399 | 374 |

Source: Interstate Commerce Commission; *Annual Report, Statement Q 100*, and *Statement Q 125*.

No. 845. RAILROADS (CLASS I)—SELECTED FREIGHT STATISTICS: 1950 TO 1967

[Excludes switching and terminal roads. Tons of 2,000 pounds. See text, p. 540, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 93]

| ITEM | 1950 | 1955 | 1960 | 1965 | 1966 | 1967 |
|--|---------|---------|---------|---------|---------|---------|
| Average miles of road operated..... | 225,330 | 223,201 | 219,381 | 212,133 | 211,474 | 211,835 |
| Operating revenue..... mil. dol. | 7,817 | 8,538 | 8,025 | 8,836 | 9,281 | 9,130 |
| Per ton-mile..... cents. | 1.33 | 1.37 | 1.40 | 1.27 | 1.26 | (NA) |
| Per ton per road..... dollars. | 3.04 | 3.25 | 3.51 | 3.48 | 3.52 | 3.55 |
| Revenue-tons: | | | | | | |
| Originated..... millions. | 1,354 | 1,393 | 1,241 | (NA) | (NA) | (NA) |
| Carried..... millions. | 2,570 | 2,607 | 2,281 | 2,539 | 2,638 | 2,570 |
| Carried 1 mile..... millions. | 588,578 | 623,615 | 572,309 | 697,736 | 738,252 | 719,397 |
| Miles per revenue-ton per road (average haul)... | 229.0 | 237.6 | 250.9 | 274.8 | 279.9 | (NA) |
| Freight train miles..... millions. | 515 | 476 | 405 | 421 | 437 | 420 |
| Freight train car-miles: | | | | | | |
| Loaded, revenue and nonrevenue..... millions. | 19,644 | 20,099 | 17,287 | 17,885 | 18,304 | 17,449 |
| Empty..... millions. | 10,140 | 11,054 | 10,872 | 11,420 | 12,034 | 12,183 |
| Net ton-miles per train-mile..... | 1,224 | 1,374 | 1,466 | 1,685 | (NA) | (NA) |
| Net ton-miles per loaded car-mile ¹ | 31.7 | 32.0 | 33.9 | 39.7 | (NA) | (NA) |
| Train-miles per train-hour..... | 16.8 | 18.6 | 19.5 | 20.1 | 20.3 | (NA) |

NA Not available. ¹ Revenue and nonrevenue freight.

Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1, and unpublished data.

No. 846. RAILROADS (CLASS I)—CARS OF REVENUE FREIGHT LOADED, BY PRINCIPAL COMMODITIES: 1940 TO 1967

[In thousands. Figures are 52-week totals. See text, p. 540, for explanation of class limits]

| YEAR | Total | Grain and grain products | Live-stock | Coal | Coke | Forest products | Ore | Miscellaneous | Mdse., less than carload | Cars loaded with highway trailers |
|-----------|--------|--------------------------|------------|-------|------|-----------------|-------|---------------|--------------------------|-----------------------------------|
| 1940..... | 36,358 | 1,835 | 685 | 6,820 | 549 | 1,800 | 2,148 | 14,842 | 7,679 | (NA) |
| 1945..... | 41,918 | 2,734 | 894 | 8,296 | 695 | 2,039 | 2,474 | 19,258 | 5,529 | (NA) |
| 1950..... | 38,903 | 2,466 | 491 | 7,240 | 727 | 2,226 | 2,529 | 18,955 | 4,269 | (NA) |
| 1955..... | 37,636 | 2,633 | 441 | 6,508 | 616 | 2,275 | 2,846 | 19,087 | 3,230 | 168 |
| 1960..... | 30,441 | 2,786 | 269 | 5,318 | 403 | 1,950 | 2,209 | 15,707 | 1,809 | 554 |
| 1964..... | 29,027 | 2,625 | 153 | 5,530 | 423 | 1,960 | 2,005 | 15,693 | 639 | 891 |
| 1965..... | 29,248 | 2,662 | 125 | 5,555 | 428 | 1,978 | 1,956 | 16,084 | 469 | 1,034 |
| 1966..... | 29,623 | 2,877 | 109 | 5,587 | 434 | 1,995 | 2,131 | 16,162 | 328 | 1,163 |
| 1967..... | 28,050 | 2,458 | 87 | 5,543 | 364 | 2,013 | 1,830 | 15,513 | 242 | 1,207 |

NA Not available.

Source: Association of American Railroads, Car Service Division, Washington, D.C.; annual report, *Cars of Revenue Freight Loaded*. Weekly reports are published currently.

No. 847. RAILROADS (CLASS I)—SELECTED PASSENGER STATISTICS: 1950 TO 1967

[See text, p. 540, for explanation of class limits. See also *Historical Statistics, Colonial Times to 1957*, series Q 87-89]

| ITEM | 1950 | 1955 | 1960 | 1965 | 1967 (prel.) |
|--|-----------|-----------|-----------|---------|--------------|
| Average miles of road operated..... | 150,349 | 120,711 | 94,117 | 76,993 | 67,827 |
| Passenger revenue..... \$1,000. | 813,417 | 742,945 | 640,268 | 552,775 | 485,224 |
| Revenue per passenger-mile: | | | | | |
| Including commutation passengers..... cents. | 2.56 | 2.60 | 3.01 | 3.18 | (NA) |
| Excluding commutation passengers..... cents. | 2.74 | 2.70 | 3.03 | 3.14 | (NA) |
| Revenue passengers carried..... 1,000. | 486,194 | 431,999 | 325,872 | 298,877 | 296,995 |
| Revenue passenger-miles..... millions. | 31,760 | 28,526 | 21,258 | 17,389 | 15,201 |
| Revenue passenger-miles per train-mile..... | 88.5 | 95.2 | 100.9 | 100.0 | (NA) |
| Revenue passenger-miles per car-mile..... | 17.0 | 17.8 | 19.3 | 20.9 | (NA) |
| Average journey per passenger per road..... miles. | 65.3 | 66.1 | 65.3 | 58.2 | (NA) |
| Passenger-train miles..... 1,000. | 357,618 | 298,602 | 209,367 | 172,344 | 149,820 |
| Passenger-carrying car-miles..... 1,000. | 1,854,737 | 1,570,916 | 1,101,021 | 832,102 | (NA) |
| Train-miles per train-hour..... | 37.4 | 39.8 | 40.7 | 41.3 | (NA) |

NA Not available.

Source: Interstate Commerce Commission; *Annual Report*, and *Transport Statistics in the United States*, Part 1, and unpublished data.

No. 848. RAILROADS—EMPLOYEES, HOURS, AND COMPENSATION: 1950 TO 1967

[Excludes switching and terminal roads. See also *Historical Statistics, Colonial Times to 1957*, series Q141-142]

| YEAR | ALL OPERATING CARRIERS ¹ | | CLASS I CARRIERS ² | | | | | |
|--------------|-------------------------------------|-------------------------------------|-------------------------------|---------------------|-------------------------------------|----------------------------|-----------------------|----------|
| | Average number of employees | Total yearly compensation (\$1,000) | Average number of employees | Total hours (1,000) | Total yearly compensation (\$1,000) | Average hours per employee | Average compensation | |
| | | | | | | | Per hour ³ | Per year |
| 1950 | 1,236,879 | 4,644,890 | 1,220,401 | 2,876,591 | 4,594,423 | 2,357 | \$1.60 | \$3,765 |
| 1955 | 1,071,387 | 5,045,278 | 1,057,866 | 2,502,608 | 4,992,235 | 2,366 | 2.00 | 4,719 |
| 1960 | 793,071 | 4,956,902 | 780,971 | 1,840,615 | 4,893,622 | 2,358 | 2.66 | 6,270 |
| 1962 | 711,000 | 4,721,895 | 700,146 | 1,672,389 | 4,662,113 | 2,389 | 2.79 | 6,659 |
| 1963 | 690,585 | 4,690,053 | 679,867 | 1,640,888 | 4,629,784 | 2,414 | 2.82 | 6,810 |
| 1964 | 675,348 | 4,757,889 | 665,034 | 1,619,804 | 4,697,884 | 2,436 | 2.90 | 7,064 |
| 1965 | 654,670 | 4,886,740 | 639,961 | 1,564,736 | 4,793,066 | 2,445 | 3.06 | 7,490 |
| 1966 | 645,336 | 4,974,510 | 630,895 | 1,541,093 | 4,879,273 | 2,443 | 3.17 | 7,734 |
| 1967 (prel.) | (NA) | (NA) | 610,191 | 1,466,429 | 4,933,663 | 2,403 | 3.30 | 8,085 |

NA Not available. ¹ Prior to 1960, excludes Alaska and Hawaii.² See text, p. 540, for explanation of class limits.³ Calculated for all classes of employees, including those not paid on an hourly basis.Source: Interstate Commerce Commission; annual report, *Transport Statistics in the United States*, Part 1, and Statement No. M-300.

No. 849. RAILROAD ACCIDENTS—PERSONS KILLED AND INJURED, BY TYPE OF ACCIDENT: 1950 TO 1966

[Prior to 1960, excludes Alaska and Hawaii. Covers all reportable accidents, i.e., those resulting in personal casualty or in damage to railroad property exceeding amounts specified by Federal Railroad Administration. See also *Historical Statistics, Colonial Times to 1957*, series Q 143 and 144]

| YEAR | TOTAL | | TRAIN | | TRAIN SERVICE | | | | NONTRAIN | |
|------|--------|---------|--------|---------|---------------|---------|--|---------|----------|---------|
| | Killed | Injured | Killed | Injured | Total | | Grade crossing (train and train service) | | Killed | Injured |
| | | | | | Killed | Injured | Killed | Injured | | |
| 1950 | 3,398 | 33,255 | 336 | 2,315 | 2,921 | 19,454 | 1,570 | 4,308 | 141 | 11,486 |
| 1955 | 2,667 | 27,832 | 259 | 1,183 | 2,316 | 16,856 | 1,446 | 4,014 | 92 | 6,793 |
| 1960 | 2,248 | 19,577 | 156 | 847 | 2,042 | 12,877 | 1,364 | 3,424 | 50 | 5,853 |
| 1965 | 2,399 | 25,789 | 191 | 864 | 2,136 | 16,577 | 1,534 | 3,801 | 72 | 8,348 |
| 1966 | 2,684 | 25,552 | 214 | 900 | 2,387 | 16,489 | 1,780 | 4,043 | 83 | 8,163 |

Source: 1950-1965, Interstate Commerce Commission; annual report, *Accident Bulletin*. Beginning 1966, Dept. of Transportation, Federal Railroad Administration; annual report, *Accident Bulletin*.

No. 850. HIGHWAY GRADE CROSSINGS—NUMBER AND ACCIDENTS: 1950 TO 1966

[Prior to 1960, excludes Alaska and Hawaii. Covers all railroads, except as noted. See also headnote, table 840. See also *Historical Statistics, Colonial Times to 1957*, series Q 125-127]

| YEAR | HIGHWAY GRADE CROSSINGS ¹ | | | ACCIDENTS | | | | |
|------|--------------------------------------|----------------------------------|------------------------------------|-----------|---------------|----------------|--------------------------|-----------------|
| | Total | Specially protected ² | Eliminated by separation of grades | Number | All persons | | Involving motor vehicles | |
| | | | | | Number killed | Number injured | Persons killed | Persons injured |
| 1950 | 227,364 | 35,968 | 61 | 4,000 | 1,576 | 4,368 | 1,393 | 4,206 |
| 1955 | 226,318 | 39,080 | 84 | 3,846 | 1,446 | 4,014 | 1,313 | 3,886 |
| 1960 | 224,513 | 42,267 | 102 | 3,195 | 1,364 | 3,424 | 1,254 | 3,277 |
| 1964 | 218,723 | 43,990 | 159 | 3,755 | 1,543 | 3,783 | 1,432 | 3,676 |
| 1965 | 215,961 | 44,333 | 59 | 3,820 | 1,534 | 3,801 | 1,434 | 3,663 |
| 1966 | 214,417 | 44,432 | 173 | 4,097 | 1,780 | 4,043 | 1,634 | 3,908 |

¹ Class I railroads only.² Includes crossings with operated gates or watchmen, or both, during at least part of day; and those with audible or visible signals, or both. Excludes those with fixed signs only.Source: Interstate Commerce Commission; annual reports, *Accident Bulletin*, *Statistics of Railways in the United States*, and, beginning 1965, *Transport Statistics in the United States*, Part 1. Beginning 1966, accident data from Dept. of Transportation, Federal Railroad Administration; annual report, *Accident Bulletin*.

No. 851. PULLMAN COMPANY OPERATIONS: 1940 TO 1967

[Excludes Alaska and Hawaii. See also *Historical Statistics, Colonial Times to 1957*, series Q 138-140]

| YEAR | Average miles of road over which operations conducted | Revenue-passenger miles ¹ (millions) | Employees, annual average | YEAR | Average miles of road over which operations conducted | Revenue-passenger miles ¹ (millions) | Employees, annual average |
|-----------|---|---|---------------------------|-----------|---|---|---------------------------|
| 1940..... | 109,595 | 8,214 | 20,877 | 1963..... | 59,798 | 2,516 | 5,902 |
| 1945..... | 95,765 | 27,276 | 41,601 | 1964..... | 52,994 | 2,218 | 5,544 |
| 1950..... | 102,722 | 10,568 | 22,820 | 1965..... | 51,057 | 2,014 | 5,347 |
| 1955..... | 89,124 | 6,882 | 18,061 | 1966..... | 45,807 | 1,969 | 4,905 |
| 1960..... | 67,467 | 3,358 | 7,320 | 1967..... | 42,713 | 1,434 | 4,179 |

¹ Beginning 1940, includes operations on Canadian and Mexican railroads; excludes chartered car operations.

Source: Interstate Commerce Commission; annual reports, *Statistics of Railways in the United States*, and, beginning 1955, *Transport Statistics in the United States*. (1955-1962, Part 2; beginning 1963, Part 1.)

No. 852. PETROLEUM PIPELINE COMPANIES—SUMMARY OF SELECTED FINANCIAL DATA: 1940 TO 1966

[In thousands of dollars, except miles of line operated. Prior to 1960, excludes Alaska and Hawaii. Refers to pipeline companies operating in interstate commerce and subject to jurisdiction of Interstate Commerce Commission. See *Historical Statistics, Colonial Times to 1957*, series Q 342, for miles of line operated]

| YEAR | Miles of line operated | Investment in carrier property | Other investments | Total current assets | Pipeline operating revenues | Pipeline operating expenses | Pipeline operating income | Net income |
|-----------|------------------------|--------------------------------|-------------------|----------------------|-----------------------------|-----------------------------|---------------------------|------------|
| 1940..... | 100,156 | 841,977 | 64,095 | 47,163 | 225,760 | 101,919 | 82,558 | 79,857 |
| 1945..... | 113,851 | 1,042,523 | 86,713 | 115,370 | 304,268 | 191,688 | 67,127 | 65,941 |
| 1950..... | 128,589 | 1,655,973 | 100,798 | 192,291 | 441,627 | 254,701 | 89,047 | 81,303 |
| 1955..... | 140,374 | 2,585,565 | 80,679 | 352,762 | 677,605 | 346,985 | 176,257 | 153,334 |
| 1960..... | 151,968 | 3,299,501 | 113,504 | 393,028 | 770,417 | 417,640 | 193,911 | 169,398 |
| 1963..... | 156,812 | 3,914,665 | 99,230 | 534,686 | 840,260 | 437,701 | 232,220 | 200,770 |
| 1964..... | 159,583 | 4,040,385 | 152,535 | 530,431 | 865,079 | 2 502,456 | 362,623 | 209,527 |
| 1965..... | 161,412 | 4,177,562 | 159,060 | 555,254 | 903,817 | 2 515,113 | 388,705 | 217,761 |
| 1966..... | 163,152 | 4,433,271 | 175,730 | 572,110 | 941,138 | 2 533,043 | 408,996 | 236,001 |

¹ Represents investments and special funds. ² Includes pipe-line taxes but not Federal income taxes.

No. 853. PETROLEUM PIPELINES—OIL TRANSPORTED: 1950 TO 1966

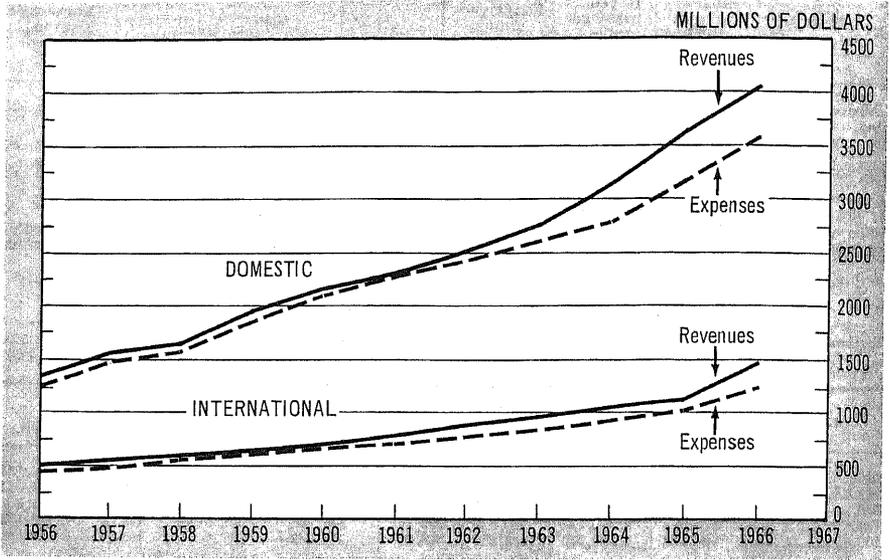
[Prior to 1960, excludes Alaska and Hawaii. See headnote, table 852. See *Historical Statistics, Colonial Times to 1957*, series Q 343-344, for oil originated]

| ITEM | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Number of companies..... | 76 | 84 | 87 | 94 | 90 | 89 | 87 |
| Mileage operated..... | 128,589 | 140,374 | 151,968 | 156,812 | 159,583 | 161,412 | 163,155 |
| Gathering lines..... | 47,593 | 50,645 | 49,401 | 47,228 | 46,836 | 46,640 | 47,352 |
| Trunk lines..... | 80,996 | 89,729 | 102,567 | 109,586 | 112,697 | 114,772 | 115,803 |
| Oil transported (million bbl.): | | | | | | | |
| Total received into system..... | 2,766 | 4,058 | 4,783 | 5,334 | 5,576 | 5,868 | 6,252 |
| From connecting carriers..... | 944 | 1,434 | 1,636 | 1,685 | 1,628 | 1,620 | 1,651 |
| Crude oil..... | 879 | 1,299 | 1,402 | 1,433 | 1,412 | 1,385 | 1,388 |
| Refined oils..... | 65 | 134 | 234 | 252 | 216 | 235 | 263 |
| Originated..... | 1,822 | 2,624 | 3,147 | 3,649 | 3,948 | 4,247 | 4,600 |
| Crude oil..... | 1,525 | 2,038 | 2,239 | 2,467 | 2,567 | 2,618 | 2,826 |
| Refined oils..... | 297 | 586 | 909 | 1,182 | 1,381 | 1,629 | 1,774 |
| Total delivered out of system..... | 2,740 | 4,039 | 4,783 | 5,322 | 5,565 | 5,864 | 6,238 |
| To connecting carriers..... | 937 | 1,444 | 1,639 | 1,648 | 1,634 | 1,757 | 1,770 |
| Crude oil..... | 874 | 1,329 | 1,400 | 1,367 | 1,387 | 1,361 | 1,370 |
| Refined oils..... | 63 | 115 | 240 | 281 | 297 | 396 | 401 |
| Terminated..... | 1,803 | 2,595 | 3,144 | 3,673 | 3,881 | 4,107 | 4,468 |
| Crude oil..... | 1,510 | 1,992 | 2,253 | 2,535 | 2,590 | 2,641 | 2,833 |
| Refined oils..... | 293 | 603 | 891 | 1,138 | 1,292 | 1,466 | 1,635 |
| Trunk-line movement (million bbl.): | | | | | | | |
| Crude oil..... | 1,977 | 2,781 | 3,091 | 3,355 | 3,446 | 3,505 | 3,661 |
| Refined oils..... | 360 | 717 | 1,124 | 1,416 | 1,601 | 1,872 | 2,050 |
| Trunk-line barrel-miles (billions): | | | | | | | |
| Crude oil..... | 577 | 839 | 976 | 1,054 | 1,062 | 1,121 | 1,181 |
| Refined oils..... | 107 | 205 | 304 | 369 | 449 | 627 | 720 |

Source of tables 852 and 853: Interstate Commerce Commission; annual reports, *Statistics of Oil Pipeline Companies*, and, beginning 1955, *Transport Statistics in the United States*, Part 6.

FIG. XXXIV. OPERATING REVENUES AND EXPENSES OF SCHEDULED AIR CARRIERS: 1956 TO 1966

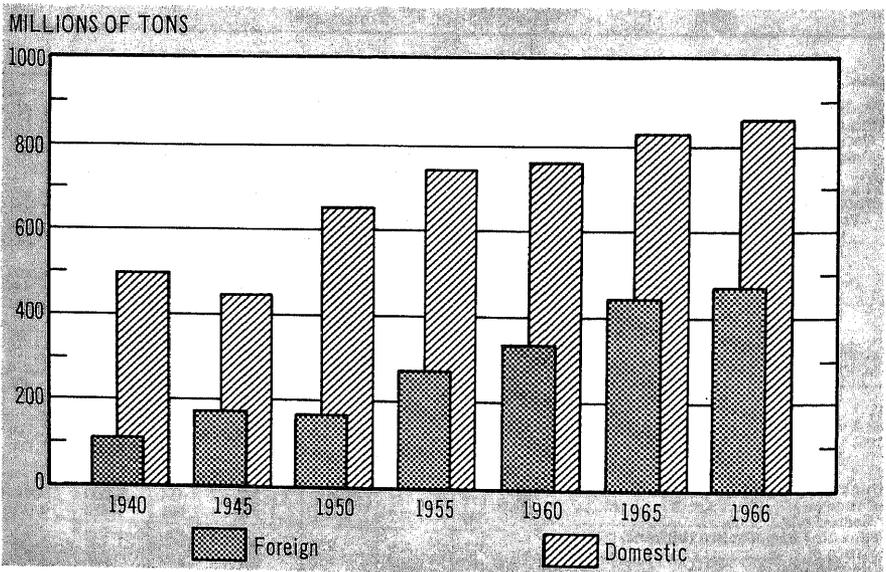
[See table 854]



Source: Chart prepared by Dept. of Commerce, Bureau of the Census. Data from Federal Aviation Administration.

FIG. XXXV. WATERBORNE COMMERCE OF THE UNITED STATES: 1940 TO 1966

[See table 867]



Source: Chart prepared by Dept. of Commerce, Bureau of the Census. Data from Dept. of the Army, Corps of Engineers.

Section 22

Transportation—Air and Water

This section presents statistics on civil air transportation, both passenger and cargo, and on water transportation, including inland waterways, oceanborne commerce, the merchant marine, cargo and vessel tonnages, and shipbuilding. The principal sources of these data are the annual *FAA Statistical Handbook of Aviation*, issued by the Federal Aviation Administration; the annual *Waterborne Commerce of the United States* and the *Annual Report of the Chief of Engineers*, Part 2, issued by the Corps of Engineers of the Department of the Army; the monthly and annual *U.S. Waterborne Foreign Trade*, and *U.S. Airborne Foreign Trade*, issued by the Bureau of the Census; and the annual *Merchant Marine Statistics*, issued by the Bureau of Customs.

Data on air transportation are also presented in *Air Transport Facts and Figures*, published annually by the Air Transport Association of America, Washington, D.C. Additional sources of data on water transportation include *A Statistical Analysis of the World's Merchant Fleets*, issued periodically by the Maritime Administration of the Department of Commerce; *The Bulletin*, issued monthly by the American Bureau of Shipping, New York; and the *Annual Summary of Merchant Ships Launched in the World* and the *Register Book* published by Lloyd's Register of Shipping, London, England. The 1821 through 1946 issues of *Foreign Commerce and Navigation of the United States*, published by the Bureau of the Census, are a basic source of historical data.

Data relating to merchandise exports and imports, their classification, dollar values, and countries of origin and destination are in section 30, Foreign Commerce and Aid.

Civil aviation.—Federal promotion and regulation of civil aviation are carried out by the Federal Aviation Administration and the Civil Aeronautics Board. The Board issues certificates permitting persons to engage in air transportation as a business, fixes air mail rates which they may charge, and may establish maximum and minimum rates for transportation of passengers and goods. It also has the duty of investigating accidents in air transportation.

The principal activities of the Federal Aviation Administration are: Controlling the use of navigable airspace; prescribing regulations dealing with the competency of airmen, airworthiness of aircraft, and air traffic control; operation of air route traffic control centers, airport traffic control towers, and flight service stations; the design, construction, maintenance, and inspection of navigation, traffic control, and communications equipment for the airways; and promotion of air safety.

These agencies publish annual operational data on the use of airway facilities; data related to the location of airmen, aircraft, and airports; the activity volume in the field of non-air carrier (general aviation) flying; and aircraft production and registration.

Air carriers and service.—The term *certificated route air carrier* refers to air carriers holding certificates of public convenience and necessity, issued by the Civil Aeronautics Board, authorizing the performance of scheduled air transportation over specified routes and a limited amount of nonscheduled operations. This general carrier grouping includes the all-purpose carrier (i.e., the so-called passenger/cargo carriers) and the all-cargo carriers, and comprises all of the airlines certificated by the board, except the supplemental air carriers. Certificated route air carriers are often referred to as "scheduled airlines," although they also perform nonscheduled service. *Nonscheduled service* comprises revenue flights that are not operated in regular scheduled service, such as charter flights, and all nonrevenue flights incident to such flights. *Scheduled service* is transport service operated over an air carrier's certificated routes, based on published flight schedules, including extra sections and related nonrevenue flights.

Vessel shipments, entrances, and clearances.—Shipments by dry cargo vessels comprise shipments on all types of watercraft except tanker vessels; shipments by tanker vessels comprise all types of cargo, liquid and dry, carried by tanker vessels.

A vessel is reported as entered at the first port which it enters in the United States, regardless of whether any cargo is unladen at that port. A vessel is reported as cleared from the last port where outward cargo is completed or where the vessel cleared in ballast. Army and Navy vessels entering or clearing without commercial cargo and vessels touching at a United States port in distress, or for other temporary causes without discharging cargo, are not included in the figures.

Units of measurement.—Cargo tonnage and shipping weight both represent the gross weight of the cargo including the weight of containers, wrappings, crates, etc. However, shipping weight excludes lift and cargo vans and similar substantial outer containers. Other tonnage figures generally refer to stowing capacity of vessels, 100 cubic feet being called 1 ton. Gross tonnage comprises the space within the frames and the ceiling of the hull, together with those closed-in spaces above deck available for cargo, stores, passengers, or crew, with certain minor exceptions. Net or registered tonnage is the gross tonnage less the spaces occupied by the propelling machinery, fuel, crew quarters, master's cabin, and navigation spaces. It represents substantially space available for cargo and passengers. The net tonnage capacity of a ship may bear little relation to weight of cargo. Dead-weight tonnage is the weight in long tons required to depress a vessel from light water line (that is, with only the machinery and equipment on board) to load line. It is therefore the weight of the cargo, fuel, etc., which a vessel is designed to carry with safety.

Historical statistics.—Tabular headnotes provide cross-references, where applicable, to *Historical Statistics of the United States, Colonial Times to 1957*. See preface.

No. 854. SCHEDULED OPERATIONS—OPERATING REVENUES AND EXPENSES OF CERTIFICATED AIR CARRIERS: 1955 TO 1966

[In millions of dollars. 1955 not exactly comparable with later years. Beginning 1962, aircraft expense items include some ground and indirect expenses not previously included, and the ground and indirect expense item covers only expenses chargeable to general services and administration. See also headnote, table 857]

| ITEM | 1955 | 1960 | 1962 | 1963 | 1964 | 1965 | 1966 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| DOMESTIC | | | | | | | |
| Revenues | 1,215 | 2,129 | 2,498 | 2,722 | 3,095 | 3,609 | 4,070 |
| Passenger..... | 1,065 | 1,860 | 2,167 | 2,374 | 2,701 | 3,142 | 3,534 |
| Mail (including subsidy)..... | 61 | 113 | 139 | 143 | 150 | 159 | 162 |
| Express and freight..... | 62 | 103 | 136 | 152 | 181 | 220 | 251 |
| Excess baggage..... | 12 | 21 | 20 | 17 | 17 | 12 | 6 |
| Other..... | 15 | 32 | 35 | 35 | 46 | 77 | 117 |
| Expenses | 1,091 | 2,091 | 2,408 | 2,580 | 2,778 | 3,165 | 3,590 |
| Aircraft..... | 559 | 1,043 | 1,448 | 1,539 | 1,615 | 1,811 | 2,007 |
| Flying operations..... | 328 | 601 | 659 | 699 | 756 | 855 | 974 |
| Direct maintenance flight equipment..... | 138 | 258 | 496 | 523 | 580 | 640 | 680 |
| Depreciation and amortization flight equipment..... | 83 | 184 | 293 | 317 | 279 | 816 | 353 |
| Ground and indirect..... | 532 | 1,048 | 960 | 1,041 | 1,163 | 1,354 | 1,583 |
| Net operating income | 124 | 38 | 90 | 143 | 317 | 443 | 480 |
| INTERNATIONAL | | | | | | | |
| Revenues | 398 | 685 | 810 | 920 | 1,028 | 1,199 | 1,464 |
| Passenger..... | 300 | 528 | 595 | 693 | 782 | 887 | 965 |
| Mail (including subsidy)..... | 30 | 48 | 70 | 74 | 71 | 82 | 132 |
| Express and freight..... | 33 | 59 | 71 | 80 | 100 | 131 | 150 |
| Excess baggage..... | 7 | 10 | 10 | 12 | 11 | 14 | 14 |
| Other..... | 25 | 41 | 63 | 61 | 64 | 85 | 173 |
| Expenses | 380 | 639 | 724 | 799 | 896 | 1,002 | 1,221 |
| Aircraft..... | 181 | 304 | 398 | 450 | 472 | 509 | 634 |
| Flying operations..... | 115 | 180 | 193 | 217 | 238 | 263 | 320 |
| Direct maintenance flight equipment..... | 37 | 58 | 114 | 118 | 145 | 146 | 181 |
| Depreciation and amortization of flight equipment..... | 29 | 66 | 61 | 96 | 88 | 100 | 124 |
| Ground and indirect..... | 200 | 336 | 325 | 369 | 424 | 493 | 587 |
| Net operating income | 18 | 45 | 87 | 121 | 131 | 197 | 243 |

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Data from Civil Aeronautics Board.

No. 855. SUMMARY OF CIVIL FLYING: 1940 TO 1967

[As of Dec. 31 or for years ending Dec. 31. General aviation flying excludes civil flying performed by public carriers—scheduled, supplemental, contract, or intrastate. See also *Historical Statistics, Colonial Times to 1967, series Q 376-383 and Q 394-397*]

| ITEM | 1940 | 1950 | 1960 | 1964 | 1965 | 1966 | 1967 |
|---|------------|--------|---------|---------|---------|---------|---------|
| Airports in operation ¹ | 2,331 | 6,403 | 6,881 | 9,490 | 9,566 | 9,673 | 10,126 |
| Public ² | 1,081 | 2,272 | 2,780 | 3,644 | 3,570 | 3,630 | 3,830 |
| Private ² | 1,300 | 4,131 | 4,101 | 5,846 | 5,996 | 6,043 | 6,296 |
| Lighted airports..... | 776 | 1,670 | 2,133 | 2,773 | 2,878 | 2,988 | 3,149 |
| Airports with paved runways..... | (NA) | 1,422 | 1,893 | 2,620 | 2,747 | 2,859 | 3,109 |
| Miles of Federal airways ³ | 32,100 | 70,263 | 178,924 | 139,989 | 141,856 | 131,231 | 133,565 |
| Total civil aircraft ⁴ | 17,928 | 92,809 | 111,580 | 137,189 | 142,078 | 155,132 | 166,598 |
| Eligible aircraft..... | (NA) | 60,921 | 78,760 | 90,935 | 97,741 | 107,085 | 116,794 |
| Air carriers, total ⁵ | (NA) | (NA) | 2,211 | 2,193 | 2,299 | 2,379 | 2,583 |
| General aviation aircraft..... | (NA) | (NA) | 76,549 | 88,742 | 95,442 | 104,706 | 114,211 |
| Fixed-wing aircraft: | | | | | | | |
| Multi-engine..... | (NA) | (NA) | 7,243 | 10,644 | 11,977 | 13,548 | 14,668 |
| Single-engine, 4-place and over..... | (NA) | (NA) | 34,829 | 45,777 | 49,789 | 52,972 | 56,869 |
| Single-engine, 3-place and over..... | (NA) | (NA) | 33,472 | 30,367 | 31,364 | 35,687 | 39,675 |
| Rotorcraft ⁶ | (NA) | (NA) | 634 | 1,306 | 1,503 | 1,622 | 1,903 |
| Other ⁷ | (NA) | (NA) | 371 | 648 | 809 | 877 | 1,096 |
| Aids to air navigation (Federal airways): ³ | | | | | | | |
| Radio range stations..... | 292 | 749 | 1,030 | 930 | 915 | 1,009 | 984 |
| Nondirectional radio beacons..... | 48 | 141 | 190 | 275 | 286 | 477 | 491 |
| Airport towers..... | - | 172 | 153 | 212 | 226 | 238 | 255 |
| Combined station/towers..... | - | - | 75 | 67 | 66 | 66 | 58 |
| Flight service stations..... | 365 | 451 | 335 | 333 | 331 | 331 | 330 |
| Instrument landing systems..... | 1 | 96 | 191 | 247 | 267 | 268 | 264 |
| Active airman certificates held ⁸ | (NA) | (NA) | 549,119 | 658,595 | 719,137 | 765,889 | 843,201 |
| Pilot ⁹ | (NA) | (NA) | 348,062 | 431,041 | 479,770 | 548,757 | 611,465 |
| Airline transport..... | 1,431 | (NA) | 18,279 | 21,572 | 22,440 | 23,917 | 25,807 |
| Commercial..... | 18,791 | (NA) | 89,804 | 108,428 | 116,665 | 131,539 | 144,846 |
| Private..... | 49,607 | (NA) | 188,869 | 175,574 | 196,393 | 222,427 | 252,185 |
| Student..... | 110,938 | 44,591 | 99,182 | 120,743 | 139,172 | 165,117 | 181,267 |
| Hours flown (general aviation)..... | 1,000 | 9,650 | 13,121 | 15,738 | 16,733 | 21,023 | 22,154 |
| Business ¹⁰ | 1,000 | 314 | 2,750 | 5,699 | 5,857 | 7,057 | 5,079 |
| Commercial ¹¹ | 1,000 | 387 | 1,500 | 2,365 | 3,348 | 3,555 | 3,024 |
| Instructional..... | 1,000 | 1,529 | 3,000 | 1,828 | 2,675 | 3,346 | 5,754 |
| Personal..... | 1,000 | 970 | 2,300 | 3,172 | 3,777 | 4,016 | 4,540 |
| Other..... | 1,000 | - | 100 | 57 | 158 | 166 | 197 |
| Other..... | 1,000 | - | 100 | 57 | 158 | 166 | 197 |
| Miles flown (general aviation)..... | millions | 264 | 1,062 | 1,769 | 2,181 | 2,562 | 3,336 |
| Business ¹⁰ | millions | 26 | 340 | 881 | 1,047 | 1,204 | 1,536 |
| Commercial ¹¹ | millions | 32 | 181 | 299 | 393 | 461 | 516 |
| Instructional..... | millions | 126 | 287 | 194 | 283 | 359 | 646 |
| Personal..... | millions | 80 | 244 | 387 | 436 | 512 | 606 |
| Other..... | millions | - | 11 | 8 | 22 | 26 | 32 |
| Fuel consumed (general aviation): | | | | | | | |
| Gasoline..... | 1,000 gal. | 22,400 | 131,200 | 242,417 | 261,728 | 291,841 | 374,610 |
| Jet fuel..... | 1,000 gal. | - | - | 41,364 | 41,364 | 81,277 | 137,278 |
| Oil..... | 1,000 gal. | 660 | 2,916 | 3,910 | 4,089 | 4,554 | 5,739 |
| Domestic air cargo, revenue ton-miles flown ¹² | millions | (NA) | 239 | 724 | 1,288 | 1,661 | 1,944 |
| Scheduled carriers..... | millions | (NA) | 211 | 476 | 894 | 1,112 | 1,301 |
| Nonscheduled carriers ¹³ | millions | (NA) | 16 | 135 | 209 | 330 | 389 |
| Supplemental carriers ¹⁴ | millions | (NA) | 13 | 112 | 185 | 220 | 254 |
| Aircraft accidents..... | (NA) | 4,595 | 4,883 | 5,148 | 5,279 | 5,503 | (NA) |
| Air carrier ¹⁵ | (NA) | 90 | 90 | 78 | 83 | 167 | (NA) |
| Fatal..... | (NA) | 11 | 17 | 13 | 9 | 16 | (NA) |
| Fatalities..... | (NA) | 205 | 499 | 238 | 261 | 272 | (NA) |
| General aviation..... | 3,471 | 4,505 | 4,793 | 5,070 | 5,196 | 5,425 | (NA) |
| Fatal..... | 232 | 499 | 429 | 504 | 538 | 538 | (NA) |
| Fatalities..... | 359 | 871 | 787 | 1,056 | 1,029 | 1,069 | (NA) |

- Represents zero. NA Not available.

¹ Existing airports and airfields recorded with FAA. Includes military airports with joint civil and military use. Beginning 1960, includes Puerto Rico, American Samoa, Canton, Guam, Virgin Islands, and Wake Island.

² Airport type definitions: Public—public use and public services, public control; Private—(a) public use and public services, private control, and (b) no public services, private control, military control, or Federal Government control. ³ Includes outlying areas of the United States.

⁴ Beginning 1950, includes gliders, and 1960, dirigibles and balloons.

⁵ Registered, not necessarily in operation. Includes helicopters.

⁶ Includes autogiros; excludes air carrier helicopters. ⁷ Includes gliders, blimps, and balloons.

⁸ Includes nonpilot technicians and flight instructors, not shown separately. ⁹ Excludes Alaska and Hawaii.

¹⁰ Corporation and individual business transportation, not for hire.

¹¹ Passenger and cargo transportation for hire, aerial application (crop dusting, spraying, seeding, etc.), patrol, survey, and other miscellaneous work use. ¹² Comprises express and freight ton-miles.

¹³ Includes some military ton-miles and may include a small amount of international traffic.

¹⁴ Civil and military. ¹⁵ Excludes commercial operators. ¹⁶ Preliminary.

Source: Dept. of Transportation, Federal Aviation Administration; FAA *Statistical Handbook of Aviation*. Includes data from Civil Aeronautics Board.

No. 856. CIVIL AIRCRAFT, AIRPORTS, AND FEDERAL-AID AIRPORT PROGRAM—
STATES AND OTHER AREAS: 1967

[As of December 31, except as noted]

| STATE OR OTHER AREA | CIVIL AIRCRAFT ¹ | | AIRPORTS ² | | | FEDERAL-AID AIRPORT PROGRAM ³ (\$1,000) | | |
|--------------------------------|-----------------------------|---------|-----------------------|--------|---------|--|---------------|---------------|
| | Total | Active | Total | Public | Private | Total | Federal funds | Sponsor funds |
| Total | 166,598 | 116,699 | 10,126 | 3,830 | 6,296 | 2,192,855 | 1,090,136 | 1,102,719 |
| Alabama | 2,100 | 1,494 | 123 | 76 | 47 | 37,725 | 18,943 | 18,782 |
| Alaska | 3,076 | 1,806 | 626 | 458 | 168 | 58,578 | 37,974 | 20,604 |
| Arizona | 2,794 | 1,775 | 191 | 98 | 98 | 28,871 | 15,972 | 12,899 |
| Arkansas | 2,233 | 1,530 | 127 | 63 | 64 | 18,901 | 9,426 | 9,475 |
| California | 22,736 | 15,596 | 684 | 241 | 443 | 198,121 | 98,071 | 100,050 |
| Colorado | 2,700 | 1,952 | 177 | 64 | 113 | 34,867 | 18,111 | 16,756 |
| Connecticut | 1,418 | 962 | 75 | 12 | 63 | 18,599 | 9,327 | 9,272 |
| Delaware | 601 | 464 | 21 | 4 | 17 | 1,696 | 878 | 818 |
| District of Columbia | 927 | 706 | 3 | 3 | - | - | - | - |
| Florida | 7,081 | 4,543 | 281 | 109 | 172 | 94,110 | 45,883 | 48,227 |
| Georgia | 3,184 | 2,333 | 169 | 96 | 73 | 72,513 | 36,641 | 35,872 |
| Hawaii | 351 | 196 | 46 | 16 | 30 | 36,118 | 12,954 | 23,164 |
| Idaho | 1,430 | 1,030 | 164 | 111 | 53 | 7,964 | 4,458 | 3,506 |
| Illinois | 7,481 | 5,339 | 433 | 69 | 364 | 132,639 | 62,756 | 69,883 |
| Indiana | 4,104 | 3,036 | 153 | 48 | 105 | 38,928 | 18,990 | 19,938 |
| Iowa | 2,915 | 2,294 | 228 | 90 | 138 | 32,516 | 16,056 | 16,460 |
| Kansas | 3,656 | 2,636 | 266 | 109 | 157 | 17,742 | 8,669 | 9,073 |
| Kentucky | 1,117 | 831 | 63 | 44 | 19 | 41,630 | 20,807 | 20,723 |
| Louisiana | 2,786 | 1,878 | 224 | 64 | 160 | 45,751 | 22,123 | 23,628 |
| Maine | 782 | 497 | 136 | 43 | 93 | 8,268 | 4,103 | 4,165 |
| Maryland | 1,894 | 1,308 | 83 | 13 | 70 | 19,053 | 9,582 | 9,471 |
| Massachusetts | 2,257 | 1,521 | 113 | 27 | 86 | 44,641 | 21,884 | 22,757 |
| Michigan | 6,412 | 4,647 | 251 | 119 | 132 | 72,972 | 34,211 | 38,761 |
| Minnesota | 4,211 | 3,132 | 200 | 122 | 138 | 48,535 | 23,620 | 24,906 |
| Mississippi | 1,933 | 1,310 | 159 | 69 | 90 | 23,211 | 11,601 | 11,610 |
| Missouri | 4,209 | 3,042 | 265 | 80 | 185 | 62,634 | 30,470 | 32,164 |
| Montana | 1,877 | 1,362 | 188 | 114 | 74 | 17,016 | 8,968 | 9,047 |
| Nebraska | 2,154 | 1,578 | 260 | 81 | 179 | 22,956 | 11,276 | 11,680 |
| Nevada | 1,287 | 896 | 79 | 43 | 36 | 17,481 | 10,574 | 6,907 |
| New Hampshire | 492 | 332 | 44 | 15 | 29 | 5,840 | 2,911 | 2,929 |
| New Jersey | 3,574 | 2,476 | 138 | 16 | 122 | 35,358 | 17,230 | 18,128 |
| New Mexico | 1,636 | 1,149 | 124 | 62 | 62 | 12,212 | 6,881 | 5,381 |
| New York | 7,717 | 5,318 | 338 | 55 | 283 | 170,875 | 79,898 | 90,977 |
| North Carolina | 2,855 | 2,044 | 181 | 49 | 132 | 33,268 | 16,654 | 16,614 |
| North Dakota | 1,300 | 942 | 180 | 70 | 110 | 9,989 | 4,879 | 5,110 |
| Ohio | 7,032 | 4,949 | 397 | 67 | 330 | 78,876 | 38,732 | 40,144 |
| Oklahoma | 3,520 | 2,362 | 206 | 99 | 107 | 49,860 | 24,597 | 25,263 |
| Oregon | 3,354 | 2,443 | 177 | 85 | 92 | 23,966 | 12,660 | 11,306 |
| Pennsylvania | 5,149 | 3,668 | 443 | 66 | 377 | 115,004 | 56,498 | 58,506 |
| Rhode Island | 224 | 174 | 11 | 5 | 6 | 10,085 | 5,067 | 5,018 |
| South Carolina | 1,214 | 913 | 100 | 49 | 51 | 16,520 | 8,307 | 8,213 |
| South Dakota | 1,231 | 873 | 108 | 64 | 44 | 9,471 | 5,002 | 4,469 |
| Tennessee | 2,124 | 1,604 | 101 | 59 | 42 | 54,457 | 27,254 | 27,203 |
| Texas | 12,811 | 9,024 | 900 | 224 | 676 | 127,548 | 63,071 | 64,477 |
| Utah | 967 | 686 | 71 | 50 | 21 | 17,112 | 10,479 | 6,633 |
| Vermont | 333 | 242 | 37 | 12 | 25 | 3,522 | 1,749 | 1,773 |
| Virginia | 2,085 | 1,444 | 138 | 39 | 99 | 31,961 | 15,846 | 16,115 |
| Washington | 4,121 | 2,727 | 198 | 94 | 104 | 34,725 | 17,439 | 17,286 |
| West Virginia | 702 | 470 | 48 | 15 | 33 | 20,285 | 10,095 | 10,190 |
| Wisconsin | 3,043 | 2,189 | 225 | 95 | 130 | 41,564 | 19,914 | 21,560 |
| Wyoming | 794 | 582 | 86 | 41 | 45 | 7,381 | 4,205 | 3,176 |
| Other areas ⁴ | 614 | 371 | 27 | 18 | 9 | 29,941 | 16,481 | 12,560 |

- Represents zero.

¹ Includes gliders, dirigibles, and balloons.

² Includes military airports with joint civil and military use.

³ Cumulative since enactment of Federal Airport Act, May 16, 1946, through Dec. 31, 1967.

⁴ Comprises Puerto Rico, American Samoa, Canton, Guam, Virgin Islands, and Wake Island.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*.

Scheduled Air Carriers

573

No. 857. SCHEDULED AIR CARRIERS—SUMMARY OF OPERATIONS: 1940 TO 1967

[As of Dec. 31 or for calendar years, except as noted. Operations between conterminous U.S. and Hawaii, Puerto Rico, and outlying areas included with international. Intra-Alaska included with domestic carriers and Mainland-Alaska with international, as follows: Number of operators and traffic data, beginning 1950; fuel and financial data, beginning 1955; and personnel data, beginning 1960. See also *Historical Statistics, Colonial Times to 1867*, series Q 352, Q 354-362, and Q 384-393]

| ITEM | 1940 | 1950 | 1955 | 1960 | 1965 | 1966 | 1967 |
|--|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Number of operators: ¹ | | | | | | | |
| Domestic..... | 19 | 48 | 40 | 39 | 40 | 40 | (NA) |
| International..... | 3 | 6 | 7 | 10 | 9 | 9 | (NA) |
| Total personnel employed ² | 22,051 | 82,786 | 122,203 | 162,771 | 206,834 | 238,696 | (NA) |
| Domestic..... | 15,984 | 61,903 | 95,548 | 133,717 | 169,952 | 196,298 | (NA) |
| International..... | 6,067 | 20,883 | 26,655 | 29,054 | 36,882 | 42,398 | (NA) |
| Route miles in operation ³ | 95,079 | 183,841 | 196,274 | 249,717 | 248,294 | 250,601 | (NA) |
| Domestic ⁴ | 42,757 | 77,440 | 78,992 | 101,414 | 104,870 | 104,703 | (NA) |
| International ⁴ | 52,322 | 106,401 | 117,282 | 148,303 | 143,424 | 145,898 | (NA) |
| Aircraft in operation ⁵ | 437 | 1,220 | 1,409 | 1,822 | 1,827 | 1,953 | 2,129 |
| Fixed wing..... | 437 | 1,209 | 1,390 | 1,797 | 1,806 | 1,932 | 2,129 |
| Four-engine..... | | | 679 | 1,141 | 994 | 987 | 987 |
| Three-engine turbojet..... | (NA) | (NA) | (NA) | (NA) | 168 | 277 | 394 |
| Twin-engine..... | | | 709 | 651 | 607 | 641 | 711 |
| Single-engine..... | | | 2 | 5 | 37 | 32 | 27 |
| Average available seats: ⁶ | | | | | | | |
| Domestic..... | 16.5 | 37.5 | 51.2 | 65.5 | 89.2 | 91.2 | 94.4 |
| International..... | 18.3 | 41.0 | 56.4 | 89.9 | 129.1 | 129.3 | 132.2 |
| Average speed (miles per hour): | | | | | | | |
| Domestic..... | (NA) | 180 | 208 | 235 | 314 | 320 | 354 |
| International..... | (NA) | 218 | 244 | 307 | 451 | 468 | 482 |
| Fuel consumed: | | | | | | | |
| Gasoline..... 1,000 gal..... | 74,535 | 572,246 | 1,170,240 | 1,127,006 | 489,136 | 363,127 | 241,256 |
| Domestic..... 1,000 gal..... | 65,675 | 418,442 | 911,748 | 922,480 | 445,022 | 331,869 | 223,356 |
| International..... 1,000 gal..... | 8,860 | 153,804 | 258,492 | 204,526 | 41,114 | 31,258 | 17,900 |
| Jet fuel, domestic..... 1,000 gal..... | | - | 1,827 | 988,003 | 3,367,915 | 3,993,205 | 5,324,794 |
| International..... 1,000 gal..... | | - | - | 342,513 | 1,194,765 | 1,529,713 | 1,983,292 |
| Oil..... 1,000 gal..... | 1,288 | 6,675 | 14,161 | 15,545 | 7,569 | 5,701 | 4,432 |
| Domestic..... 1,000 gal..... | 1,104 | 5,007 | 11,418 | 12,888 | 6,943 | 5,153 | 3,697 |
| International..... 1,000 gal..... | 184 | 1,668 | 2,743 | 2,857 | 626 | 548 | 486 |
| Revenue-miles flown (all scheduled services)..... 1,000..... | 119,753 | 464,452 | 762,777 | 983,390 | 1,335,878 | 1,464,169 | 1,812,959 |
| Domestic..... 1,000..... | 110,101 | 369,826 | 627,336 | 820,756 | 1,088,112 | 1,178,458 | 1,462,240 |
| International..... 1,000..... | 9,652 | 94,626 | 135,441 | 162,634 | 247,766 | 285,711 | 350,719 |
| Revenue passengers carried..... 1,000..... | 7,2965 | 19,019 | 41,709 | 62,256 | 102,920 | 118,061 | 142,499 |
| Domestic..... 1,000..... | 7,2523 | 17,345 | 38,221 | 56,352 | 92,073 | 105,789 | 128,479 |
| International..... 1,000..... | 163 | 1,675 | 3,488 | 5,904 | 10,847 | 12,272 | 14,020 |
| Revenue passenger-miles flown:..... millions..... | | | | | | | |
| Domestic..... 1,052 | 8,007 | 19,852 | 30,557 | 51,888 | 60,591 | 75,487 | 85,287 |
| International..... 100 | 2,214 | 4,499 | 8,306 | 16,789 | 19,298 | 23,259 | 28,259 |
| Average passenger-mile rate: | | | | | | | |
| Domestic..... | \$0.0507 | \$0.0554 | \$0.0536 | \$0.0609 | \$0.0606 | \$0.0583 | (NA) |
| International..... | .0683 | .0728 | .0666 | .0635 | .0528 | .0516 | (NA) |
| Express and freight, ton-miles | | | | | | | |
| flown..... 1,000..... | (NA) | 212,811 | 326,344 | 578,518 | 1,540,452 | 1,830,300 | 2,111,373 |
| Domestic ⁸ 1,000..... | 3,476 | 152,223 | 229,956 | 356,933 | 943,128 | 1,108,691 | 1,314,409 |
| International..... 1,000..... | (NA) | 60,588 | 96,378 | 191,585 | 597,324 | 721,609 | 796,964 |
| Mail, ton-miles flown:..... 1,000..... | 10,118 | 47,740 | 88,751 | 135,923 | 225,992 | 291,277 | 406,297 |
| Domestic..... 1,000..... | (NA) | 26,228 | 61,233 | 103,335 | 254,093 | 452,635 | 560,402 |
| Accidents (revenue operations): ⁹ | | | | | | | |
| Domestic, total..... | 29 | 36 | 41 | 62 | 53 | 48 | (NA) |
| Fatal..... | 3 | 4 | 8 | 10 | 6 | 4 | (NA) |
| Fatalities ¹¹ | 45 | 109 | 221 | 363 | 223 | 72 | (NA) |
| Passenger-fatalities per 100 million passenger-miles flown ¹² | 3.0 | 1.2 | 0.8 | 0.9 | 0.4 | 0.9 | (NA) |
| International, total..... | 6 | 5 | 5 | 5 | 8 | 6 | (NA) |
| Fatal..... | - | 2 | 1 | 2 | 1 | - | (NA) |
| Fatalities ¹¹ | - | 56 | 4 | -15 | 30 | - | (NA) |
| Passenger-fatalities per 100 million passenger-miles flown..... | - | 2.1 | (Z) | 0.1 | 0.1 | - | (NA) |

- Represents zero. NA Not available. Z Less than 0.05. ¹ Excludes all-cargo operators.

² For types of personnel, see table 860. ³ Not compiled for intra-Alaska.

⁴ 1940, domestic is average for December, international as of Dec. 31; 1950-1967, based on fourth quarter.

⁵ Represents aircraft of the certificated route air carriers; excludes those used for crew training and general utility purposes, or held for disposal. Beginning 1960, excludes aircraft operated by the scheduled all-cargo carriers. Includes helicopters, not shown separately.

⁶ Obtained by dividing passenger seat-miles by revenue-miles flown in passenger service.

⁷ Data for domestic passengers include duplication.

⁸ Excludes freight flown by certificated all-cargo operators and irregular carriers.

⁹ Beginning 1960, includes military contract operations. 1965 data preliminary.

¹⁰ Includes 2 midair collisions nonfatal to air carrier occupants; excluded in computation of fatal accidents.

¹¹ Includes crew members. ¹² Excludes passenger deaths occurring in dynamite accidents, as follows: Nov. 1, 1955, 39; Jan. 6, 1960, 29.

Source: Dept. of Transportation, Federal Aviation Administration; *F.A.A. Statistical Handbook of Aviation*. Includes data from Civil Aeronautics Board.

No. 858. SCHEDULED AIR CARRIERS—AVAILABLE SERVICE AND UTILIZATION, AND TRAFFIC CARRIED: 1950 TO 1967

[In millions, except percent]

| ITEM | 1950 | 1955 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| SERVICE AND UTILIZATION | | | | | | | | | | |
| Available ton-miles..... | 2,426 | 5,289 | 9,384 | 10,578 | 12,326 | 13,931 | 16,302 | 19,662 | 23,505 | 30,748 |
| Revenue ton-miles..... | 1,398 | 3,088 | 5,024 | 5,395 | 6,238 | 6,860 | 8,016 | 9,895 | 12,441 | 15,662 |
| Ton-mile load factor...percent.. | 57.6 | 58.4 | 53.5 | 51.0 | 50.6 | 49.2 | 49.2 | 50.3 | 52.9 | 50.9 |
| Available seat-miles..... | 16,842 | 38,574 | 65,567 | 71,857 | 82,612 | 94,845 | 106,316 | 124,328 | 137,844 | 174,548 |
| Revenue passenger-miles..... | 10,243 | 24,351 | 38,863 | 39,831 | 43,760 | 50,362 | 58,494 | 68,676 | 79,889 | 93,613 |
| Passenger load factor...percent.. | 60.8 | 63.1 | 59.3 | 55.4 | 53.0 | 53.1 | 55.0 | 55.2 | 58.0 | 56.5 |
| Revenue plane-miles..... | 477 | 780 | 998 | 970 | 1,010 | 1,095 | 1,189 | 1,354 | 1,483 | 1,739 |
| TRAFFIC CARRIED (revenue ton-miles) | | | | | | | | | | |
| Total | 1,398 | 3,088 | 5,024 | 5,395 | 6,238 | 6,860 | 8,016 | 9,895 | 12,441 | 15,662 |
| Passenger ¹ | 1,001 | 2,368 | 3,733 | 3,827 | 4,210 | 4,839 | 5,630 | 6,629 | 7,736 | 9,546 |
| U.S. mail: | | | | | | | | | | |
| Priority..... | 69 | 128 | 202 | 223 | 251 | 266 | 290 | 372 | 543 | 567 |
| Nonpriority..... | | 15 | 39 | 76 | 89 | 90 | 81 | 111 | 208 | 407 |
| Express..... | 38 | 51 | 59 | 61 | 70 | 71 | 78 | 90 | 100 | 99 |
| Freight..... | 233 | 383 | 643 | 733 | 898 | 1,027 | 1,301 | 1,730 | 2,051 | 2,346 |
| Charter flights..... | 40 | 106 | 296 | 424 | 668 | 514 | 582 | 909 | 1,755 | 2,648 |
| Excess baggage ² | 18 | 37 | 53 | 50 | 52 | 53 | 52 | 53 | 49 | 49 |

¹ Passenger-miles converted to ton-miles on basis that 10 passengers with allowable free baggage equal 1 ton.

² Includes foreign mail revenue ton-miles.

Source: Air Transport Association of America, Washington, D.C.; *Air Transport Facts and Figures*, and unpublished data.

No. 859. SUPPLEMENTAL AIR CARRIERS—SUMMARY OF OPERATIONS: 1955 TO 1966

[In thousands, except number of operators. Refers to carriers operating by authority of letters of registration granted by the Civil Aeronautics Board. Includes international operations; see headnote, table 857. Figures shown for military cover activities performed under charter or other contract with the Department of Defense.]

| ITEM | 1955 | 1960 | 1962 | 1963 | 1964 | 1965 | 1966 |
|------------------------------|-----------|-----------|------------------------|---------------------|----------------------|-----------|----------------------|
| Number of operators..... | 50 | 30 | 25 | 15 | 15 | 13 | 13 |
| Revenue passenger-miles..... | 1,395,682 | 2,207,595 | 1,869,697 | 1,547,416 | 1,502,018 | 2,489,173 | 4,125,445 |
| Commercial..... | 716,096 | 671,094 | 816,354 | 411,753 | 535,748 | 1,069,335 | 1,553,529 |
| Military..... | 679,586 | 1,536,501 | 1,053,313 | 1,135,663 | 966,270 | 1,419,838 | 2,571,916 |
| Revenue cargo ton-miles..... | 74,601 | 120,400 | 214,677 | 218,736 | 267,726 | 297,601 | 425,092 |
| Commercial..... | 21,191 | 5,355 | 22,368 | 20,340 | 36,934 | 48,820 | 53,763 |
| Military..... | 53,410 | 115,045 | 192,309 | 198,396 | 230,792 | 248,781 | 371,329 |
| Operating revenue..... | \$76,824 | \$83,447 | ¹ \$107,013 | \$92,697 | \$105,802 | \$140,981 | \$209,278 |
| Transport..... | 66,923 | 79,711 | 103,114 | ² 92,262 | ² 105,063 | 139,525 | ² 205,172 |
| Passenger..... | 20,494 | 19,919 | 19,226 | 5,045 | 2,073 | (NA) | (NA) |
| Freight..... | 3,743 | 407 | 391 | 185 | 122 | (NA) | (NA) |
| Contract and charter: | | | | | | | |
| Commercial..... | 6,993 | 11,591 | 12,023 | 15,815 | 27,679 | 51,625 | 71,215 |
| Military..... | 35,133 | 47,527 | 70,829 | 70,005 | 73,005 | 87,161 | 132,609 |
| Other..... | 580 | 267 | 645 | 1,213 | 2,204 | 739 | 774 |
| Other than transport..... | 9,901 | 3,736 | 1,579 | 435 | 740 | 1,456 | 4,106 |
| Operating expenses..... | \$73,067 | \$85,295 | \$99,787 | \$87,539 | \$88,989 | \$116,906 | \$172,420 |
| Operating profit or loss... | \$3,757 | -\$1,849 | \$7,226 | \$5,158 | \$16,813 | \$24,075 | \$36,859 |

NA Not available.

¹ Includes \$2,319,000 for which no distribution was reported.

² Total less than sum of details due to statistical discrepancies in reporting.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Data from Civil Aeronautics Board.

No. 860. SCHEDULED AIR CARRIERS—PERSONNEL, PAYROLL, AND AVERAGE SALARY:
1965 AND 1966

[As of December 31 or for calendar years. See also headnote, table 857]

| TYPE OF PERSONNEL | 1965 | | | 1966 | | |
|---|----------------|-------------------|----------------|----------------|-------------------|----------------|
| | Number | Payroll (\$1,000) | Average salary | Number | Payroll (\$1,000) | Average salary |
| Total domestic | 169,952 | 1,448,758 | \$8,525 | 196,298 | 1,724,379 | \$8,784 |
| Pilots and copilots..... | 14,469 | 288,602 | 19,946 | 17,770 | 351,269 | 19,768 |
| Other flight personnel..... | 3,911 | 52,874 | 13,468 | 5,039 | 63,971 | 13,222 |
| Pursers, stewards, stewardesses..... | 14,220 | 73,146 | 5,144 | 17,207 | 90,001 | 5,481 |
| Communications personnel..... | 2,001 | 12,902 | 6,448 | 2,004 | 12,868 | 5,738 |
| Mechanics ¹ | 35,367 | 282,423 | 7,985 | 37,918 | 324,916 | 8,487 |
| Aircraft and traffic servicing personnel..... | 45,777 | 330,659 | 7,223 | 52,856 | 397,845 | 7,223 |
| Office employees..... | 34,561 | 239,306 | 6,924 | 40,601 | 285,638 | 6,878 |
| All others..... | 19,646 | 169,047 | 8,605 | 22,903 | 197,871 | 8,315 |
| Total international | 36,882 | 269,022 | 7,294 | 42,398 | 321,542 | 7,584 |
| Pilots and copilots..... | 1,924 | 41,863 | 21,758 | 2,516 | 51,740 | 20,564 |
| Other flight personnel..... | 781 | 13,363 | 17,110 | 1,046 | 17,231 | 16,473 |
| Pursers, stewards, stewardesses..... | 2,987 | 18,689 | 6,257 | 3,637 | 24,320 | 6,687 |
| Communications personnel..... | 1,104 | 4,742 | 4,295 | 1,144 | 5,215 | 4,559 |
| Mechanics ¹ | 5,343 | 41,959 | 7,853 | 6,146 | 49,354 | 8,030 |
| Aircraft and traffic servicing personnel..... | 10,788 | 61,474 | 5,698 | 12,574 | 74,783 | 5,947 |
| Office employees..... | 9,026 | 53,427 | 5,919 | 9,860 | 60,255 | 6,111 |
| All others..... | 4,929 | 33,505 | 6,798 | 5,475 | 38,644 | 7,068 |

¹ Includes other maintenance personnel.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Data from Civil Aeronautics Board.

No. 861. EMPLOYMENT, HOURS, AND EARNINGS IN AIRCRAFT INDUSTRIES—ANNUAL AVERAGES: 1948 TO 1967

| ITEM | 1948 | 1950 | 1955 | 1960 | 1964 | 1965 | 1966 | 1967 |
|---|------------|------------|------------|------------|------------|------------|------------|------------|
| EMPLOYMENT¹ (1,000) | | | | | | | | |
| Total | 238 | 283 | 761 | 674 | 620 | 619 | 751 | 825 |
| Aircraft..... | 158 | 188 | 467 | 371 | 322 | 330 | 419 | 469 |
| Aircraft engines and parts..... | 49 | 57 | 108 | 171 | 197 | 188 | 210 | 220 |
| Other aircraft parts and equipment ² | 31 | 38 | 127 | 132 | 100 | 101 | 122 | 136 |
| HOURS AND EARNINGS | | | | | | | | |
| Average weekly hours: | | | | | | | | |
| Aircraft industries..... | 41.2 | 41.4 | 41.4 | 40.6 | 40.5 | 41.2 | 42.9 | 42.2 |
| Aircraft engines and parts industries..... | 40.5 | 41.7 | 40.6 | 41.1 | 41.2 | 42.1 | 43.4 | 42.5 |
| Average weekly earnings: | | | | | | | | |
| Aircraft industries..... | \$60 | \$67 | \$90 | \$110 | \$123 | \$130 | \$144 | \$147 |
| Aircraft engines and parts industries..... | \$62 | \$69 | \$86 | \$112 | \$127 | \$133 | \$144 | \$146 |
| Average hourly earnings: | | | | | | | | |
| Aircraft industries..... | \$1.46 | \$1.62 | \$2.17 | \$2.71 | \$3.05 | \$3.16 | \$3.34 | \$3.49 |
| Aircraft engines and parts industries..... | \$1.52 | \$1.66 | \$2.13 | \$2.73 | \$3.09 | \$3.17 | \$3.31 | \$3.42 |

¹ Data for week ending nearest middle of month.

² Includes aircraft propellers and parts.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Data from Dept. of Labor, Bureau of Labor Statistics.

No. 862. CIVIL AIRCRAFT SHIPMENTS: 1950 TO 1967

[Represents manufacturers' shipments of complete aircraft. Includes both domestic and export output]

| ITEM | 1950 | 1955 | 1960 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 |
|-----------------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| Total | 3,520 | 4,820 | 8,181 | 7,249 | 8,121 | 10,067 | 12,646 | 16,397 | 14,479 |
| Transports..... | 129 | 113 | 238 | 146 | 80 | 158 | 221 | 322 | 500 |
| General aviation..... | 3,391 | 4,663 | 7,726 | 6,797 | 7,628 | 9,459 | 12,053 | 15,723 | 13,536 |
| Single-engine: | | | | | | | | | |
| 1- to 3-place..... | (NA) | 786 | 1,366 | 1,247 | 1,404 | 2,187 | 3,545 | 5,744 | 4,873 |
| 4-place and over..... | (NA) | 2,969 | 5,072 | 4,518 | 4,913 | 5,625 | 6,478 | 7,482 | 6,657 |
| Multiengine..... | (NA) | 808 | 1,288 | 1,082 | 1,311 | 1,647 | 2,030 | 2,497 | 2,006 |
| Rotorcraft..... | (NA) | 144 | 217 | 306 | 413 | 450 | 372 | 352 | 443 |

NA Not available.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Includes data from Dept. of Commerce, Bureau of the Census; *Current Industrial Reports*.

No. 863. SUMMARY OF AIRBORNE IMPORTS AND EXPORTS—SHIPPING WEIGHT, 1964 TO 1966, AND VALUE, 1966

[Weight in millions of pounds, value in millions of dollars, except as indicated. Includes trade of Puerto Rico with foreign countries. Exports include domestic and foreign merchandise; imports include merchandise for immediate consumption and entries into bonded warehouses]

| ITEM | IMPORTS | | | | EXPORTS | | | |
|----------------------------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|----------------|
| | Weight | | 1966 | | Weight | | 1966 | |
| | 1964 | 1965 | Weight | Value | 1964 | 1965 | Weight | Value |
| Total | 128.5 | 192.3 | 229.6 | 1,724.0 | 326.6 | 457.3 | 503.4 | 2,798.4 |
| CONTINENT | | | | | | | | |
| North America..... | 31.0 | 33.1 | 38.8 | 170.7 | 92.8 | 127.3 | 135.3 | 427.0 |
| South America..... | 14.4 | 19.8 | 15.4 | 46.8 | 55.8 | 71.3 | 71.2 | 223.0 |
| Europe..... | 68.4 | 111.5 | 134.3 | 1,168.4 | 97.9 | 182.0 | 206.4 | 1,593.8 |
| Asia..... | 13.8 | 26.7 | 39.2 | 267.3 | 15.9 | 29.1 | 37.1 | 314.6 |
| Australia and Oceania..... | 0.3 | 0.4 | 0.7 | 8.6 | 2.9 | 5.0 | 5.8 | 58.6 |
| Africa..... | 0.7 | 0.8 | 1.2 | 27.4 | 4.1 | 7.4 | 8.0 | 50.0 |
| U.S. carriers ¹ | 59.1 | 95.7 | 111.3 | 706.2 | 125.7 | 175.6 | 178.3 | 987.2 |
| Percent of all carriers..... | 46.0 | 50.0 | 48.5 | 41.0 | 38.5 | 38.4 | 35.4 | 35.3 |
| North America..... | 13.4 | 15.7 | 18.0 | 72.2 | 42.2 | 56.5 | 64.7 | 181.4 |
| South America..... | 3.9 | 6.4 | 5.6 | 23.9 | 11.4 | 19.2 | 19.5 | 74.5 |
| Europe..... | 32.1 | 55.6 | 61.1 | 448.5 | 34.9 | 63.8 | 66.7 | 515.0 |
| Asia..... | 9.4 | 17.6 | 25.8 | 153.3 | 8.9 | 15.1 | 17.2 | 130.6 |
| Australia and Oceania..... | (Z) | (Z) | 0.3 | 4.1 | 0.8 | 1.1 | 1.4 | 13.3 |
| Africa..... | 0.3 | 0.3 | 0.4 | 4.2 | 1.7 | 3.0 | 2.9 | 14.9 |
| CUSTOMS DISTRICT | | | | | | | | |
| New York..... | 69.3 | 113.1 | 130.0 | 1,211.6 | 129.6 | 224.8 | 237.7 | 1,697.7 |
| Florida..... | 27.3 | 26.7 | 26.8 | 48.3 | 98.8 | 116.1 | 108.0 | 216.4 |
| Tampa..... | (NA) | (NA) | 0.1 | 1.1 | (NA) | (NA) | 1.2 | 1.0 |
| Miami..... | (NA) | (NA) | 26.7 | 47.3 | (NA) | (NA) | 106.7 | 215.4 |
| Los Angeles..... | 5.0 | 7.4 | 12.3 | 80.3 | 6.2 | 9.4 | 12.3 | 128.8 |
| San Francisco..... | 4.4 | 10.3 | 17.1 | 122.4 | 9.2 | 16.9 | 19.7 | 199.2 |
| Chicago..... | 4.3 | 10.0 | 11.3 | 116.8 | 16.3 | 26.8 | 29.4 | 167.0 |
| Other ² | 18.2 | 24.8 | 32.1 | 144.6 | 66.6 | 63.4 | 96.3 | 389.3 |

NA Not available. Z Less than 50,000 pounds. ¹ For period January-June 1965, value of imports includes estimates for shipments valued less than \$251 reported on informal entries only. For period July-December 1965 and later years, value of imports includes estimates for shipments valued less than \$251 reported on formal and informal entries. Exports include shipments of "special category" commodities and estimated shipments valued under \$100, which are excluded from the continent totals.

² Exports include shipments of "special category" commodities which are excluded from individual districts.

Source: Dept. of Commerce, Bureau of the Census; summary reports, FT 986, *United States Airborne Foreign Trade*.

No. 864. AIRCRAFT—VALUE OF BACKLOG ORDERS, NET NEW ORDERS, AND NET SALES: 1951 to 1966

[In millions of dollars. Reported by manufacturers of complete aircraft, aircraft engines, and propellers]

| YEAR | Backlog, Jan. 1 | Net new orders ¹ | Net sales | Backlog, Dec. 31 | YEAR AND ITEM | Backlog, Jan. 1 | Net new orders ¹ | Net sales | Backlog, Dec. 31 | | | | | |
|-----------|-----------------|-----------------------------|-----------|------------------|----------------------------------|-----------------|-----------------------------|-----------|------------------|--------------------|-------|-------|-------|--|
| 1951..... | 5,039 | 11,100 | 3,473 | 12,666 | 1966 | | | | | | | | | |
| 1952..... | 12,666 | 11,482 | 6,495 | 17,653 | Aircraft and parts: ³ | | | | | | | | | |
| 1953..... | 17,653 | 7,611 | 8,511 | 216,763 | | | | | | U.S. military..... | | | | |
| 1954..... | 216,848 | 6,309 | 8,305 | 14,852 | | | | | | | | | | |
| 1955..... | 14,852 | 9,323 | 8,470 | 15,705 | Other..... | 4,460 | 6,295 | 2,544 | 8,140 | | | | | |
| 1956..... | 15,705 | 12,141 | 9,496 | 18,350 | Aircraft engines and parts: | | | | | | | | | |
| 1957..... | 18,350 | 7,947 | 11,766 | 14,581 | | | | | | U.S. military..... | | | | |
| 1958..... | 14,581 | 10,110 | 11,470 | 13,171 | | | | | | | | | | |
| 1959..... | 13,171 | 10,204 | 11,255 | 12,120 | Other..... | 856 | 1,436 | 723 | 1,578 | | | | | |
| 1960..... | 12,120 | 11,373 | 10,997 | 15,452 | Missiles and parts: | | | | | | | | | |
| 1961..... | 15,452 | 13,418 | 14,948 | 23,922 | | | | | | U.S. military..... | | | | |
| 1962..... | 214,147 | 14,962 | 15,972 | 213,137 | | | | | | | | | | |
| 1963..... | 212,647 | 17,637 | 16,407 | 13,904 | Other..... | 472 | 695 | 605 | 599 | | | | | |
| 1964..... | 13,904 | 17,970 | 16,686 | 15,188 | Other products and services..... | | | | | | | | | |
| 1965..... | 15,188 | 22,183 | 17,016 | 20,385 | | | | | | 3,517 | 6,303 | 5,261 | 4,558 | |
| 1966..... | 20,385 | 27,223 | 20,227 | 27,547 | | | | | | | | | | |

¹ New orders received during year less terminations during year.

² Difference in backlog figure as of Dec. 31, as against that of Jan. 1, reflects usual year-end adjustments and revisions resulting from changes in accounting practices involving the concept of backlog.

³ Includes propellers and propeller parts.

Source: Dept. of Transportation, Federal Aviation Administration; *FAA Statistical Handbook of Aviation*. Data from Dept. of Commerce, Bureau of the Census; *Current Industrial Reports*.

No. 865. EXPORTS OF AIRCRAFT AND AIRCRAFT PARTS AND ACCESSORIES: 1960, 1965, AND 1967

[Value in millions of dollars. See *Historical Statistics, Colonial Times to 1957*, series Q 349-350, for number and value of aircraft exported]

| ITEM | 1960 | | 1965 | | 1967 | |
|--|-----------------|-------|-----------------|-------|-----------------|-------|
| | Number of units | Value | Number of units | Value | Number of units | Value |
| Aircraft, parts, and accessories | (X) | 1,329 | (X) | 1,798 | (X) | 1,926 |
| Commercial and civilian aircraft ¹ | 2,336 | 537 | 3,129 | 477 | 3,877 | 789 |
| Cargo transports, new..... | - | - | 4 | 15 | 5 | 5 |
| Passenger transports, new..... | (NA) | (NA) | 61 | 262 | 113 | 511 |
| Passenger/cargo combinations, new..... | (NA) | (NA) | 12 | 76 | 17 | 95 |
| Aircraft, personal and utility type: | | | | | | |
| Single engine, new..... | 1,527 | 24 | 2,031 | 31 | 2,552 | 37 |
| Multiple engine, new..... | | | 426 | 38 | 571 | 54 |
| Rotary wing, new..... | 82 | 8 | 177 | 16 | 223 | 25 |
| Aircraft, used, rebuilt, modified, or converted..... | 565 | 26 | 406 | 39 | 362 | 60 |
| Internal combustion aircraft engines, new..... | 1,464 | 4 | 1,684 | 7 | 2,079 | 19 |
| Aircraft engines, used..... | 1,558 | 10 | 1,273 | 10 | 1,304 | 13 |
| Aircraft components, parts, and accessories ² | (X) | 778 | (X) | 1,303 | (X) | 1,106 |

- Represents zero. NA Not available. X Not applicable.

¹ Includes aircraft new, not elsewhere classified, not shown separately.

² Includes military aircraft and parts, new and used jet and gas turbines for aircraft, electronic navigational aids, and aircraft flight and other instruments.

Source: Dept. of Commerce, Bureau of the Census; *Current Industrial Reports*, Series M37G.

No. 866. UNITED STATES RECEIPTS AND PAYMENTS FOR INTERNATIONAL TRANSPORTATION: 1947 TO 1967

[In millions of dollars. Data are international transportation transactions recorded for balance of payment purposes (see table 1198). Receipts include freight on exports carried by U.S. operated carriers and foreign carrier expenditures in U.S. ports. Payments include freight on imports carried by foreign carriers and U.S. carrier port expenditures abroad. Freight on exports carried by foreign carriers is excluded since such payments are directly or indirectly for foreign account. Similarly, freight on U.S. imports carried by U.S. carriers is a domestic rather than an international transaction. Minus sign (-) denotes decrease. See *Historical Statistics, Colonial Times to 1957*, series U 170 and U 177, for totals]

| ITEM | 1947 | 1950 | 1955 | 1960 | 1963 | 1964 | 1965 | 1966 | 1967 (prel.) |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total receipts | 1,738 | 1,033 | 1,406 | 1,782 | 2,115 | 2,324 | 2,391 | 2,588 | 2,701 |
| Ocean transportation..... | 1,593 | 859 | 1,137 | 1,337 | 1,581 | 1,732 | 1,720 | 1,854 | 1,852 |
| Export freight earnings..... | 1,154 | 380 | 448 | 428 | 538 | 599 | 519 | 541 | 523 |
| Freight earnings on shipments between foreign countries..... | 100 | 110 | 106 | 136 | 154 | 158 | 152 | 139 | 161 |
| Passenger fares..... | 39 | 20 | 23 | 19 | 10 | 10 | 8 | 10 | 8 |
| Port expenditures..... | 231 | 313 | 548 | 746 | 870 | 956 | 1,032 | 1,154 | 1,162 |
| Charter hire..... | 19 | 36 | 12 | 8 | 9 | 9 | 9 | 10 | 8 |
| Air transportation..... | 85 | 108 | 183 | 358 | 435 | 484 | 559 | 622 | 736 |
| Export freight earnings..... | 12 | 17 | 33 | 55 | 53 | 63 | 91 | 106 | 126 |
| Passenger fares..... | 63 | 68 | 97 | 156 | 195 | 231 | 259 | 307 | 363 |
| Port expenditures..... | 10 | 23 | 53 | 147 | 187 | 190 | 209 | 209 | 247 |
| Other transportation..... | 60 | 66 | 86 | 87 | 99 | 108 | 112 | 112 | 113 |
| Total payments | 583 | 818 | 1,204 | 1,915 | 2,316 | 2,462 | 2,672 | 2,914 | 2,965 |
| Ocean transportation..... | 456 | 643 | 946 | 1,333 | 1,636 | 1,717 | 1,808 | 1,932 | 1,879 |
| Import freight payments..... | 141 | 295 | 480 | 780 | 888 | 945 | 1,082 | 1,187 | 1,161 |
| Passenger fares..... | 47 | 121 | 138 | 212 | 225 | 215 | 210 | 200 | 189 |
| Port expenditures..... | 231 | 138 | 153 | 167 | 288 | 317 | 281 | 294 | 282 |
| Charter hire..... | 37 | 89 | 175 | 174 | 235 | 240 | 235 | 251 | 247 |
| Air transportation..... | 70 | 106 | 183 | 504 | 594 | 651 | 773 | 886 | 991 |
| Import freight earnings..... | 1 | 2 | 7 | 22 | 26 | 26 | 38 | 44 | 65 |
| Passenger fares..... | 9 | 26 | 68 | 301 | 390 | 430 | 510 | 555 | 604 |
| Port expenditures..... | 60 | 78 | 108 | 181 | 178 | 195 | 225 | 287 | 322 |
| Other transportation..... | 57 | 69 | 75 | 78 | 86 | 94 | 91 | 96 | 95 |
| Receipts balance | 1,155 | 215 | 202 | -133 | -201 | -138 | -281 | -326 | -264 |

Source: Dept. of Commerce, Office of Business Economics; *Survey of Current Business*, June 1966, and unpublished data.

No. 867. WATERBORNE COMMERCE, FOREIGN AND DOMESTIC—CARGO TONNAGE: 1940 TO 1966

[In millions of short tons. Includes Puerto Rico and outlying areas. Import and export figures differ slightly from those shown in tables 889 and 870, due to minor differences in basic concepts which are explained in the source. See also *Historical Statistics, Colonial Times to 1957*, series Q 218-229]

| CLASS | 1940 | 1945 | 1950 | 1955 | 1960 | 1964 | 1965 | 1966 |
|---|------------------|------------------|------------|--------------|--------------|--------------|--------------|--------------|
| Net total | 608 | 619 | 821 | 1,016 | 1,100 | 1,238 | 1,273 | 1,334 |
| Foreign commerce | 111 | 172 | 169 | 271 | 339 | 422 | 444 | 471 |
| Imports, through seaports..... | 41 | 45 | 96 | 144 | 198 | 224 | 245 | 257 |
| Exports, through seaports..... | 50 | 100 | 44 | 95 | 105 | 143 | 142 | 156 |
| Imports, Great Lakes ports..... | 4 | 7 | 6 | 9 | 13 | 24 | 25 | 27 |
| Exports, Great Lakes ports..... | 17 | 21 | 24 | 23 | 23 | 30 | 32 | 32 |
| Domestic commerce ¹ | 497 | 447 | 651 | 745 | 761 | 816 | 829 | 863 |
| Coastwise, between ports..... | 157 | 91 | 183 | 196 | 209 | 206 | 202 | 208 |
| Great Lakes, between ports..... | 141 | 158 | 170 | 185 | 155 | 151 | 154 | 164 |
| Local traffic of seaports, Great Lakes ports, and inland waterways ports..... | 98 | 98 | 107 | 113 | 104 | 100 | 103 | 99 |
| Traffic between ports and river ports ² | 70 | 87 | 101 | 250 | 291 | 358 | 370 | 390 |
| Traffic between ports of outlying areas of the United States..... | (³) | (³) | 1 | 2 | 1 | 2 | 1 | 1 |

¹ For 1940 and 1945, approximate net total, excluding duplications in domestic traffic.

² Represents traffic among ports and communities mainly utilizing inland waterways.

³ Included in other types of domestic traffic.

Source: Dept. of the Army, Corps of Engineers; through 1950, *Annual Report of Chief of Engineers, Part 2*; thereafter, *Waterborne Commerce of the United States*.

No. 868. SHIPMENTS OF EXPORTS AND IMPORTS, BY METHOD OF TRANSPORT: 1950 TO 1967

[Value in millions of dollars, except percent; shipping weight in millions of pounds. Export data include both domestic and foreign; import data for general imports only]

| ITEM | 1950 | 1955 | 1960 | 1965 | 1966 | 1967 |
|---|--------|---------|---------|---------|---------|---------|
| EXPORTS ¹ | | | | | | |
| Value, all methods of transportation..... | 10,275 | 15,547 | 20,575 | 27,478 | 30,320 | 31,534 |
| Vessel..... | (NA) | 9,227 | 13,142 | 16,926 | 18,520 | 18,773 |
| Percent of total..... | (NA) | 59.4 | 63.9 | 61.6 | 61.1 | 59.5 |
| Air..... | (NA) | (NA) | (NA) | 2,289 | 2,666 | 3,236 |
| Shipping weight: | | | | | | |
| Vessel..... | (NA) | 225,169 | 248,456 | 343,461 | 371,955 | 375,301 |
| Air..... | (NA) | (NA) | (NA) | 457 | 464 | 544 |
| IMPORTS ² | | | | | | |
| Value, all methods of transportation..... | 8,852 | 11,384 | 14,654 | 21,366 | 25,542 | 26,816 |
| Vessel..... | (NA) | 8,073 | 11,106 | 14,943 | 17,319 | 17,493 |
| Percent of total..... | (NA) | 70.9 | 75.8 | 69.9 | 67.8 | 65.2 |
| Air..... | (NA) | (NA) | (NA) | 1,316 | 1,723 | 1,947 |
| Shipping weight: | | | | | | |
| Vessel..... | (NA) | 283,069 | 398,085 | 511,509 | 532,149 | 512,686 |
| Air..... | (NA) | (NA) | (NA) | 192 | 230 | 305 |

NA Not available.

¹ Export vessel and air data include estimated shipments under \$100, but exclude vessels under their own power or afloat, and "special category" and mail (parcel post) shipments.

² Import vessel and air data include estimated shipments under \$251, but exclude vessels under their own power or afloat.

Source: Dept. of Commerce, Bureau of the Census; monthly report, *Highlights of U.S. Export and Import Trade*, Report FT 990.

No. 869. WATERBORNE IMPORTS AND EXPORTS—CARGO TONNAGE, BY COASTAL DISTRICT: 1945 TO 1966

[In thousands of short tons. See headnote, table 870]

| DISTRICT | 1945 | 1950 | 1955 | 1960 | 1962 | 1963 | 1964 | 1965 | 1966 |
|------------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| IMPORTS | | | | | | | | | |
| Atlantic ports..... | 30,748 | 76,062 | 105,990 | 135,313 | 139,579 | 140,155 | 149,367 | 163,871 | 173,072 |
| Gulf ports..... | 5,675 | 10,930 | 17,345 | 27,304 | 30,019 | 30,180 | 32,255 | 36,773 | 39,183 |
| Pacific ports..... | 3,003 | 4,095 | 9,038 | 23,281 | 25,410 | 24,272 | 28,001 | 29,995 | 26,905 |
| Great Lakes ports..... | (NA) | 5,616 | 8,751 | 12,932 | 15,622 | 17,936 | 24,151 | 24,957 | 25,378 |
| EXPORTS | | | | | | | | | |
| Atlantic ports..... | 39,609 | 15,228 | 54,906 | 44,902 | 46,983 | 56,788 | 57,464 | 54,943 | 56,774 |
| Gulf ports..... | 14,737 | 16,818 | 22,500 | 36,730 | 43,605 | 47,651 | 58,529 | 58,717 | 67,109 |
| Pacific ports..... | 7,253 | 7,270 | 13,884 | 19,351 | 18,248 | 23,581 | 25,043 | 26,445 | 30,460 |
| Great Lakes ports..... | (NA) | 23,370 | 21,996 | 22,905 | 25,165 | 28,103 | 30,395 | 31,705 | 31,749 |

NA Not available.

Source: Dept. of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, releases, and unpublished data.

Imports and Exports

579

No. 870. WATERBORNE IMPORTS AND EXPORTS—CARGO TONNAGE, BY FLAG OF CARRIER VESSEL: 1950 to 1966

[In thousands of short tons. Beginning July 1950, excludes commodities classified for security reasons as "Special Category." For 1955 and 1960, exports exclude shipments individually valued under \$500. For 1963 and later years, exports exclude shipments to Canada individually valued under \$2,000 and to other countries under \$500. Under \$100 shipments are excluded for all years. Beginning 1955, imports exclude shipments under 2,000 pounds shipping weight regardless of value, as well as shipments valued at less than \$100 regardless of shipping weight. For January 1960 through June 1965, imports exclude formal entry shipments valued at less than \$100 and informal entry shipments valued under \$251. For July–December 1965 and later years, imports exclude all shipments under \$251. For further coverage details, see report FT 985, *U.S. Waterborne Foreign Trade* published monthly by Bureau of the Census. See also *Historical Statistics, Colonial Times to 1967*, series Q, 210–215]

| YEAR | Total trade | Percent by U.S. flag | IMPORTS BY FLAG OF CARRIER VESSEL | | | | EXPORTS BY FLAG OF CARRIER VESSEL | | | |
|---------------------|-------------|----------------------|-----------------------------------|--------|---------|--------------|-----------------------------------|--------|---------|--------------|
| | | | Total | U.S. | Foreign | Percent U.S. | Total | U.S. | Foreign | Percent U.S. |
| TOTAL | | | | | | | | | | |
| 1950----- | 159,389 | 39.3 | 96,703 | 42,268 | 54,435 | 43.7 | 62,685 | 20,379 | 42,306 | 32.5 |
| 1955----- | 253,919 | 23.5 | 141,123 | 37,409 | 103,715 | 26.5 | 112,796 | 22,144 | 90,652 | 19.6 |
| 1960----- | 322,717 | 12.3 | 198,830 | 19,627 | 179,203 | 9.9 | 123,887 | 20,133 | 103,754 | 16.3 |
| 1962----- | 344,631 | 11.0 | 210,631 | 18,373 | 192,257 | 8.7 | 134,001 | 19,535 | 114,466 | 14.6 |
| 1963----- | 368,664 | 9.9 | 212,542 | 15,682 | 196,860 | 7.4 | 156,122 | 20,885 | 135,237 | 13.4 |
| 1964----- | 405,205 | 9.9 | 233,774 | 16,278 | 217,496 | 7.0 | 171,431 | 23,937 | 147,494 | 14.0 |
| 1965----- | 427,407 | 8.1 | 255,596 | 15,573 | 240,023 | 6.1 | 171,811 | 19,048 | 152,762 | 11.1 |
| 1966----- | 450,631 | 7.3 | 264,539 | 15,844 | 248,695 | 6.0 | 186,092 | 17,453 | 168,639 | 9.4 |
| DRY CARGO | | | | | | | | | | |
| 1950----- | 100,189 | 31.2 | 46,611 | 14,823 | 31,788 | 31.8 | 53,578 | 16,429 | 37,149 | 30.7 |
| 1955----- | 169,231 | 23.2 | 68,437 | 19,855 | 48,582 | 29.0 | 100,794 | 19,762 | 81,032 | 19.6 |
| 1960----- | 202,497 | 15.2 | 94,931 | 13,813 | 81,118 | 14.6 | 107,666 | 16,980 | 90,686 | 15.8 |
| 1962----- | 218,173 | 13.4 | 98,458 | 12,355 | 86,103 | 12.5 | 119,715 | 16,888 | 102,827 | 14.1 |
| 1963----- | 239,486 | 12.0 | 98,623 | 10,998 | 87,625 | 11.1 | 140,862 | 17,750 | 123,112 | 12.6 |
| 1964----- | 266,816 | 12.0 | 113,371 | 11,967 | 101,404 | 10.6 | 153,445 | 20,083 | 133,362 | 13.1 |
| 1965----- | 273,928 | 9.3 | 123,318 | 10,369 | 112,949 | 8.4 | 160,610 | 15,223 | 135,387 | 10.0 |
| 1966----- | 296,287 | 8.1 | 129,460 | 10,335 | 119,115 | 8.0 | 166,837 | 13,626 | 153,210 | 8.2 |
| TANKER CARGO | | | | | | | | | | |
| 1950----- | 59,199 | 53.0 | 50,092 | 27,445 | 22,647 | 54.8 | 9,107 | 3,950 | 5,157 | 43.4 |
| 1955----- | 84,688 | 23.5 | 72,686 | 17,554 | 55,133 | 24.2 | 12,002 | 2,382 | 9,620 | 19.8 |
| 1960----- | 120,219 | 7.5 | 103,898 | 5,814 | 98,084 | 5.6 | 16,321 | 3,153 | 13,168 | 19.3 |
| 1962----- | 126,458 | 6.9 | 112,172 | 6,018 | 106,154 | 5.4 | 14,286 | 2,647 | 11,639 | 18.5 |
| 1963----- | 129,178 | 6.0 | 113,918 | 4,684 | 109,234 | 4.1 | 15,260 | 3,135 | 12,125 | 20.5 |
| 1964----- | 138,390 | 5.9 | 120,403 | 4,311 | 116,092 | 3.6 | 17,987 | 3,854 | 14,133 | 21.4 |
| 1965----- | 153,478 | 5.9 | 132,278 | 5,204 | 127,074 | 3.9 | 21,200 | 3,825 | 17,375 | 18.0 |
| 1966----- | 154,343 | 6.0 | 135,089 | 5,509 | 129,580 | 4.1 | 19,254 | 3,826 | 15,428 | 19.9 |

Source: Dept. of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, releases and unpublished data.

No. 871. WATERBORNE IMPORTS AND EXPORTS—VALUE OF TRADE, BY COASTAL DISTRICT: 1964 to 1966

[In millions of dollars. Includes trade of Puerto Rico with foreign countries]

| DISTRICT AND TYPE OF VESSEL | TOTAL TRADE | | | IMPORTS | | | EXPORTS | | |
|-----------------------------|-------------|--------|--------|---------|--------|--------|---------|--------|--------|
| | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 | 1964 | 1965 | 1966 |
| Total ----- | 30,530 | 31,868 | 35,831 | 13,441 | 14,941 | 17,300 | 17,089 | 16,927 | 18,531 |
| Atlantic ----- | 17,598 | 18,132 | 20,552 | 8,953 | 9,743 | 11,339 | 8,645 | 8,389 | 9,213 |
| Dry cargo----- | 16,170 | 16,570 | 18,827 | 7,600 | 8,266 | 9,762 | 8,570 | 8,304 | 9,065 |
| Tanker----- | 1,428 | 1,562 | 1,723 | 1,353 | 1,477 | 1,576 | 75 | 85 | 147 |
| Gulf ----- | 6,788 | 6,739 | 7,633 | 1,612 | 1,761 | 2,089 | 5,176 | 4,978 | 5,544 |
| Dry cargo----- | 5,843 | 5,584 | 6,721 | 1,522 | 1,657 | 1,952 | 4,321 | 3,927 | 4,769 |
| Tanker----- | 945 | 1,156 | 912 | 90 | 105 | 137 | 855 | 1,051 | 775 |
| Pacific ----- | 4,208 | 4,789 | 5,351 | 2,076 | 2,410 | 2,774 | 2,132 | 2,379 | 2,577 |
| Dry cargo----- | 3,819 | 4,353 | 4,954 | 1,791 | 2,097 | 2,504 | 2,028 | 2,256 | 2,450 |
| Tanker----- | 388 | 436 | 397 | 285 | 313 | 270 | 103 | 123 | 127 |
| Great Lakes ----- | 1,935 | 2,209 | 2,295 | 799 | 1,028 | 1,098 | 1,136 | 1,181 | 1,197 |
| Dry cargo----- | 1,855 | 2,141 | 2,226 | 788 | 1,013 | 1,085 | 1,067 | 1,128 | 1,141 |
| Tanker----- | 80 | 68 | 69 | 11 | 15 | 13 | 69 | 53 | 56 |

Source: Dept. of Commerce, Bureau of the Census; annual report, *U.S. Waterborne Foreign Trade*.

No. 872. FREIGHT CARRIED ON INLAND WATERWAYS, BY SYSTEM: 1940 TO 1966

[In millions of ton-miles. Excludes Alaska and Hawaii, except as noted]

| SYSTEM | 1940 | 1945 | 1950 | 1955 | 1960 | 1965 | 1966 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Total | 118,057 | 142,737 | 163,344 | 216,508 | 220,253 | 262,421 | 280,527 |
| Atlantic coast rivers..... | 1,859 | 1,036 | 6,497 | 27,042 | 28,583 | 27,781 | 28,109 |
| Gulf coast rivers..... | 593 | 345 | 1,229 | 13,860 | 16,932 | 21,808 | 23,619 |
| Pacific coast rivers..... | 1,229 | 1,555 | 1,686 | 4,736 | 6,001 | 6,630 | 6,425 |
| Mississippi River System ¹ | 13,934 | 19,595 | 33,598 | 52,019 | 69,257 | 96,593 | 106,376 |
| Great Lakes System ² | 100,442 | 120,205 | 120,334 | 118,850 | 99,480 | 109,609 | 115,998 |

¹ Comprises main channels and all tributaries of the Mississippi, Illinois, Missouri, and Ohio Rivers.² Includes other waterways, canals and connecting channels, and, beginning 1960, Alaskan waterways.Source: Dept. of the Army, Corps of Engineers; through 1950, *Annual Report of the Chief of Engineers*, Part 2; thereafter, *Waterborne Commerce of the United States*.

No. 873. FREIGHT CARRIED ON GREAT LAKES SYSTEM: 1966

[In millions of ton-miles]

| AREA | Total | DOMESTIC | | | | FOREIGN | |
|---|----------------|---------------|------------|------------|---------------------|---------------|---------------|
| | | Lakewise | Coast-wise | Internal | Local and Intraport | Canadian | Overseas |
| Total | 115,998 | 81,264 | 74 | 174 | 52 | 23,816 | 10,619 |
| Lake Superior..... | 28,408 | 24,504 | - | - | (Z) | 2,603 | 1,211 |
| St. Marys River..... | 5,321 | 4,595 | - | - | (Z) | 527 | 199 |
| Lake Michigan, including Port of Chicago ¹ | 19,704 | 15,677 | 1 | 47 | 30 | 2,703 | 1,247 |
| Lake Huron..... | 25,821 | 19,836 | 2 | 2 | 4 | 4,313 | 1,665 |
| St. Clair River, including channels in Lake St. Clair..... | 6,412 | 4,921 | 1 | 1 | (Z) | 1,078 | 410 |
| Detroit River..... | 3,557 | 2,707 | 3 | 3 | (Z) | 586 | 258 |
| Lake Erie, including upper Niagara River..... | 17,163 | 8,789 | 32 | 53 | 18 | 5,909 | 2,362 |
| Welland Canal..... | 1,132 | 17 | 4 | 10 | - | 807 | 294 |
| Lake Ontario, including lower Niagara River..... | 5,267 | 101 | 23 | 55 | - | 3,343 | 1,745 |
| St. Lawrence River, between International Boundary Line and Lake Ontario..... | 3,213 | 27 | 8 | 3 | - | 1,947 | 1,228 |

- Represents zero. Z Less than 500,000 ton-miles.

¹ Comprises Chicago Harbor, North Branch, Sanitary Ship Canal, Calumet-Sag Channel, Lake Calumet, Calumet Harbor and River.Source: Dept. of the Army, Corps of Engineers; *Waterborne Commerce of the United States*.

No. 874. FEDERAL EXPENDITURES FOR CIVIL FUNCTIONS OF THE CORPS OF ENGINEERS, UNITED STATES ARMY: 1940 TO 1967

[In thousands of dollars. For years ending June 30. Includes Puerto Rico and outlying areas. Represents funds actually expended under the direction of the Chief of Engineers for maintenance and improvement of rivers and harbors, flood control, and other miscellaneous works]

| YEAR | Amount | YEAR | Amount | YEAR | Amount | YEAR | Amount |
|-----------|---------|-----------|---------|-----------|---------|-----------|-----------|
| 1940..... | 213,889 | 1947..... | 269,380 | 1954..... | 539,687 | 1961..... | 938,032 |
| 1941..... | 220,734 | 1948..... | 380,615 | 1955..... | 511,587 | 1962..... | 964,964 |
| 1942..... | 198,041 | 1949..... | 572,830 | 1956..... | 556,724 | 1963..... | 1,082,579 |
| 1943..... | 222,053 | 1950..... | 634,534 | 1957..... | 666,433 | 1964..... | 1,096,564 |
| 1944..... | 175,589 | 1951..... | 620,581 | 1958..... | 718,532 | 1965..... | 1,210,765 |
| 1945..... | 134,216 | 1952..... | 597,102 | 1959..... | 806,427 | 1966..... | 1,291,223 |
| 1946..... | 168,957 | 1953..... | 635,512 | 1960..... | 868,573 | 1967..... | 1,265,933 |

Source: Dept. of the Army, Corps of Engineers; annual report, *Statement of Costs*.

No. 875. COMMERCE OF SELECTED UNITED STATES PORTS: 1966

[In thousands of short tons (cargo). Excludes Great Lakes. In addition to commerce shown here, many ports have (a) commerce with ports on internal rivers and canals; (b) purely local port traffic]

| PORT | Im-ports | Ex-ports | COASTWISE | | PORT | Im-ports | Ex-ports | COASTWISE | |
|--|-----------------|-----------------|-----------------|-----------------|--------------------------------------|----------|----------|-----------|------------|
| | | | Re-ceipts | Ship-ments | | | | Re-ceipts | Ship-ments |
| Total | 257, 173 | 155, 759 | 208, 375 | 208, 375 | | | | | |
| ATLANTIC COAST PORTS | | | | | GULF COAST PORTS | | | | |
| Portland Harbor, Maine..... | 18, 416 | 145 | 3, 042 | 597 | Charlotte Harbor, Fla..... | 106 | 273 | 8 | 825 |
| Portsmouth Harbor, N.H..... | 825 | (Z) | 890 | 25 | Tampa Harbor, Fla..... | 1, 510 | 7, 746 | 9, 840 | 3, 724 |
| Salem Harbor, Mass..... | 379 | - | 974 | 22 | Port St. Joe Harbor, Fla..... | 64 | 49 | 127 | - |
| Boston, Mass..... | 7, 156 | 495 | 10, 681 | 712 | Mobile Harbor, Ala..... | 9, 359 | 2, 020 | 423 | 2, 617 |
| Fall River Harbor, Mass..... | 371 | - | 3, 480 | 136 | New Orleans, La..... | 5, 682 | 19, 961 | 2, 005 | 24, 909 |
| Providence River and Harbor, R.I..... | 1, 289 | 157 | 6, 699 | 876 | Baton Rouge, La..... | 7, 142 | 5, 042 | 264 | 6, 906 |
| New London Harbor, Conn..... | 475 | - | 365 | 199 | Lake Charles, La. ² | 232 | 1, 043 | 80 | 2, 712 |
| New Haven Harbor, Conn..... | 2, 363 | 178 | 5, 818 | 1, 073 | Galveston, Tex..... | 169 | 4, 278 | 240 | 33 |
| Bridgeport Harbor, Conn..... | 434 | 46 | 1, 638 | 371 | Texas City, Tex..... | 93 | 308 | 466 | 5, 531 |
| Norwalk Harbor, Conn..... | - | - | 1, 346 | (Z) | Houston, Tex..... | 3, 893 | 10, 622 | 2, 392 | 17, 635 |
| Stamford Harbor, Conn..... | - | - | 990 | 49 | Corpus Christi, Tex..... | 3, 168 | 3, 554 | 161 | 10, 691 |
| Port of New York, N.Y., and N.J..... | 49, 984 | 7, 195 | 31, 373 | 16, 961 | Harbor Island, Tex..... | - | (Z) | - | 4, 665 |
| Hempstead Harbor, N.Y..... | - | - | 2, 001 | 2, 248 | Freeport Harbor, Tex..... | 55 | 744 | 27 | 1, 336 |
| Port Jefferson Harbor, N.Y..... | 499 | - | 1, 502 | 1 | Brazos Island Harbor, Tex..... | 1, 874 | 439 | 7 | 1, 599 |
| Port of Albany, N.Y..... | 1, 329 | 467 | 2, 851 | 5 | Beaumont, Tex..... | 47 | 4, 396 | 951 | 15, 639 |
| Delaware River and tributaries..... | 52, 711 | 2, 963 | 27, 585 | 7, 768 | Port Arthur, Tex..... | 175 | 3, 324 | 5, 990 | 12, 644 |
| Baltimore Harbor and Channels, Md..... | 19, 390 | 6, 020 | 4, 051 | 1, 480 | PACIFIC COAST PORTS | | | | |
| Norfolk Harbor, Va..... | 3, 307 | 25, 482 | 1, 636 | 3, 174 | San Diego Harbor, Calif..... | 292 | 496 | 987 | 131 |
| Port of Newport News, Va..... | 1, 305 | 9, 614 | - | 1, 506 | Long Beach Harbor, Calif..... | 4, 239 | 4, 728 | 1, 832 | 2, 292 |
| Port of Wilmington, N.C..... | 1, 202 | 248 | 2, 208 | 198 | Los Angeles Harbor, Calif..... | 6, 400 | 4, 206 | 5, 433 | 7, 002 |
| Charleston Harbor, S.C..... | 2, 141 | 651 | 2, 309 | 44 | San Francisco Bay Area, Calif..... | 6, 362 | 5, 585 | 13, 209 | 8, 421 |
| Savannah Harbor, Ga..... | 2, 089 | 800 | 1, 547 | 146 | Stockton, Calif..... | 215 | 1, 476 | 224 | 59 |
| Jacksonville Harbor, Fla..... | 3, 407 | 805 | 3, 630 | 465 | Coos Bay, Oreg..... | (Z) | 889 | 354 | 535 |
| Port Everglades Harbor, Fla..... | 1, 805 | 183 | 4, 635 | 361 | Portland, Oreg..... | 1, 213 | 3, 761 | 4, 361 | 283 |
| Miami Harbor, Fla..... | 495 | 285 | 221 | 124 | Vancouver, Wash..... | 303 | 840 | 202 | 15 |
| San Juan Harbor, P.R..... | 3, 200 | 98 | 2, 141 | 1, 181 | Longview, Wash..... | 195 | 1, 764 | 588 | 135 |
| | | | | | Tacoma Harbor, Wash..... | 1, 456 | 1, 526 | 118 | 158 |
| | | | | | Seattle Harbor, Wash..... | 1, 440 | 1, 406 | 3, 283 | 877 |
| | | | | | Bellingham Bay and Harbor, Wash..... | 383 | 218 | 28 | 163 |
| | | | | | Anchorage, Alaska..... | 51 | 1 | 856 | 101 |
| | | | | | Honolulu Harbor, Hawaii..... | 965 | 152 | 2, 917 | 2, 147 |

- Represents zero. Z Less than 500 tons.

¹ Includes data for ports not shown separately.

² Includes Calcasieu River and Pass.

Source: Dept. of the Army, Corps of Engineers; *Waterborne Commerce of the United States*.

No. 876. COMMERCE OF SELECTED GREAT LAKES PORTS: 1950 TO 1966

[In thousands of short tons (cargo). Comprises foreign, lakewise, and coastwise shipping]

| PORT | RECEIPTS | | | | SHIPMENTS | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | 1950 | 1955 | 1960 | 1966 | 1950 | 1955 | 1960 | 1966 |
| Total | 175,637 | 193,591 | 168,043 | 190,838 | 193,511 | 207,588 | 178,287 | 195,943 |
| Ashtabula Harbor, Ohio..... | 10,447 | 9,455 | 7,773 | 6,377 | 3,302 | 3,586 | 2,450 | 2,938 |
| Buffalo, N. Y., Port of..... | 16,458 | 19,318 | 15,595 | 17,218 | 2,417 | 2,436 | 1,226 | 1,090 |
| Chicago, Ill., Port of..... | 15,813 | 18,872 | 12,903 | 14,592 | 4,093 | 6,349 | 8,411 | 12,108 |
| Cleveland Harbor, Ohio..... | 17,375 | 19,744 | 17,113 | 23,457 | 382 | 358 | 511 | 540 |
| Conneaut Harbor, Ohio..... | 9,562 | 14,139 | 6,570 | 7,811 | 2,822 | 994 | 588 | 5,011 |
| Detroit, Mich., Port of..... | 21,090 | 24,295 | 25,934 | 31,942 | 1,298 | 1,026 | 1,892 | 1,082 |
| Duluth-Superior, Minn. and Wis..... | 10,117 | 7,142 | 5,155 | 4,916 | 53,009 | 61,156 | 37,512 | 41,381 |
| Indiana Harbor, Ind..... | 10,355 | 13,695 | 12,116 | 14,964 | 5,182 | 6,886 | 7,059 | 4,688 |
| Lorain Harbor, Ohio..... | 8,153 | 5,563 | 5,036 | 4,814 | 3,264 | 2,258 | 1,659 | 1,806 |
| Milwaukee Harbor, Wis..... | 7,357 | 7,157 | 6,861 | 4,507 | 1,421 | 1,532 | 1,647 | 2,017 |
| Sandusky Harbor, Ohio..... | 1 | 1 | 38 | 157 | 9,822 | 7,961 | 5,616 | 3,648 |
| Toledo Harbor, Ohio..... | 4,640 | 6,504 | 5,870 | 6,605 | 29,307 | 28,710 | 27,815 | 36,894 |
| All other..... | 44,269 | 49,706 | 48,279 | 53,478 | 77,492 | 84,236 | 81,901 | 82,740 |

No. 877. FREIGHT CARRIED ON MISSISSIPPI RIVER SYSTEM: 1940 TO 1966

[Net traffic. Comprises main channels and all tributaries of the Mississippi, Illinois, Missouri, and Ohio Rivers]

| YEAR | TRAFFIC IN SHORT TONS (1,000) | | | | | TRAFFIC IN TON-MILES (millions) | | | | |
|-----------|-------------------------------|---------|-----------|---------|---------|---------------------------------|--------|-----------|---------|---------|
| | Total | Inland | Coastwise | Foreign | | Total | Inland | Coastwise | Foreign | |
| | | | | Imports | Exports | | | | Imports | Exports |
| 1940..... | 88,980 | 73,174 | 9,001 | 3,157 | 3,649 | 13,934 | 11,578 | 1,523 | 385 | 447 |
| 1945..... | 95,548 | 82,081 | 4,954 | 3,114 | 5,394 | 19,595 | 17,738 | 2,849 | 340 | 668 |
| 1950..... | 138,145 | 114,697 | 13,877 | 4,395 | 5,176 | 33,598 | 30,282 | 2,074 | 599 | 643 |
| 1955..... | 194,363 | 163,760 | 16,060 | 6,296 | 8,248 | 52,019 | 47,418 | 2,473 | 1,046 | 1,082 |
| 1960..... | 233,959 | 188,098 | 21,994 | 11,284 | 12,584 | 69,257 | 62,367 | 3,184 | 1,821 | 1,884 |
| 1962..... | 257,962 | 200,041 | 26,960 | 12,632 | 18,329 | 79,305 | 70,999 | 3,303 | 2,223 | 2,780 |
| 1963..... | 271,320 | 211,840 | 28,370 | 11,082 | 20,327 | 82,315 | 73,520 | 3,843 | 1,928 | 3,024 |
| 1964..... | 289,493 | 226,475 | 27,696 | 11,125 | 24,196 | 89,348 | 80,087 | 3,683 | 1,976 | 3,601 |
| 1965..... | 301,780 | 237,631 | 28,395 | 13,031 | 22,724 | 96,593 | 87,407 | 3,592 | 2,333 | 3,261 |
| 1966..... | 321,756 | 247,200 | 35,161 | 14,479 | 24,917 | 106,376 | 95,870 | 4,284 | 2,561 | 3,661 |

Source of tables 876 and 877: Dept. of the Army, Corps of Engineers; through 1950, *Annual Report of the Chief of Engineers, Part 2*; thereafter, *Waterborne Commerce of the United States*.

No. 878. COMMERCIAL TRAFFIC THROUGH THE PANAMA CANAL, 1940 TO 1967, AND BY NATIONALITY OF VESSEL, 1967

For years ending June 30. Comprises oceangoing toll-paying vessels and foreign naval vessels of 300 net tons and over (Panama Canal measurement) for vessels rated on net tonnage, or 500 tons displacement and over for vessels rated on displacement tonnage. See also *Historical Statistics, Colonial Times to 1857*, series Q 235-237]

| YEAR | Number of transits | Net tonnage ¹ (1,000) | Tolls (\$1,000) | Tons of cargo (1,000 long tons) | NATIONALITY OF VESSEL, 1967 | Number of transits | Net tonnage ¹ (1,000) | Tolls (\$1,000) | Tons of cargo (1,000 long tons) |
|-----------|--------------------|----------------------------------|-----------------|---------------------------------|-----------------------------|--------------------|----------------------------------|-----------------|---------------------------------|
| 1940..... | 5,370 | 24,144 | 21,145 | 27,299 | Germany..... | 1,228 | 6,265 | 5,438 | 4,249 |
| 1945..... | 1,989 | 8,381 | 7,244 | 8,604 | Great Britain..... | 1,326 | 9,835 | 8,640 | 9,146 |
| 1950..... | 5,448 | 28,013 | 24,430 | 28,872 | Greece..... | 468 | 3,818 | 3,318 | 4,609 |
| 1955..... | 7,997 | 38,568 | 33,849 | 40,646 | Japan..... | 864 | 6,431 | 5,705 | 6,961 |
| 1960..... | 10,795 | 58,302 | 50,939 | 59,258 | Liberia..... | 1,381 | 13,722 | 11,781 | 17,947 |
| 1962..... | 11,149 | 65,379 | 57,290 | 67,525 | Netherlands..... | 491 | 2,186 | 1,911 | 1,887 |
| 1963..... | 11,017 | 64,438 | 56,368 | 62,247 | Norway..... | 1,542 | 13,066 | 11,346 | 14,915 |
| 1964..... | 11,808 | 69,633 | 61,098 | 70,550 | Panama..... | 474 | 2,436 | 2,005 | 2,230 |
| 1965..... | 11,834 | 74,735 | 65,443 | 76,573 | Sweden..... | 424 | 3,053 | 2,692 | 2,930 |
| 1966..... | 11,925 | 78,913 | 69,095 | 81,704 | United States..... | 1,724 | 13,566 | 11,637 | 9,350 |
| 1967..... | 12,412 | 88,266 | 76,769 | 86,193 | All other..... | 2,490 | 13,888 | 12,296 | 11,969 |

¹ Panama Canal net. ² Includes Canadian.Source: Panama Canal Company; *Annual Report*.

No. 879. VESSELS ENTERED AND CLEARED IN FOREIGN TRADE—NET REGISTERED TONNAGE, BY CUSTOMS DISTRICTS: 1955 to 1966

[In thousands of net tons. Excludes domestic trade]

| CUSTOMS DISTRICT | 1955 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| ENTERED | | | | | | | | |
| North Atlantic Coast..... | 71,159 | 75,829 | 75,032 | 80,068 | 83,564 | 85,178 | 88,586 | 89,918 |
| With cargo..... | 57,844 | 66,589 | 64,879 | 69,143 | 70,101 | 72,875 | 76,541 | 79,052 |
| South Atlantic Coast..... | 6,000 | 8,827 | 8,307 | 9,060 | 9,953 | 11,224 | 10,862 | 12,629 |
| With cargo..... | 5,292 | 7,808 | 7,303 | 8,099 | 8,465 | 9,038 | 8,709 | 10,390 |
| Gulf Coast..... | 17,434 | 27,022 | 30,237 | 32,224 | 32,459 | 36,674 | 37,564 | 36,527 |
| With cargo..... | 11,795 | 15,616 | 15,661 | 16,886 | 16,399 | 17,940 | 18,485 | 20,207 |
| South Pacific Coast..... | 9,582 | 17,148 | 18,200 | 18,654 | 17,736 | 19,206 | 21,546 | 23,174 |
| With cargo..... | 7,547 | 15,007 | 15,322 | 16,675 | 16,369 | 16,500 | 17,747 | 18,178 |
| North Pacific Coast..... | 6,385 | 10,133 | 9,851 | 9,861 | 11,870 | 11,692 | 12,968 | 14,711 |
| With cargo..... | 4,395 | 7,551 | 6,981 | 7,152 | 7,729 | 7,742 | 7,895 | 8,373 |
| Great Lakes..... | 14,697 | 16,937 | 17,593 | 19,728 | 21,577 | 24,705 | 25,276 | 26,209 |
| With cargo..... | 4,631 | 7,771 | 7,826 | 9,761 | 10,748 | 13,948 | 14,484 | 15,825 |
| Alaska, Hawaii, Puerto Rico, and V.I..... | 3,247 | 6,869 | 7,326 | 8,739 | 9,842 | 10,650 | 12,198 | 14,727 |
| With cargo..... | 2,678 | 5,968 | 6,369 | 7,340 | 7,991 | 8,763 | 9,652 | 11,509 |
| CLEARED | | | | | | | | |
| North Atlantic Coast..... | 71,240 | 80,842 | 79,127 | 83,466 | 86,874 | 91,464 | 89,676 | 89,865 |
| With cargo..... | 38,903 | 35,510 | 35,964 | 37,998 | 40,296 | 39,781 | 37,778 | 38,387 |
| South Atlantic Coast..... | 5,846 | 8,612 | 8,759 | 9,275 | 9,726 | 10,908 | 11,227 | 11,590 |
| With cargo..... | 3,635 | 5,121 | 5,362 | 5,227 | 5,249 | 5,766 | 5,322 | 6,614 |
| Gulf Coast..... | 17,289 | 25,218 | 27,235 | 30,200 | 30,200 | 33,959 | 36,289 | 40,943 |
| With cargo..... | 13,320 | 18,825 | 20,385 | 22,825 | 23,501 | 28,192 | 28,981 | 33,828 |
| South Pacific Coast..... | 11,172 | 18,007 | 18,616 | 18,843 | 18,263 | 19,744 | 21,758 | 22,676 |
| With cargo..... | 10,598 | 14,602 | 14,485 | 14,127 | 14,546 | 14,495 | 16,068 | 18,020 |
| North Pacific Coast..... | 5,060 | 9,444 | 9,473 | 9,180 | 11,158 | 10,873 | 12,840 | 14,708 |
| With cargo..... | 4,130 | 6,923 | 7,415 | 7,068 | 8,639 | 8,068 | 9,769 | 11,228 |
| Great Lakes..... | 14,561 | 16,937 | 17,583 | 19,623 | 21,434 | 24,626 | 25,196 | 26,004 |
| With cargo..... | 11,831 | 13,106 | 13,791 | 15,020 | 16,780 | 17,454 | 18,641 | 18,702 |
| Alaska, Hawaii, Puerto Rico, and V.I..... | 4,200 | 7,654 | 8,085 | 8,714 | 9,882 | 10,703 | 11,749 | 13,651 |
| With cargo..... | 3,077 | 3,491 | 3,663 | 3,920 | 4,591 | 4,921 | 5,655 | 6,872 |

No. 880. VESSELS ENTERED AND CLEARED IN FOREIGN TRADE—NET REGISTERED TONNAGE, BY FLAG OF CARRIER VESSEL: 1941 to 1966

[In thousands of net tons, except as indicated. Includes Puerto Rico and Virgin Islands. Excludes domestic trade. See also *Historical Statistics, Colonial Times to 1967*, series Q 192-203]

| YEARLY AVERAGE OR YEAR | ALL PORTS | | | | | SEAPORTS ¹ | | | | | |
|------------------------|-------------------|---------------|--------|---------|--------------|-----------------------|--------|------------|---------------|--------|---------|
| | Number of vessels | All vessels | | | All vessels | | | With cargo | | | |
| | | Total tonnage | U.S. | Foreign | Percent U.S. | Total tonnage | U.S. | Foreign | Total tonnage | U.S. | Foreign |
| ENTERED | | | | | | | | | | | |
| 1941-1945..... | 38,997 | 67,994 | 34,658 | 33,336 | 51.0 | 52,620 | 30,059 | 22,560 | 28,995 | 16,877 | 12,118 |
| 1946-1950..... | 48,813 | 87,462 | 46,205 | 41,257 | 52.8 | 75,094 | 42,168 | 32,926 | 50,288 | 26,318 | 23,970 |
| 1951-1955..... | 48,082 | 114,990 | 39,459 | 75,531 | 34.3 | 100,657 | 35,345 | 65,313 | 78,407 | 26,759 | 51,649 |
| 1956-1960..... | 51,874 | 155,368 | 31,118 | 124,251 | 20.0 | 139,375 | 26,938 | 112,436 | 110,023 | 21,884 | 88,139 |
| 1961-1965..... | 49,670 | 187,982 | 33,443 | 154,539 | 17.9 | 166,207 | 29,947 | 136,260 | 127,832 | 18,994 | 108,839 |
| 1955..... | 48,415 | 128,405 | 34,321 | 94,084 | 26.7 | 113,807 | 30,407 | 83,400 | 89,552 | 25,331 | 64,220 |
| 1960..... | 51,375 | 162,765 | 30,189 | 132,575 | 18.5 | 145,828 | 26,708 | 119,119 | 118,539 | 19,955 | 98,584 |
| 1962..... | 49,515 | 178,334 | 33,774 | 144,560 | 18.9 | 158,606 | 29,963 | 128,644 | 125,297 | 19,978 | 105,319 |
| 1963..... | 48,654 | 186,700 | 33,300 | 153,400 | 17.8 | 165,124 | 29,677 | 135,447 | 126,054 | 18,928 | 107,126 |
| 1964..... | 50,998 | 199,330 | 34,956 | 164,373 | 17.5 | 174,625 | 30,909 | 143,715 | 132,257 | 19,001 | 113,256 |
| 1965..... | 51,357 | 209,000 | 34,041 | 174,960 | 16.3 | 183,724 | 30,919 | 152,806 | 139,029 | 18,283 | 120,747 |
| 1966..... | 52,182 | 217,894 | 31,487 | 186,407 | 14.5 | 191,685 | 28,621 | 163,063 | 147,769 | 18,641 | 129,128 |
| CLEARED | | | | | | | | | | | |
| 1941-1945..... | 38,195 | 71,792 | 37,283 | 34,509 | 51.9 | 56,304 | 32,585 | 23,718 | 45,147 | 26,377 | 18,770 |
| 1946-1950..... | 45,135 | 87,190 | 44,942 | 42,244 | 51.5 | 74,889 | 40,933 | 33,953 | 54,584 | 29,510 | 25,073 |
| 1951-1955..... | 45,324 | 115,447 | 39,533 | 75,914 | 34.2 | 101,213 | 35,531 | 65,682 | 68,396 | 25,407 | 42,989 |
| 1956-1960..... | 49,079 | 156,376 | 31,167 | 125,219 | 19.9 | 140,498 | 27,018 | 113,478 | 85,273 | 19,791 | 65,481 |
| 1961-1965..... | 48,098 | 189,274 | 33,913 | 155,360 | 17.9 | 167,581 | 30,459 | 137,121 | 95,263 | 20,383 | 75,581 |
| 1955..... | 46,642 | 129,368 | 34,407 | 94,961 | 26.6 | 114,806 | 30,615 | 84,192 | 73,663 | 20,763 | 52,900 |
| 1960..... | 49,809 | 166,715 | 31,280 | 135,434 | 18.8 | 149,778 | 27,649 | 122,127 | 84,470 | 18,665 | 65,817 |
| 1962..... | 47,837 | 178,953 | 34,165 | 144,788 | 19.1 | 159,330 | 30,337 | 128,992 | 91,036 | 19,648 | 71,388 |
| 1963..... | 46,882 | 187,539 | 34,106 | 153,433 | 18.2 | 166,103 | 30,440 | 135,663 | 96,822 | 20,833 | 75,989 |
| 1964..... | 49,636 | 202,262 | 35,397 | 166,864 | 17.5 | 177,636 | 31,409 | 146,225 | 101,212 | 21,501 | 79,711 |
| 1965..... | 49,779 | 208,736 | 34,016 | 174,721 | 16.8 | 183,540 | 31,048 | 152,492 | 108,473 | 20,979 | 82,494 |
| 1966..... | 51,159 | 219,437 | 32,738 | 186,699 | 14.9 | 193,433 | 29,925 | 163,507 | 114,949 | 24,815 | 90,134 |

¹ Comprises all ports except Great Lakes ports.

Source of tables 879 and 880: Dept. of Commerce, Bureau of the Census; *Foreign Commerce and Navigation of the United States*, and annual report, FT 975, *Vessel Entrances and Clearances*.

No. 881. EMPLOYEES IN GOVERNMENT AND PRIVATE SHIPYARDS: 1940 TO 1967

[In thousands. Prior to 1959, excludes Alaska and Hawaii. Annual average employment in establishments primarily engaged in building and repairing all types of ships, barges, canal boats, and lighters of 5 gross tons and over, whether propelled by sail or motor power or towed by other craft]

| YEAR | Total | Private yards ¹ | Navy yards ² | YEAR | Total | Private yards ¹ | Navy yards ² |
|-----------|-------|----------------------------|-------------------------|-----------|-------|----------------------------|-------------------------|
| 1940..... | 180 | 103 | 78 | 1960..... | 208 | 112 | 96 |
| 1945..... | 1,010 | 718 | 292 | 1961..... | 214 | 116 | 98 |
| 1950..... | 146 | 72 | 74 | 1962..... | 212 | 115 | 98 |
| 1955..... | 208 | 101 | 107 | 1963..... | 210 | 116 | 94 |
| 1956..... | 212 | 110 | 102 | 1964..... | 204 | 117 | 87 |
| 1957..... | 225 | 127 | 98 | 1965..... | 213 | 120 | 84 |
| 1958..... | 220 | 125 | 95 | 1966..... | 228 | 143 | 85 |
| 1959..... | 214 | 118 | 97 | 1967..... | 233 | 139 | 95 |

¹ Includes all full- and part-time employees who worked during or received pay for any part of the pay period which includes the 12th of the month. Data have been adjusted to March 1965 benchmark levels indicated by data from Government social insurance programs.

² Includes Curtis Bay Coast Guard yard (Md.) through 1958.

Source: Dept. of Labor, Bureau of Labor Statistics. Current data for private yards published monthly in *Employment and Earnings and Monthly Report on the Labor Force*.

No. 882. EMPLOYMENT ON U.S. FLAG MERCHANT VESSELS: 1935 TO 1967

[As of June 30, except as indicated. Estimates of personnel employed on U.S. merchant ships, 1,000 gross tons and over. Excludes vessels on inland waterways, Great Lakes, and those owned by, or operated for, the United States Army and Navy, and special types such as cable ships, tugs, etc.]

| DATE | Employment | DATE | Employment | DATE | Employment |
|-------------------|------------|-----------|------------|-------------------|---------------------|
| 1935..... | 56,150 | 1952..... | 70,736 | 1961..... | ¹ 30,930 |
| 1940..... | 49,810 | 1953..... | 69,125 | 1962..... | 47,346 |
| 1945—June 20..... | 158,860 | 1954..... | 55,797 | 1963..... | 47,996 |
| | | | | 1964..... | 47,979 |
| 1946—June 20..... | 120,050 | 1955..... | 57,468 | 1965..... | ² 39,125 |
| 1947—Dec. 20..... | 110,820 | 1956..... | 57,192 | 1966..... | 51,889 |
| 1948..... | 82,117 | 1957..... | 61,059 | | |
| | | | | 1967—Mar. 31..... | 55,059 |
| 1949..... | 67,165 | 1958..... | 51,515 | June 30..... | 54,584 |
| 1950..... | 56,629 | 1959..... | 50,223 | Sept. 30..... | 54,646 |
| 1951..... | 69,473 | 1960..... | 49,153 | Dec. 31..... | 53,066 |

¹ Employment affected by maritime strike, Atlantic, Gulf, and Pacific Coast ports.

² Decrease due to seafaring strike.

Source: Dept. of Commerce, Maritime Administration; unpublished data through 1955; beginning 1956, monthly data in *Maritime Manpower Report*.

No. 883. BASIC WAGE SCALE FOR ABLE-BODIED SEAMEN: 1935 TO 1968

[Represents basic wage, over and above subsistence (board and room), paid to seamen having qualifying experience and employed on U.S. flag merchant vessels. Excludes overtime and fringe pay benefits]

| MONTH ESTABLISHED | Monthly wage rate | AREA AND MONTH ESTABLISHED | Monthly wage rate | AREA AND MONTH ESTABLISHED | Monthly wage rate |
|------------------------------|-------------------|-----------------------------|-------------------|-----------------------------|-------------------|
| In effect, Jan. 1, 1935..... | \$55.00 | EAST COAST ¹ | | WEST COAST ¹ | |
| 1940—January..... | 72.50 | | | | |
| 1941—February..... | 90.00 | 1953—June..... | \$314.41 | 1953—June..... | \$314.41 |
| 1942—January..... | 100.00 | 1956—June..... | 333.27 | 1954—October..... | 302.00 |
| 1945—October..... | 145.00 | 1957—June..... | 353.27 | 1955—November..... | 423.00 |
| 1946—April..... | 162.50 | | | | |
| June..... | 172.50 | 1960—January..... | 369.17 | 1956—October..... | 453.00 |
| 1947—February..... | 182.85 | 1961—June..... | 383.94 | 1957—October..... | 478.00 |
| October..... | 197.50 | 1962—June..... | 392.58 | 1960—October..... | 511.50 |
| 1948—March..... | 210.00 | 1967—June..... | 422.58 | 1961—October..... | 521.50 |
| December..... | 226.00 | | | 1966—June..... | 558.00 |
| 1950—September..... | 248.50 | In effect Jan. 1, 1968..... | 422.58 | 1967—June..... | 577.50 |
| 1951—October..... | 288.00 | | | | |
| 1952—April..... | 302.40 | | | In effect Jan. 1, 1968..... | 577.50 |

¹ Seamen on both coasts receive extra pay for Saturdays and Sundays at sea. Beginning November 1955, West Coast incorporated this extra pay into base wages but East Coast did not.

Source: Dept. of Commerce, Maritime Administration; *Seafaring Wage Rates*, and unpublished data.

No. 884. U.S. MERCHANT MARINE—SUMMARY: 1930 TO 1965

[As of June 30 for 1930 to 1940; January 1, thereafter. Includes Puerto Rico, Guam, and Virgin Islands. Covers documented vessels of 5 net tons or more. See also *Historical Statistics, Colonial Times to 1967*, series Q 153-174]

| YEAR | NUMBER OF VESSELS | | | GROSS TONNAGE OF VESSELS (1,000) | | | | | | | |
|-------------------------|-------------------|-----------------|-----------|----------------------------------|-----------------|----------------------|------------------------|-------------------------|--------------------|---|-----------------------------------|
| | Total | Steam and motor | All other | Total | Major class | | | Material of which built | | Type of trade in which engaged ⁴ | |
| | | | | | Steam and motor | Sailing ¹ | Un-rigged ² | Wood | Other ³ | For- sign trade | Coast- wise and internal |
| 1930..... | 25,214 | 18,211 | 7,003 | 16,068 | 13,757 | 757 | 1,554 | 2,554 | 13,514 | 6,296 | 9,723 |
| 1935..... | 24,919 | 18,496 | 6,424 | 14,654 | 12,535 | 441 | 1,677 | 2,185 | 12,469 | 4,560 | 10,049 |
| 1940..... | 27,212 | 19,504 | 7,708 | 14,018 | 11,353 | 200 | 2,466 | 2,329 | 11,393 | 3,638 | 10,352 |
| 1945..... | 29,797 | 22,772 | 7,025 | 32,813 | 30,247 | 115 | 2,452 | 1,915 | 30,898 | 26,043 | 6,766 |
| 1950..... | 36,083 | 28,793 | 7,290 | 31,215 | 28,327 | 82 | 2,806 | 1,952 | 29,263 | 19,154 | 12,048 |
| 1955..... | 39,242 | 31,832 | 7,360 | 29,958 | 26,792 | 40 | 3,125 | 1,622 | 28,336 | 18,143 | 11,812 |
| 1958..... | 41,276 | 32,988 | 8,288 | 28,586 | 24,599 | 23 | 3,965 | 1,469 | 27,118 | 16,206 | 12,376 |
| 1959..... | 42,409 | 33,506 | 8,903 | 28,895 | 24,333 | 23 | 4,539 | 1,425 | 27,470 | 15,600 | 13,284 |
| 1960..... | 43,088 | 33,640 | 9,448 | 28,581 | 23,553 | 23 | 5,005 | 1,397 | 27,184 | 14,737 | 13,833 |
| 1961..... | 43,367 | 33,796 | 9,571 | 26,403 | 21,175 | 18 | 5,210 | 1,375 | 25,028 | 13,126 | 13,260 |
| 1962..... | 43,566 | 33,852 | 9,714 | 25,456 | 20,076 | 18 | 5,362 | 1,349 | 24,107 | 12,393 | 12,775 |
| 1963..... | 44,077 | 34,004 | 10,073 | 25,691 | 20,079 | 18 | 5,595 | 1,314 | 24,377 | 12,289 | 13,089 |
| 1964..... | 44,669 | 34,167 | 10,502 | 26,160 | 20,018 | 17 | 6,125 | 1,260 | 24,900 | 12,580 | 13,276 |
| 1965 ⁵ | 45,579 | 34,361 | 11,218 | 26,516 | 19,730 | 8 | 6,778 | 1,198 | 25,318 | 12,628 | 13,839 |

| AREA OF LOCATION | NUMBER OF VESSELS | | | | | GROSS TONNAGE OF VESSELS (1,000) | | | | |
|------------------------|-------------------|--------|--------|--------|--------|----------------------------------|--------|--------|--------|--------|
| | 1950 | 1955 | 1960 | 1964 | 1965 | 1950 | 1955 | 1960 | 1964 | 1965 |
| Total..... | 36,083 | 39,242 | 43,088 | 44,669 | 45,579 | 31,215 | 29,958 | 28,581 | 26,160 | 26,516 |
| Atlantic and Gulf..... | 21,623 | 23,355 | 24,963 | 25,651 | 26,087 | 20,420 | 20,402 | 18,926 | 17,077 | 17,074 |
| Pacific..... | 10,066 | 10,687 | 10,828 | 10,934 | 10,957 | 8,446 | 7,004 | 5,782 | 4,405 | 4,356 |
| Northern lakes..... | 2,026 | 2,005 | 1,950 | 1,973 | 1,951 | 1,628 | 1,590 | 1,728 | 1,858 | 1,878 |
| Western rivers..... | 2,368 | 3,195 | 5,347 | 6,111 | 6,584 | 721 | 962 | 2,145 | 2,820 | 3,208 |

¹ Vessels propelled wholly by sail. ² Vessels having no propelling power of their own.
³ Comprises iron, steel, composite, concrete, and aluminum. Beginning 1961, includes plastic (fiberglass).
For 1963, 1964, and 1965, steel amounted to 24,336,000, 24,860,000, and 25,279,000 tons, respectively.
⁴ Excludes vessels engaged in whale, cod, and mackerel fisheries.
⁵ Estimates for 1966 and 1967, respectively: Commercial documented vessels, 47,223 and 48,700; gross tonnage, 26,522,159 and 27,250,946.

Source: Dept. of Transportation, U.S. Coast Guard; annual report, *Merchant Marine Statistics*.

No. 885. U.S. MERCHANT MARINE—VESSELS, BY YEAR BUILT: 1965

[As of January 1. Includes Puerto Rico, Guam, and Virgin Islands. Covers documented vessels of 5 net tons or more]

| PERIOD BUILT | Number | Gross tons (1,000) | YEAR BUILT | | Gross tons (1,000) | YEAR BUILT | | Gross tons (1,000) |
|----------------|--------|--------------------|------------|-------|--------------------|------------|-------|--------------------|
| | | | Number | Year | | Number | Year | |
| Total..... | 45,579 | 26,516 | 1941..... | 844 | 379 | 1953..... | 1,278 | 658 |
| Unknown..... | 529 | 33 | 1942..... | 1,192 | 1,452 | 1954..... | 1,238 | 554 |
| | | | 1943..... | 1,721 | 2,918 | 1955..... | 1,272 | 449 |
| | | | 1944..... | 2,013 | 3,724 | 1956..... | 1,588 | 491 |
| 1840-1900..... | 467 | 106 | 1945..... | 1,753 | 3,837 | 1957..... | 1,812 | 701 |
| 1901-1905..... | 375 | 192 | 1946..... | 1,413 | 600 | 1958..... | 1,494 | 830 |
| 1906-1910..... | 621 | 598 | 1947..... | 1,313 | 286 | 1959..... | 1,378 | 843 |
| 1911-1915..... | 950 | 230 | 1948..... | 1,226 | 246 | 1960..... | 1,129 | 676 |
| 1916-1920..... | 1,234 | 309 | 1949..... | 1,050 | 238 | 1961..... | 1,016 | 668 |
| 1921-1925..... | 1,436 | 361 | 1950..... | 960 | 221 | 1962..... | 1,295 | 870 |
| 1926-1930..... | 2,720 | 492 | 1951..... | 1,062 | 344 | 1963..... | 1,496 | 991 |
| 1931-1935..... | 1,703 | 200 | 1952..... | 1,060 | 462 | 1964..... | 1,551 | 868 |
| 1936-1940..... | 3,390 | 661 | | | | | | |

Source: Dept. of Transportation, U.S. Coast Guard; annual report, *Merchant Marine Statistics*.

No. 886. U.S. MERCHANT MARINE—VESSELS, BY TYPE AND TONNAGE GROUP: 1965

[As of January 1. Includes Puerto Rico, Guam, and Virgin Islands. Covers documented vessels of 5 net tons or more]

| TONNAGE GROUP | ALL VESSELS | | STEAM | | MOTOR | | SAILING ¹ | | UNRIGGED ² | |
|----------------------------|-------------|--------------------|--------|--------------------|--------|--------------------|----------------------|--------------------|-----------------------|--------------------|
| | Number | Gross tons (1,000) | Number | Gross tons (1,000) | Number | Gross tons (1,000) | Number | Gross tons (1,000) | Number | Gross tons (1,000) |
| Total | 45,579 | 26,516 | 2,169 | 17,560 | 32,192 | 2,170 | 149 | 8 | 11,069 | 6,778 |
| 5 to 49 tons..... | 25,958 | 473 | 14 | (Z) | 25,171 | 452 | 134 | 2 | 639 | 18 |
| 50 to 99 tons..... | 4,369 | 305 | 23 | 2 | 3,907 | 270 | 6 | (Z) | 433 | 32 |
| 100 to 499 tons..... | 6,950 | 1,975 | 112 | 28 | 2,638 | 540 | 6 | 2 | 4,194 | 1,405 |
| 500 to 999 tons..... | 4,965 | 3,636 | 39 | 28 | 228 | 151 | 1 | 1 | 4,697 | 3,457 |
| 1,000 to 4,499 tons..... | 1,425 | 2,592 | 122 | 372 | 211 | 458 | 2 | 3 | 1,090 | 1,759 |
| 5,000 to 9,999 tons..... | 1,449 | 10,901 | 1,401 | 10,558 | 32 | 236 | - | - | 16 | 107 |
| 10,000 to 19,999 tons..... | 418 | 5,442 | 413 | 5,380 | 5 | 62 | - | - | - | - |
| 20,000 tons and over..... | 45 | 1,192 | 45 | 1,192 | - | - | - | - | - | - |

- Represents zero.

Z Less than 500 gross tons.

¹ Vessels propelled wholly by sail.

² Vessels having no propelling power of their own.

Source: Dept. of Transportation, U.S. Coast Guard; annual report, *Merchant Marine Statistics*.

No. 887. U.S. MERCHANT MARINE—VESSELS BUILT AND REMOVED: 1940 TO 1964

[Includes Puerto Rico, Guam, and Virgin Islands. Covers documented vessels of 5 net tons or more, both new and redocumented. Year shown is year of build of vessel, not necessarily year of documentation. See also *Historical Statistics, Colonial Times to 1957*, series Q 178-182]

| YEAR OF BUILD | VESSELS DOCUMENTED | | | | GROSS TONNAGE OF VESSELS REMOVED (1,000) | | | | |
|---------------|--------------------|-----------------------|-----------------|------------------------|--|--------------------|-----------------------------|----------------------|-----------|
| | Number | Gross tonnage (1,000) | | | Total | Lost and abandoned | Sold to aliens ³ | Out of documentation | All other |
| | | Total ¹ | Steam and motor | Un-rigged ² | | | | | |
| 1940..... | 705 | 447 | 386 | 61 | 1,697 | 274 | 1,114 | 62 | 246 |
| 1945..... | 1,744 | 6,314 | 6,259 | 55 | 901 | 138 | 75 | 42 | 646 |
| 1950..... | 861 | 194 | 103 | 91 | 1,238 | 163 | 488 | 411 | 176 |
| 1955..... | 1,116 | 400 | 117 | 283 | 866 | 63 | 418 | 208 | 176 |
| 1956..... | 1,385 | 446 | 152 | 293 | 890 | 60 | 274 | 435 | 122 |
| 1957..... | 1,582 | 585 | 249 | 336 | 1,625 | 33 | 579 | 728 | 285 |
| 1958..... | 1,390 | 837 | 406 | 431 | 961 | 35 | 87 | 694 | 144 |
| 1959..... | 1,180 | 792 | 386 | 406 | 1,448 | 58 | 50 | 1,264 | 75 |
| 1960..... | 949 | 629 | 352 | 277 | 3,065 | 55 | 249 | 2,585 | 175 |
| 1961..... | 877 | 620 | 389 | 231 | 1,966 | 54 | 456 | 1,260 | 195 |
| 1962..... | 1,175 | 821 | 420 | 402 | 947 | 45 | 261 | 322 | 319 |
| 1963..... | 1,365 | 943 | 460 | 482 | 801 | 69 | 234 | 180 | 327 |
| 1964..... | 1,551 | 868 | 266 | 602 | 885 | 59 | 336 | 122 | 368 |

¹ Includes small amount of tonnage for vessels propelled wholly by sail.

² Vessels having no propelling power of their own.

³ Beginning 1955, sold or transferred to aliens.

Source: Dept. of Transportation, U.S. Coast Guard; annual report, *Merchant Marine Statistics*.

Merchant Vessels

No. 888. UNITED STATES FLAG MERCHANT VESSELS, STEAM AND MOTOR: 1940 TO 1967

[Dead-weight tonnage in thousands. As of June 30, except as indicated. Covers oceangoing vessels of 1,000 gross tons and over engaged in foreign and domestic trade, and inactive vessels. Excludes special types and vessels employed on Great Lakes]

| YEAR AND TYPE OF VESSEL | ALL VESSELS | | ACTIVE VESSELS | | | | | | | | | | TEMPORARILY INACTIVE | | RESERVE FLEET | | SPECIAL SERVICE | | |
|-------------------------|-------------|--------|----------------|--------|----------------|--------|---------|-------|-------|-----------|------|--------------|----------------------|---------------|---------------|---------|-----------------|---------|------|
| | Num-ber | Tons | Foreign trade | | Domestic trade | | | | Total | Coastwise | | Intercoastal | | Noncontiguous | | Num-ber | Tons | Num-ber | Tons |
| | | | Num-ber | Tons | Num-ber | Tons | Num-ber | Tons | | Num-ber | Tons | Num-ber | Tons | Num-ber | Tons | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 1940 | 1,300 | 11,019 | 1,118 | 9,643 | 425 | 3,749 | 693 | 5,893 | 500 | 4,172 | 122 | 1,189 | 71 | 532 | 181 | 1,367 | 1 | 10 | |
| Combination..... | 140 | 873 | 112 | 696 | 66 | 514 | 46 | 182 | 36 | 129 | 1 | 8 | 9 | 45 | 28 | 176 | - | - | |
| Cargo..... | 790 | 6,020 | 641 | 4,882 | 291 | 2,443 | 2,438 | 2,438 | 188 | 988 | 109 | 1,093 | 53 | 417 | 148 | 1,129 | 1 | 10 | |
| Tanker..... | 370 | 4,126 | 365 | 4,065 | 68 | 791 | 297 | 3,273 | 276 | 3,054 | 12 | 148 | 9 | 70 | 5 | 62 | - | - | |
| 1946 (Sept. 30)..... | 4,852 | 50,283 | 2,332 | 25,399 | 1,890 | 20,592 | 442 | 4,807 | 297 | 3,480 | 54 | 563 | 91 | 757 | 533 | 4,998 | 16,138 | 430 | |
| Combination..... | 117 | 800 | 25 | 165 | 15 | 127 | 10 | 38 | - | - | - | - | 10 | 38 | 28 | 1,333 | 213 | 31 | |
| Cargo..... | 3,829 | 36,675 | 1,833 | 18,110 | 1,607 | 16,200 | 226 | 1,910 | 101 | 728 | 53 | 561 | 72 | 617 | 450 | 4,168 | 11,069 | 387 | |
| Tanker..... | 906 | 12,785 | 474 | 7,122 | 1,268 | 4,264 | 208 | 2,858 | 196 | 2,751 | 1 | 2 | 9 | 101 | 55 | 624 | 4,886 | 12 | |
| 1950 | 3,408 | 36,526 | 1,145 | 13,828 | 711 | 8,353 | 434 | 5,474 | 279 | 3,716 | 87 | 1,181 | 68 | 626 | 86 | 845 | 2,177 | 21,853 | |
| Combination..... | 83 | 659 | 51 | 417 | 45 | 389 | 6 | 28 | - | - | - | - | 6 | 28 | 4 | 27 | 28 | - | |
| Cargo..... | 2,946 | 28,927 | 682 | 7,075 | 505 | 5,367 | 177 | 1,708 | 66 | 559 | 58 | 649 | 53 | 500 | 42 | 384 | 2,122 | 21,468 | |
| Tanker..... | 479 | 6,959 | 412 | 6,335 | 161 | 2,597 | 251 | 3,737 | 213 | 3,157 | 29 | 482 | 9 | 98 | 40 | 434 | 27 | - | |
| 1955 | 3,235 | 35,017 | 1,026 | 12,872 | 601 | 6,992 | 425 | 5,880 | 271 | 3,999 | 75 | 996 | 79 | 885 | 89 | 1,099 | 1,983 | 137 | |
| Combination..... | 249 | 1,687 | 40 | 371 | 39 | 361 | 1 | 10 | - | - | - | - | 1 | 10 | 14 | 68 | 185 | 10 | |
| Cargo..... | 2,860 | 28,559 | 652 | 7,058 | 492 | 5,383 | 160 | 1,650 | 43 | 385 | 52 | 591 | 65 | 674 | 28 | 288 | 1,760 | 18,070 | |
| Tanker..... | 426 | 6,790 | 334 | 5,408 | 70 | 1,248 | 264 | 4,220 | 228 | 3,614 | 23 | 405 | 13 | 201 | 47 | 742 | 38 | 7 | |
| 1960 | 2,960 | 32,821 | 830 | 12,467 | 558 | 6,541 | 372 | 5,226 | 237 | 4,284 | 50 | 717 | 85 | 925 | 99 | 1,400 | 1,884 | 47 | |
| Combination..... | 308 | 2,044 | 86 | 310 | 84 | 205 | 4 | 4 | - | - | - | - | 2 | 14 | 4 | 31 | 265 | 1 | |
| Cargo..... | 2,228 | 23,015 | 627 | 6,854 | 470 | 5,265 | 148 | 1,529 | 35 | 375 | 39 | 442 | 74 | 773 | 36 | 376 | 1,536 | 28 | |
| Tanker..... | 428 | 7,762 | 267 | 5,295 | 45 | 972 | 222 | 4,323 | 202 | 3,910 | 11 | 275 | 9 | 138 | 60 | 993 | 1,062 | 18 | |
| 1967 | 2,209 | 26,560 | 693 | 10,691 | 460 | 6,037 | 283 | 4,654 | 142 | 3,383 | 33 | 619 | 58 | 704 | 63 | 837 | 1,039 | 414 | |
| Combination..... | 222 | 1,454 | 218 | 214 | 24 | 214 | 1 | 4 | 9 | 120 | 18 | 283 | 30 | 408 | 19 | 193 | 1,686 | 6 | |
| Cargo..... | 1,970 | 17,843 | 466 | 5,775 | 400 | 4,963 | 66 | 810 | 9 | 3,213 | 15 | 336 | 18 | 292 | 46 | 544 | 7,752 | 362 | |
| Tanker..... | 317 | 7,263 | 202 | 4,700 | 36 | 860 | 166 | 3,840 | 133 | 3,213 | 15 | 336 | 18 | 292 | 10 | 274 | 493 | 60 | |

- Represents zero.
 1 Includes ships originally constructed as cargo ships but converted to transports, hospital ships, etc., previously included in cargo classification as follows: 1955, 181 ships of 1,124,000 tons; 1960, 237 ships of 1,427,600 tons; 1967, 137 ships of 1,151,000 tons.
 Source: Dept. of Commerce, Maritime Administration: *Employment Report of United States Flag Merchant Fleet Ocean-going Vessels 1960 Gross Tons and Over*, June 1967, and unpublished data.

No. 889. MERCHANT VESSELS COMPLETED BY U.S. SHIPYARDS: 1930 TO 1967
 [Tons in thousands. Represents self-propelled steel vessels of 2,000 gross tons and over. Excludes Alaska and Hawaii]

| YEAR | ALL MERCHANT VESSELS | | PASSENGER-CARGO/ TRANSPORT | | | CARGO | | | TANKER | | |
|------|----------------------|------------|----------------------------|------------|------------------|--------|------------|------------------|--------|------------|------------------|
| | Number | Gross tons | Number | Gross tons | Dead-weight tons | Number | Gross tons | Dead-weight tons | Number | Gross tons | Dead-weight tons |
| 1930 | 18 | 164 | 5 | 50 | 39 | 2 | 16 | 24 | 11 | 97 | 161 |
| 1935 | 2 | 19 | - | - | - | - | - | - | 2 | 19 | 30 |
| 1940 | 53 | 445 | 6 | 69 | 61 | 31 | 227 | 335 | 16 | 149 | 238 |
| 1943 | 1,661 | 12,486 | 20 | 220 | 180 | 1,410 | 10,103 | 14,921 | 231 | 2,163 | 3,420 |
| 1944 | 1,463 | 11,403 | 48 | 461 | 330 | 1,175 | 8,455 | 11,858 | 240 | 2,486 | 3,955 |
| 1945 | 1,041 | 7,615 | 46 | 509 | 311 | 807 | 5,336 | 7,206 | 188 | 1,770 | 2,787 |
| 1950 | 26 | 405 | - | - | - | 3 | 27 | 44 | 23 | 378 | 609 |
| 1955 | 9 | 119 | - | - | - | 7 | 84 | 95 | 2 | 35 | 55 |
| 1960 | 26 | 410 | - | - | - | 15 | 154 | 163 | 11 | 276 | 456 |
| 1961 | 25 | 369 | - | - | - | 18 | 190 | 224 | 7 | 179 | 298 |
| 1962 | 27 | 392 | 1 | 14 | 10 | 23 | 265 | 303 | 3 | 113 | 186 |
| 1963 | 35 | 418 | 6 | 51 | 31 | 23 | 250 | 289 | 6 | 117 | 200 |
| 1964 | 15 | 213 | 1 | 14 | 9 | 10 | 104 | 123 | 4 | 95 | 166 |
| 1965 | 13 | 173 | - | - | - | 11 | 121 | 154 | 2 | 52 | 92 |
| 1966 | 13 | 146 | - | - | - | 12 | 125 | 161 | 1 | 21 | 36 |
| 1967 | 12 | 143 | - | - | - | 12 | 143 | 150 | - | - | - |

- Represents zero.

Source: 1930-1964, American Bureau of Shipping, New York, N.Y., annually in *The Bulletin*. Beginning 1965, Dept. of Commerce, Maritime Administration; annual report, *New Ship Construction*.

No. 890. SHIPBUILDING IN PRIVATE SHIPYARDS—SUMMARY: 1950 TO 1967

[Tons in thousands: Gross tons for commercial vessels, light displacement tons for naval vessels. Covers steel vessels of 1,000 tons or over]

| ITEM | 1950 | | 1960 | | 1965 | | 1966 | | 1967 | |
|-----------------------------|--------|------|--------|------|--------|------|--------|------|--------|-------|
| | Number | Tons |
| COMMERCIAL VESSELS | | | | | | | | | | |
| Under construction, Jan. 1 | 39 | 636 | 60 | 979 | 47 | 550 | 45 | 513 | 48 | 596 |
| Contracted for | 16 | 181 | 23 | 270 | 16 | 166 | 16 | 244 | 29 | 740 |
| Launched | 26 | 422 | 31 | 471 | 17 | 221 | 11 | 134 | 15 | 182 |
| Delivered | 26 | 415 | 25 | 404 | 18 | 203 | 13 | 161 | 13 | 162 |
| Under construction, Dec. 31 | 29 | 401 | 58 | 844 | 45 | 513 | 48 | 596 | 64 | 1,211 |
| NAVAL VESSELS | | | | | | | | | | |
| Under construction, Jan. 1 | 11 | 42 | 52 | 334 | 101 | 537 | 106 | 573 | 147 | 745 |
| Contracted for | - | - | 19 | 115 | 23 | 158 | 54 | 246 | 8 | 50 |
| Launched | - | - | 16 | 170 | 15 | 102 | 25 | 120 | 15 | 137 |
| Delivered | - | - | 12 | 39 | 18 | 122 | 13 | 74 | 21 | 109 |
| Under construction, Dec. 31 | 11 | 42 | 59 | 410 | 106 | 573 | 147 | 745 | 134 | 698 |

- Represents zero. ¹ Adjusted to account for major changes made during construction.

Source: Shipbuilders Council of America, Washington, D.C.; *Annual Report*, and unpublished data.

No. 891. VESSELS REPAIRED OR CONVERTED IN PRIVATE SHIPBUILDING AND SHIP REPAIR YARDS: 1950 TO 1967

| YEAR | TOTAL | | VESSELS UNDER 1,000 GROSS TONS | | VESSELS OVER 1,000 GROSS TONS | |
|------|------------------------------|---------|--------------------------------|---------|-------------------------------|---------|
| | Yards reporting ¹ | Vessels | Yards reporting | Vessels | Yards reporting | Vessels |
| 1950 | 118 | 33,287 | 111 | 17,993 | 80 | 15,294 |
| 1955 | 144 | 35,413 | 130 | 21,122 | 89 | 14,291 |
| 1960 | 159 | 37,774 | 132 | 24,991 | 93 | 12,783 |
| 1962 | 151 | 42,686 | 137 | 29,912 | 95 | 12,774 |
| 1963 | 139 | 39,990 | 129 | 27,804 | 102 | 12,186 |
| 1964 | 146 | 37,500 | 132 | 26,777 | 93 | 10,723 |
| 1965 | 136 | 35,600 | 117 | 22,900 | 93 | 12,700 |
| 1966 | 135 | 33,100 | 110 | 19,600 | 75 | 13,500 |
| 1967 | 123 | 35,800 | 106 | 23,100 | 83 | 12,700 |

¹ Not additive.

Source: Shipbuilders Council of America, Washington, D.C.; *Annual Report*, and unpublished data.

No. 892. MERCHANT VESSELS LAUNCHED AND OWNED—WORLD AND UNITED STATES: 1940 to 1967

[Vessels of 100 gross tons and over. Beginning 1945, excludes sailing ships, nonpropelled craft, and all ships built of wood]

| YEAR | WORLD | | | | UNITED STATES | | | |
|-----------|----------|--------------------|--------|--------------------|---------------|--------------------|--------|--------------------|
| | Launched | | Owned | | Launched | | Owned | |
| | Number | Gross tons (1,000) | Number | Gross tons (1,000) | Number | Gross tons (1,000) | Number | Gross tons (1,000) |
| 1940..... | 495 | 1,754 | (1) | (1) | 167 | 579 | (1) | (1) |
| 1945..... | 1,311 | 7,189 | (1) | (1) | 880 | 5,968 | (1) | (1) |
| 1950..... | 990 | 3,489 | 27,922 | 83,996 | 51 | 437 | 4,531 | 27,404 |
| 1955..... | 1,437 | 5,315 | 29,967 | 100,069 | 26 | 73 | 4,225 | 26,343 |
| 1960..... | 2,020 | 8,356 | 34,056 | 129,339 | 60 | 485 | 3,845 | 24,781 |
| 1963..... | 2,001 | 8,539 | 37,310 | 145,438 | 78 | 294 | 3,506 | 23,082 |
| 1964..... | 2,147 | 10,264 | 38,602 | 152,584 | 80 | 276 | 3,544 | 22,980 |
| 1965..... | 2,280 | 12,216 | 39,628 | 159,979 | 130 | 270 | 3,224 | 21,478 |
| 1966..... | 2,561 | 14,307 | 40,822 | 170,730 | 191 | 167 | 3,140 | 20,750 |
| 1967..... | 2,778 | 15,780 | 42,234 | 181,709 | 231 | 242 | 3,115 | 20,286 |

¹ Not recorded.

Source: Lloyd's Register of Shipping, London, England; Register Book, Statistical Tables.

No. 893. MERCHANT FLEETS OF THE WORLD, BY TYPE OF VESSEL AND COUNTRY OF REGISTRATION: 1966

[Vessels of 1,000 gross tons and over. As of December 31. Specified countries have 100 or more ships]

| COUNTRY OF REGISTRY | TOTAL | | COMBINATION PASSENGER AND CARGO | | FREIGHTERS | | BULK CARRIERS ¹ | | TANKERS | |
|-------------------------------------|---------------|---------------------|---------------------------------|---------------------|---------------|---------------------|----------------------------|---------------------|--------------|---------------------|
| | Number | Average age (years) | Number | Average age (years) | Number | Average age (years) | Number | Average age (years) | Number | Average age (years) |
| World total..... | 18,423 | 17 | 1,054 | 21 | 11,611 | 16 | 2,104 | 11 | 3,654 | 11 |
| United States..... | 2,278 | 21 | 227 | 22 | 1,673 | 22 | 59 | 22 | 319 | 18 |
| Privately owned..... | 965 | 19 | 27 | 16 | 606 | 19 | 57 | 22 | 275 | 17 |
| Government-owned..... | 1,313 | 23 | 200 | 23 | 1,067 | 24 | 2 | 23 | 44 | 24 |
| Foreign..... | 16,145 | 14 | 827 | 20 | 9,938 | 15 | 2,045 | 10 | 3,335 | 11 |
| Argentina..... | 153 | 23 | 17 | 19 | 75 | 23 | 4 | 34 | 62 | 24 |
| Australia..... | 105 | 14 | 5 | 14 | 43 | 15 | 45 | 14 | 12 | 11 |
| Brazil..... | 227 | 21 | 15 | 36 | 146 | 24 | 17 | 18 | 49 | 11 |
| British Colonies ² | 161 | 18 | 15 | 22 | 113 | 19 | 17 | 11 | 16 | 13 |
| China (Taiwan)..... | 119 | 20 | 4 | 26 | 106 | 20 | 1 | 27 | 8 | 17 |
| China (mainland)..... | 180 | 24 | 20 | 26 | 122 | 25 | 19 | 16 | 19 | 17 |
| Denmark..... | 342 | 10 | 20 | 22 | 246 | 10 | 19 | 8 | 57 | 6 |
| Finland..... | 225 | 16 | 8 | 35 | 165 | 14 | 18 | 22 | 34 | 13 |
| France..... | 537 | 12 | 42 | 16 | 283 | 13 | 58 | 10 | 154 | 11 |
| Germany (West)..... | 860 | 11 | 15 | 16 | 725 | 11 | 69 | 9 | 51 | 10 |
| Greece..... | 952 | 19 | 48 | 28 | 679 | 21 | 81 | 11 | 144 | 14 |
| India..... | 219 | 11 | 15 | 18 | 188 | 12 | 27 | 3 | 9 | 8 |
| Indonesia..... | 141 | 13 | 29 | 15 | 89 | 14 | 2 | 1 | 21 | 8 |
| Italy..... | 586 | 18 | 71 | 19 | 208 | 23 | 100 | 10 | 147 | 14 |
| Japan..... | 1,406 | 9 | 26 | 14 | 881 | 10 | 234 | 6 | 265 | 7 |
| Lebanon..... | 134 | 28 | - | (X) | 124 | 27 | 10 | 36 | - | (X) |
| Liberia..... | 1,429 | 14 | 12 | 23 | 521 | 19 | 330 | 11 | 566 | 11 |
| Netherlands..... | 469 | 11 | 36 | 19 | 311 | 11 | 34 | 7 | 88 | 8 |
| Norway..... | 1,356 | 10 | 29 | 13 | 616 | 12 | 256 | 6 | 455 | 15 |
| Panama..... | 571 | 23 | 18 | 30 | 376 | 26 | 37 | 23 | 140 | 12 |
| Philippines..... | 106 | 16 | 9 | 8 | 84 | 18 | 5 | 12 | 8 | 12 |
| Poland..... | 175 | 13 | 1 | 31 | 144 | 13 | 24 | 14 | 6 | 13 |
| Spain..... | 335 | 24 | 40 | 23 | 201 | 28 | 20 | 26 | 74 | 13 |
| Sweden..... | 433 | 11 | 9 | 28 | 265 | 13 | 85 | 9 | 74 | 7 |
| Turkey..... | 106 | 25 | 24 | 26 | 71 | 27 | 1 | 22 | 10 | 15 |
| United Kingdom..... | 1,985 | 12 | 111 | 17 | 1,154 | 12 | 297 | 10 | 423 | 10 |
| U.S.S.R..... | 1,843 | 12 | 67 | 22 | 895 | 12 | 119 | 11 | 262 | 8 |
| Yugoslavia..... | 181 | 14 | 15 | 15 | 140 | 15 | 13 | 9 | 13 | 11 |
| All others ³ | 1,304 | 14 | 106 | 21 | 927 | 14 | 103 | 13 | 188 | 14 |

- Represents zero. X Not applicable. ¹ Includes ore carriers and ore/oil carriers.

² Comprises Bahamas Islands, Bermuda, Borneo, Cayman Island, Gibraltar, Hong Kong, Kenya, and Singapore.

³ Includes countries with less than 100 merchant type ships of 1,000 gross tons and over.

Source: Dept. of Commerce, Maritime Administration; biennial report, *A Statistical Analysis of the World's Merchant Fleets*, December 1966.