# Table 2-1M. Weight of Shipments by Transportation Mode: 2007, 2011, and 2040' (millions of metric tonnes)

|                       |        | 2007     |                      |                      |        | 2011     |                      |                      |        | 2040     |                      |                      |  |
|-----------------------|--------|----------|----------------------|----------------------|--------|----------|----------------------|----------------------|--------|----------|----------------------|----------------------|--|
|                       | Total  | Domestic | Exports <sup>2</sup> | Imports <sup>2</sup> | Total  | Domestic | Exports <sup>2</sup> | Imports <sup>2</sup> | Total  | Domestic | Exports <sup>2</sup> | Imports <sup>2</sup> |  |
| Total                 | 17,127 | 15,288   | 594                  | 1,245                | 15,987 | 13,913   | 812                  | 1,261                | 25,874 | 20,951   | 2,388                | 2,535                |  |
| Truck                 | 11,592 | 11,418   | 86                   | 88                   | 10,253 | 10,038   | 97                   | 118                  | 17,042 | 16,405   | 334                  | 304                  |  |
| Rail                  | 1,723  | 1,583    | 56                   | 84                   | 1,719  | 1,538    | 98                   | 84                   | 2,513  | 1,979    | 352                  | 182                  |  |
| Water                 | 862    | 457      | 59                   | 346                  | 749    | 455      | 68                   | 225                  | 971    | 507      | 149                  | 315                  |  |
| Air, air & truck      | 12     | 2        | 4                    | 5                    | 15     | 2        | 4                    | 9                    | 48     | 6        | 18                   | 25                   |  |
| Multiple modes & mail | 1,283  | 380      | 353                  | 550                  | 1,468  | 371      | 496                  | 600                  | 3,243  | 586      | 1,403                | 1,255                |  |
| Pipeline              | 1,367  | 1,204    | 4                    | 159                  | 1,499  | 1,281    | 5                    | 213                  | 1,579  | 1,140    | 15                   | 424                  |  |
| Other & unknown       | 287    | 241      | 33                   | 13                   | 284    | 228      | 43                   | 12                   | 477    | 329      | 118                  | 31                   |  |

<sup>1</sup>Many 2007 and 2040 numbers in this table were revised as a result of Freight Analysis Framework (FAF) database improvements in FAF version 3.4. <sup>2</sup>Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.

Notes: 1 metric tonne = 1.1023 short tons. Numbers may not add to totals due to rounding.

The 2011 data are provisional estimates that are based on selected modal and economic trend data. All truck, rail, water, and pipeline movements that involve more than one mode, including exports and imports that change mode at international gateways, are included in multiple modes & mail to avoid double counting. As a consequence, rail and water totals in this table are less than other published sources.

| Millions of Metric To                   | nnes   | Billions of Dollars                 |        |  |  |  |
|---|--------|-------------------------------------|--------|--|--|--|
| Total, all commodities                  | 15,987 | Total, all commodities              | 16,804 |  |  |  |
| Gravel                                  | 1,462  | Machinery                           | 2,078  |  |  |  |
| Cereal grains                           | 1,428  | Electronics                         | 1,289  |  |  |  |
| Natural gas, coke, asphalt <sup>1</sup> | 1,367  | Motorized vehicles                  | 1,237  |  |  |  |
| Coal                                    | 1,282  | Mixed freight                       | 980    |  |  |  |
| Waste/scrap                             | 1,077  | Pharmaceuticals                     | 815    |  |  |  |
| Non-metallic mineral products           | 917    | Textiles/leather                    | 710    |  |  |  |
| Gasoline                                | 897    | Gasoline                            | 677    |  |  |  |
| Fuel oils                               | 725    | Misecllaneous manufactured products | 663    |  |  |  |
| Crude petroleum                         | 708    | Plastics/rubber                     | 611    |  |  |  |
| Other foodstuffs                        | 518    | Other foodstuffs                    | 589    |  |  |  |

<sup>1</sup>This group includes coal and petroleum products not elsewhere classified such as liquefied natural gas, coke, asphalt, and other products of coal and petroleum refining, excluding gasoline, aviation fuel, and fuel oil. **Note:** 1 metric tonne = 1.1023 short tons

 TABLE 2-1M. WEIGHT OF SHIPMENTS BY TRANSPORTATION MODE: 2007, 2011, AND 2040

 Source:
 U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 3.4, 2012.

TABLE 2-4M. Top Commodities: 2011 Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Managements and

Operations, Freight Analysis Framework, version 3.4, 2012.

|  | Valu        | ie      | Metric To | onnes   | Tonne-kild | ometers | Kilometers                          |
|--|-------------|---------|-----------|---------|------------|---------|-------------------------------------|
| <br>Transportation mode                | \$ Billions | Percent | Millions  | Percent | Billions   | Percent | Average<br>distance per<br>shipment |
| All modes, total                       | 1,448       | 100.0   | 2,024     | 100.0   | 472        | 100.0   | 154                                 |
| Single modes, total                    | 1,371       | 94.6    | 1,916     | 94.6    | 408        | 86.3    | 105                                 |
| Truck <sup>1</sup>                     | 837         | 57.8    | 1091      | 53.9    | 152        | 32.2    | 95                                  |
| For-hire                               | 359         | 24.8    | 449       | 22.2    | 92         | 19.6    | 344                                 |
| Private <sup>2</sup>                   | 478         | 33.0    | 642       | 31.7    | 59         | 12.6    | 51                                  |
| Rail                                   | 69          | 4.8     | 118       | 5.8     | 135        | 28.5    | 930                                 |
| Water                                  | 69          | 4.8     | 136       | 6.7     | 54         | 11.5    | 616                                 |
| Air                                    | 2           | 0.1     | S         | s       | S          | S       | 1,762                               |
| Pipeline <sup>3</sup>                  | 393         | 27.2    | 571       | 28.2    | S          | S       | S                                   |
| Multiple modes, total                  | 71          | 4.9     | 101       | 5.0     | 63         | 13.3    | 1,342                               |
| Parcel, U.S. Postal Service, or Courie | r 8         | 0.5     | <1        | <0.1    | <1         | <0.1    | 1,345                               |
| Other multiple modes                   | 28          | 1.9     | 51        | 2.5     | 25         | 5.3     | 375                                 |
| Unknown and other modes, total         | 7           | 0.5     | 8         | 0.4     | 2          | 0.5     | 93                                  |

## Table 2-5M. Hazardous Materials Shipments by Transportation Mode: 2007

Key: S = data are not published because of high sampling variability or other reasons.

'Truck as a single mode includes shipments that went by private truck only, for-hire truck only, or a combination of both. <sup>2</sup>Private truck refers to a truck operated by a temporary or permanent employee of an establishment or the buyer/receiver of the shipment.

<sup>3</sup>Excludes crude oil shipments.

Notes: 1 metric tonne = 1.1023 short tons; 1 tonne kilometer = 0.6849 ton miles. Numbers and percents may not add to totals due to rounding.

|              |                                 | Val         | ue      | Metric t | onnes   | Tonne-kilometers |         |  |
|--------------|---------------------------------|-------------|---------|----------|---------|------------------|---------|--|
| Hazard class | <br>Description                 | \$ Billions | Percent | Millions | Percent | Billions         | Percent |  |
| Class 1      | Explosives                      | 12          | 0.8     | 3        | 0.1     | <1               | <0.1    |  |
| Class 2      | Gases                           | 132         | 9.1     | 206      | 11.2    | 118              | 17.1    |  |
| Class 3      | Flammable liquids               | 1,170       | 80.8    | 1,443    | 78.6    | 387              | 56.3    |  |
| Class 4      | Flammable solids                | 4           | 0.3     | 17       | 0.9     | 12               | 1.7     |  |
| Class 5      | Oxidizers and organic peroxides | 7           | 0.5     | 12       | 0.7     | 15               | 2.2     |  |
| Class 6      | Toxic (poison)                  | 21          | 1.5     | 9        | 0.5     | 12               | 1.8     |  |
| Class 7      | Radioactive materials           | 21          | 1.4     | <1       | <0.1    | <1               | <0.1    |  |
| Class 8      | Corrosive materials             | 51          | 3.6     | 94       | 5.1     | 95               | 13.8    |  |
| Class 9      | Miscellaneous dangerous goods   | 30          | 2.1     | 52       | 2.8     | 49               | 7.1     |  |
| Total        |                                 | 1.448       | 100.0   | 1.836    | 100.0   | 688              | 100.0   |  |

Notes: 1 metric tonne = 1.1023 short tons; 1 tonne kilometer = 0.6849 ton miles. Numbers and percents may not add to totals due to rounding.



#### TABLE 2-5M. HAZARDOUS MATERIALS SHIPMENTS BY TRANSPORTATION MODE: 2007

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, 2007 Commodity Flow Survey, Hazardous Materials (Washington, DC: July 2010), table 1a, available at

www.bts.gov/publications/commodity\_flow\_survey/ as of August 5, 2012.

## 2-6M. HAZARDOUS MATERIALS SHIPMENTS BY HAZARD CLASS: 2007

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, 2007 Commodity Flow Survey, Hazardous Materials (Washington, DC: July 2010), table 1a, available at www.bts.gov/publications/commodity\_flow\_survey/ as of August 5, 2012.

# Table 2-7M. Domestic Mode of Exports and Imports by Tonnage and Value: 2007 and 2040<sup>1</sup>

|                               | Millions of Me   | etric Tonnes | Billions of 2007 Dollars |        |  |
|-------------------------------|------------------|--------------|--------------------------|--------|--|
|                               | 2007             | 2040         | 2007                     | 2040   |  |
| Total                         | 1,839            | 4,922        | 3,193                    | 12,134 |  |
| Truck <sup>2</sup>            | 680              | 2,145        | 1,968                    | 7,852  |  |
| Rail                          | 253              | 868          | 200                      | 573    |  |
| Water                         | 137              | 243          | 54                       | 94     |  |
| Air, air & truck <sup>3</sup> | 2                | 9            | 206                      | 892    |  |
| Multiple modes & mail         | <sup>1</sup> 135 | 462          | 278                      | 1,250  |  |
| Pipeline                      | 314              | 816          | 137                      | 350    |  |
| Other & unknown               | 47               | 152          | 220                      | 1,016  |  |
| No domestic mode <sup>5</sup> | 272              | 227          | 130                      | 108    |  |

<sup>1</sup>Many 2007 and 2040 numbers in this table were revised as a result of Freight Analysis Framework (FAF) improvements. The current version is now FAF 3.4. <sup>2</sup>Excludes truck moves to and from airports.

<sup>3</sup>Includes truck moves to and from airports.

<sup>4</sup>Multiple modes & mail includes U.S. Postal Service, courier shipments, and all inter-

modal combinations, except air and truck. In this table, oceangoing export and import shipments that move between ports and domestic locations by single modes are classified by the domestic mode rather than multiple modes & mail.

<sup>s</sup>No domestic mode includes waterborne import shipments of crude petroleum offloaded directly at the domestic destination (refineries) with no domestic mode of transportation.

**Notes:** 1 metric tonne = 1.1023 short tons. Numbers may not add to totals due to rounding.

## Table 2-9M. Value and Tonnage of U.S. Merchandise Trade with Canada and Mexico by Transportation Mode: 2000, 2005, 2010, and 2011 (billions of current U.S. dollars and millions of metric tonnes)

|                       | 20    | 000    | 2005  |        | 20    | 010    | 2011  |        |  |
|-----------------------|-------|--------|-------|--------|-------|--------|-------|--------|--|
| Mode                  | Value | Weight | Value | Weight | Value | Weight | Value | Weight |  |
| Truck <sup>1</sup>    | 429   | NA     | 491   | 173    | 557   | 170    | 626   | 189    |  |
| Rail <sup>1</sup>     | 94    | NA     | 116   | 128    | 131   | 122    | 152   | 129    |  |
| Air                   | 45    | <1     | 33    | <1     | 45    | <1     | 46    | <1     |  |
| Water                 | 33    | 176    | 58    | 232    | 81    | 190    | 108   | 171    |  |
| Pipeline <sup>1</sup> | 24    | NA     | 52    | 78     | 63    | 96     | 81    | 112    |  |
| Other <sup>1</sup>    | 29    | NA     | 39    | 5      | 40    | 8      | 46    | 12     |  |
| Total <sup>1</sup>    | 653   | NA     | 790   | 616    | 918   | 586    | 1058  | 612    |  |

### **Key:** NA = not available.

<sup>1</sup>The U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics estimated the weight of exports for truck, rail, pipeline, and other modes using weight-to-value ratios derived from imported commodities.

**Notes:** 1 metric tonne = 1.1023 short tons. Mode "Other" includes shipments transported by mail, other and unknown modes, and shipments through Foreign Trade Zones. Totals for the most recent year differ slightly from the Freight Analysis Framework due to variations in coverage and FAF conversion of values to constant dollars. Numbers may not add to totals due to rounding.

TABLE 2-7M. DOMESTIC MODE OF EXPORTS AND IMPORTS BY TONNAGE AND VALUE: 2007 AND 2040

**Source:** U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 3.4, 2012.

 TABLE 2-9M. VALUE AND TONNAGE OF U.S. MERCHANDISE TRADE WITH CANADA AND MEXICO BY TRANSPORTATION MODE: 2000, 2005, 2010, AND 2011

 Source:
 Truck, Rail, Pipeline, and Other: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, North American Transborder Freight Data, available at www.bts.gov/transborder as of June 14, 2012; Air and Water: U.S. Department of Commerce, Census Bureau, Foreign Trade Division, FT920 - U.S. Merchandise Trade: Selected Highlights (Washington, DC: annual issues).

|  | 1990      | 2000      | 2007      | 2008      | 2009      |
|--|-----------|-----------|-----------|-----------|-----------|
| Public roads, route kilometers                   | 6,222,926 | 6,358,386 | 6,515,164 | 6,532,576 | NA        |
| National Highway System (NHS)                    | N         | 417,439   | 263,511   | 264,075   | NA        |
| Interstates                                      | 72,536    | 75,109    | 75,529    | 75,657    | NA        |
| Other NHS  | N         | 184,287   | 187,982   | 188,418   | NA        |
| Other  | N         | 6,098,989 | 6,251,650 | 6,268,500 | NA        |
| Strategic Highway Corridor Network<br>(STRAHNET) | Ν         | 99,881    | 100,898   | 100,182   | NA        |
| Interstate                                       | N         | 75,113    | 75,534    | 75,657    | NA        |
| Non-Interstate                                   | N         | 24,765    | 25,798    | 24,525    | NA        |
| Railroad   | 283,085   | 274,400   | 225,513   | 224,213   | 223,878   |
| Class I  | 214,337   | 194,073   | 151,775   | 151,403   | 151,144   |
| Regional   | 29,570    | 33,759    | 27,245    | 26,859    | 20,605    |
| Local  | 39,165    | 46,567    | 46,493    | 45,951    | 52,129    |
| Inland waterways                                 |           |           |           |           |           |
| Navigable channels                               | 17,702    | 17,702    | 17,702    | 17,702    | 17,702    |
| Great Lakes-St. Lawrence Seaway                  | 3,769     | 3,769     | 3,769     | 3,769     | 3,769     |
| Pipelines  |           |           |           |           |           |
| Oil  | 335,938   | 284,834   | 267,353   | 278,404   | 275,713   |
| Gas  | 1,913,743 | 2,203,573 | 2,446,411 | 2,454,136 | 2,456,389 |

**Key:** N = not applicable; NA = not available.

Note: 1 kilometer = 0.6214 miles.

 TABLE 3-1M. KILOMETERS OF INFRASTRUCTURE BY TRANSPORTATION MODE: 1990, 2000, AND 2007-2009

 Sources:
 Public Roads:
 U.S. Department of Transportation, Federal Highway Administration, Highway Statistics

 (Washington, DC: annual issues), tables HM-16 and HM-49, available at
 www.fhwa.dot.gov/policyinformation/statistics/2009/ as of August 30, 2012. Rail: Association of American Railroads, Railroad Facts

 (Washington, DC: annual issues). Navigable channels:
 U.S. Army Corps of Engineers, A Citizen's Guide to the USACE, available at www.corpsreform.org/sitepages/downloads/CitzGuideChptr1.pdf as of August 30, 2012. Great Lakes-St. Lawrence

 Seaway:
 The St. Lawrence Seaway Development Corporation, "The Seaway," available at

www.greatlakes-seaway.com/en/seaway/facts/index.html as of August 30, 2012. **Oil pipelines: 1980-2000:** Eno Transportation Foundation, *Transportation in America*, 2002 (Washington, DC: 2002). **2001-2009:** U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety, *Pipeline Statistics*, available at www.phmsa.dot.gov/pipeline/library/data-stats as of August 30, 2012. **Gas pipelines:** American Gas Association, *Gas Facts* (Arlington, VA: annual issues).

# Table 3-6M. Top 25 Airports by Landed Weight of All-Cargo Operations: 2000 and 2007-2010<sup>1</sup>

|  | 2010 | Landed weight<br>(thousands of metric tonnes) |        |        |        |        |
|--|------|---|--------|--------|--------|--------|
| Airport  | Rank | 2000  | 2007   | 2008   | 2009   | 2010   |
| Memphis, TN (Memphis International)                                      | 1    | 5,732   | 8,865  | 8,845  | 8,586  | 8,865  |
| Anchorage, AK (Ted Stevens Anchorage International) <sup>2</sup>         | 2    | 7,334   | 9,582  | 8,143  | 7,042  | 8,829  |
| Louisville, KY (Louisville International-Standiford Field)               | 3    | 3,617   | 4,732  | 4,738  | 4,662  | 4,825  |
| Miami, FL (Miami International)  | 4    | 2,657   | 3,370  | 3,170  | 2,881  | 3,133  |
| Chicago, IL (O'Hare International)                                       | 5    | 1,871   | 1,997  | 1,908  | 1,588  | 2,221  |
| Indianapolis, IN (Indianapolis International)                            | 6    | 2,616   | 2,406  | 2,326  | 2,076  | 2,140  |
| Los Angeles, CA (Los Angeles International)                              | 7    | 2,624   | 3,113  | 2,609  | 1,709  | 1,794  |
| New York, NY (John F. Kennedy International)                             | 8    | 2,534   | 2,320  | 2,016  | 1,443  | 1,780  |
| Fort Worth, TX (Dallas/Fort Worth International)                         | 9    | 1,534   | 1,590  | 1,464  | 1,303  | 1,375  |
| Newark, NJ (Newark Liberty International)                                | 10   | 1,779   | 1,699  | 1,567  | 1,328  | 1,351  |
| Oakland, CA (Metropolitan Oakland International)                         | 11   | 1,643   | 1,643  | 1,580  | 1,217  | 1,201  |
| Atlanta, GA (William B. Hartsfield International)                        | 12   | 989   | 1,144  | 1,059  | 1,159  | 1,192  |
| Cincinatti, OH (Cincinatti/Northern Kentucky International) <sup>3</sup> | 13   | 827   | 88     | 94     | 512    | 1,103  |
| Ontario, CA (Ontario International)                                      | 14   | 1,107   | 1,265  | 1,225  | 1,060  | 1,017  |
| Honolulu, HI (Honolulu International)                                    | 15   | 628   | 1,029  | 936    | 926    | 963    |
| Philadelphia, PA (Philadelphia International)                            | 16   | 1,319   | 1,247  | 1,147  | 1,027  | 902    |
| Houston, TX (George Bush Intercontinental)                               | 17   | 435   | 698    | 684    | 711    | 692    |
| Seattle, WA (Seattle-Tacoma International)                               | 18   | 962   | 627    | 678    | 728    | 632    |
| San Francisco, CA (San Francisco International)                          | 19   | 1,149   | 943    | 703    | 678    | 591    |
| Denver, CO (Denver International)  | 20   | 816   | 582    | 567    | 566    | 562    |
| Phoenix, AZ (Sky Harbor International)                                   | 21   | 835   | 645    | 612    | 553    | 551    |
| Portland, OR (Portland International)                                    | 22   | 800   | 647    | 595    | 494    | 482    |
| Minneapolis, MN (Minneapolis-St Paul International/Wold-Chamberlain)     | 23   | 564   | 555    | 510    | 430    | 464    |
| Chicago/Rockford, IL (Chicago/Rockford International)                    | 24   | 593   | 669    | 644    | 512    | 416    |
| Seattle, WA (King County International)                                  | 25   | 388   | 366    | 379    | 406    | 411    |
| Top 25 airports <sup>4</sup>   |      | 47,520  | 52,359 | 48,645 | 43,684 | 47,492 |
| United States, all airports⁵   |      | 67,806  | 69,476 | 64,666 | 57,327 | 61,263 |
| Top 25 as % of U.S. total  |      | 70.1  | 75.4   | 75.2   | 76.2   | 77.5   |

<sup>1</sup>Dedicated to the exclusive transportation of cargo, all-cargo operations do not include aircraft carrying passengers that also may be carrying cargo. Aircraft landed weight is the certificated maximum gross landed weight of the aircraft as specified by the aircraft manufacturers. 2Anchorage includes a large share of all-cargo operations in-transit.

<sup>3</sup>The significant 2007 decrease in landed weight at Cincinnati/Northern Kentucky International Airport was due to a major reduction in DHL Airways' cargo operations, which have since rebounded.

<sup>4</sup>Airport rankings change each year. Totals represent the top 25 airports for each year, not necessarily the top 25 airports listed here for 2010.

<sup>5</sup>Limited to airports with an aggregate landed weight in excess of 100 million pounds (50,000 short tons) annually. **Notes:** 1 metric tonne = 1.1023 short tons.

TABLE 3-6M. TOP 25 AIRPORTS BY LANDED WEIGHT OF ALL-CARGO OPERATIONS: 2000 AND 2007-2010

**Source:** U.S. Department of Transportation, Federal Aviation Administration, Air Carrier Activity Information System (ACAIS) database, All-Cargo Data, available at www.faa.gov/airports/planning\_capacity/passenger\_allcargo\_stats/passenger/as of June 25, 2012.

|                                   | 198                   | 37                | 199                   | 92                | 1993                  | 7                 | 200                   | 2                 | Percent Cl<br>1987 to 2 | • •   |
|-----------------------------------|-----------------------|-------------------|-----------------------|-------------------|-----------------------|-------------------|-----------------------|-------------------|-------------------------|-------|
| <br>Average weight<br>(kilograms) | Number<br>(thousands) | VKT<br>(millions) | Number<br>(thousands) | VKT<br>(millions) | Number<br>(thousands) | VKT<br>(millions) | Number<br>(thousands) | VKT<br>(millions) | Number                  | vкт   |
| Total                             | 3,624                 | 144,789           | 4,008                 | 168,952           | 4,701                 | 237,972           | 5,415                 | 234,348           | 49.4                    | 61.9  |
| Light-heavy                       | 1,030                 | 17,328            | 1,259                 | 22,550            | 1,436                 | 31,888            | 1,914                 | 42,252            | 85.9                    | 143.8 |
| 4,536 to 6,350                    | 525                   | 8,754             | 694                   | 12,874            | 819                   | 18,509            | 1,142                 | 24,439            | 117.6                   | 179.2 |
| 6,351 to 7,257                    | 242                   | 4,407             | 282                   | 4,791             | 316                   | 6,359             | 396                   | 9,508             | 63.6                    | 115.8 |
| 7,258 to 8,845                    | 263                   | 4,168             | 282                   | 4,884             | 301                   | 7,020             | 376                   | 8,306             | 43.2                    | 99.3  |
| Medium-heavy                      | 766                   | 12,200            | 732                   | 13,103            | 729                   | 16,301            | 910                   | 18,934            | 18.8                    | 55.2  |
| 8,846 to 11,793                   | 766                   | 12,200            | 732                   | 13,103            | 729                   | 16,301            | 910                   | 18,934            | 18.8                    | 55.2  |
| Heavy-heavy                       | 1,829                 | 115,261           | 2,017                 | 133,299           | 2,536                 | 189,782           | 2,591                 | 173,161           | 41.7                    | 50.2  |
| 11,794 to 14,969                  | 377                   | 8,707             | 387                   | 9,163             | 428                   | 11,414            | 437                   | 9,407             | 15.9                    | 8.0   |
| 14,969 to 18,144                  | 209                   | 6,619             | 233                   | 8,505             | 257                   | 10,612            | 229                   | 6,066             | 9.7                     | -8.4  |
| 18,144 to 22,680                  | 292                   | 12,271            | 339                   | 15,484            | 400                   | 21,046            | 318                   | 10,778            | 9.0                     | -12.2 |
| 22,680 to 27,216                  | 188                   | 11,517            | 227                   | 13,998            | 311                   | 20,361            | 327                   | 14,404            | 73.8                    | 25.1  |
| 27,216 to 36,287                  | 723                   | 73,123            | 781                   | 82,143            | 1,070                 | 120,250           | 1,179                 | 124,701           | 63.1                    | 70.5  |
| 36,288 to 45,359                  | 28                    | 2,018             | 33                    | 2,460             | 46                    | 3,906             | 69                    | 4,747             | 144.3                   | 135.2 |
| 45,360 to 58,967                  | 8                     | 708               | 12                    | 1,181             | 18                    | 1,691             | 26                    | 2,528             | 238.5                   | 257.2 |
| 58,967 or more                    | 4                     | 298               | 5                     | 365               | 6                     | 502               | 6                     | 530               | 43.2                    | 77.9  |

# Table 3-7M. Trucks and Truck Kilometers by Average Weight: 1987, 1992, 1997, and 20021

Key: VKT = vehicle kilometers traveled.

Excludes trucks with an average weight of 4,536 kilograms (10,000 pounds) or less.

Notes: 1 kilometer = 0.6214 miles; 1 kilogram = 2.2046 pounds. Weight includes the empty weight of the vehicle plus the average weight of the load carried. Numbers may not add to totals due to rounding.

Table 3-10M. Trucks, Truck Kilometers, and Average Distance by Range of Operations and Jurisdictions: 2002

|                                   | Number of<br>Trucks<br>(thousands) | Truck<br>Kilometers<br>(millions) | Kilometers<br>per Truck<br>(thousands |
|-----------------------------------|------------------------------------|-----------------------------------|---------------------------------------|
| Total                             | 5,521                              | 233,622                           | 42                                    |
| Off the road                      | 183                                | 3,641                             | 20                                    |
| 50 miles or less                  | 2,942                              | 68,444                            | 23                                    |
| 51 to 100 miles                   | 685                                | 30,836                            | 45                                    |
| 101 to 200 miles                  | 244                                | 18,957                            | 78                                    |
| 201 to 500 miles                  | 232                                | 28,194                            | 122                                   |
| 501 miles or more                 | 293                                | 42,978                            | 147                                   |
| Not reported                      | 716                                | 40,330                            | 56                                    |
| Not applicable                    | 226                                | 241                               | 1                                     |
| Operated in Canada                | 2                                  | 116                               | 69                                    |
| Operated in Mexico                | 2                                  | 47                                | 30                                    |
| Operated within the home base sta | te 4,196                           | 136,746                           | 33                                    |
| Operated in states other than the |                                    |                                   |                                       |
| home base state                   | 496                                | 65,821                            | 133                                   |
| Not reported                      | 599                                | 30,650                            | 51                                    |
| Not applicable                    | 226                                | 241                               | 1                                     |

**Notes:** 1 kilometer = 0.6214 miles. Includes trucks registered to companies and individuals in the United States except pickups, minivans, other light vans, and sport utility vehicles..

## TABLE 3-7M. TRUCKS AND TRUCK KILOMETERS BY AVERAGE WEIGHT: 1987, 1992, 1997, AND 2002

**Source:** U.S. Department of Commerce, Census Bureau, 2002 Vehicle Inventory and Use Survey: United States, EC02TV-US (Washington, DC: 2004), available at www.census.gov/prod/ec02/ec02tv-us.pdf as of August 5, 2012; U.S. Department of Commerce, Census Bureau, *1992 Truck Inventory and Use Survey: United States*, TC92-T-52 (Washington, DC: 1995), available at www.census.gov/prod/ec97/97tv-us.pdf as of August 5, 2012.

# TABLE 3-10M. TRUCKS, TRUCK KILOMETERS, AND AVERAGE DISTANCE BY RANGE OF OPERATIONS AND JURISDICTIONS: 2002

**Source:** U.S. Department of Commerce, Census Bureau, *2002 Vehicle Inventory and Use Survey: United States*, EC02TV-US, Table 3a (Washington, DC: 2004), available at www.census.gov/prod/ec02/ec02tv-us.pdf as of August 5, 2012.

# Table 3-11M. Truck Kilometers by Products Carried: 2002<sup>1</sup>

| Products carried  | Millions of<br>kilometers |
|---|---------------------------|
| Fotal <sup>2</sup>  | 233,622                   |
| Animals and fish, live                                    | 1,182                     |
| Animal feed and products of animal origin                 | 3,360                     |
| Grains, cereal  | 2,201                     |
| All other agricultural products                           | 4,282                     |
| Basic chemicals   | 1,410                     |
| Fertilizers and fertilizer materials                      | 2,681                     |
| Pharmaceutical products                                   | 491                       |
| All other chemical products and preparations              | 2,174                     |
| Alcoholic beverages                                       | 1,808                     |
| Bakery and milled grain products                          | 5,717                     |
| Meat, seafood, and their preparations                     | 4,918                     |
| Tobacco products  | 717                       |
| All other prepared foodstuffs                             | 11,953                    |
| Logs and other wood in the rough                          | 1,849                     |
| Paper or paperboard articles                              | 5,052                     |
| Printed products  | 1,231                     |
| Pulp, newsprint, paper, paperboard                        | 3,115                     |
| Wood products   | 5,730                     |
| Articles of base metal                                    | 5,301                     |
| Base metal in primary or semifinished forms               | 4,637                     |
| Nometallic mineral products                               | 4,906                     |
| Tools, nonpowered   | 12,487                    |
| Tools, powered  | 10,424                    |
| Electronic and other electrical equipment                 | 4,866                     |
| Furniture, mattresses, lamps, etc.                        | 3,288                     |
| Machinery   | 5,190                     |
| Miscellaneous manufactured products                       | 6,449                     |
| Precision instruments and apparatus                       | 1,181                     |
| Textile, leather, and related articles                    | 2,475                     |
| Vehicles, including parts                                 | 6,186                     |
| All other transportation equipment                        | 1,024                     |
| Coal  | 484                       |
| Crude petroleum   | 212                       |
| Gravel or rushed stone                                    | 4,490                     |
| Metallic ores and concentrates                            | 73                        |
| Monumental or building stone                              | 744                       |
| Natural sands   | 1,753                     |
| All other nonmetallic minerals                            | 802                       |
| Fuel oils   | 1,983                     |
| Gasoline and aviation turbine fuel                        | 1,365                     |
| Plastic and rubber  | 3,850                     |
| All other coal and refined petroleum products             | 1,886                     |
| Hazardous waste (EPA manifest)                            | 306                       |
| All other waste and scrape (non-EPA manifest)             | 4,260                     |
| Recyclable products                                       | 1,484                     |
| Mail and courier parcels                                  | 7,660                     |
| Empty shipping containers                                 | 1,278                     |
| Passengers<br>Mixed trainbt                               | 440                       |
| Mixed freight   | 23,590                    |
| Products, equipment, or materials not elsewhere classifie |                           |
| Products not specified                                    | 10,232                    |
| Not applicable <sup>3</sup>                               | 241                       |
| No product carried  | 46,632                    |

<sup>1</sup>Excludes pickups, minivans, other light vans, and sport utility vehicles.

<sup>2</sup>Detail lines may not add to total because multiple products/hazardous materials may be carried at the same time.

3Vehicles not in use. When the respondent had partial-year ownership of the vehicle, annual miles were adjusted to reflect miles traveled when not owned by the respondent.

Note: 1 kilometer = 0.6214 miles.

## TABLE 3-11M. TRUCK KILOMETERS BY PRODUCTS CARRIED: 2002

**Source:** U.S. Department of Commerce, Census Bureau, *2002 Vehicle Inventory and Use Survey: United States*, EC02TV-US (Washington, DC: 2004), available at http://www.census.gov/prod/ec02/ec02tv-us.pdf as of August 5, 2012.

|   | 2007    | 2008    | 2009       | 2010    |
|---|---------|---------|------------|---------|
| Highway <sup>1</sup>                              |         |         |            |         |
| Gasoline, diesel and other fuels (million liters) | 666,929 | 646,349 | 636,412    | 642,238 |
| Truck, total                                      | 178,724 | 180,562 | (R)167,686 | 170,162 |
| Single-unit 2-axle 6-tire or more truck           | 61,750  | 64,888  | (R)61,516  | 57,047  |
| Combination truck                                 | 116,973 | 115,673 | (R)106,170 | 113,115 |
| Truck (percent of total)                          | 26.8    | 27.9    | (R)26.3    | 26.5    |
| Rail, Class I (in freight service)                |         |         |            |         |
| Distillate / diesel fuel (million liters)         | 15,375  | 14,709  | 12,082     | 13,225  |
| Water   |         |         |            |         |
| Residual fuel oil (million liters)                | 23,948  | 19,174  | 17,197     | 15,919  |
| Distillate / diesel fuel oil (million liters)     | 7,282   | 4,495   | 4,793      | 5,085   |
| Gasoline (million liters)                         | 4,625   | 4,301   | 4,278      | 4,417   |
| Pipeline  |         |         |            |         |
| Natural gas (million cubic meters)                | 17,595  | 18,348  | (R)18,977  | 18,940  |

Key: R = revised.

<sup>1</sup>Based on a new methodology, FHWA revised its annual vehicle miles travelled, number of vehicles, and fuel economy data beginning with 2007. Information on the new methodology is available at www.fhwa.dot.gov/policyinformation/statistics.cfm. Data in this table should not be compared to those in pre-2011 editions of *Freight Facts and Figures*.

Notes: 1 liter = 0.2642 gallons; 1 cubic meter = 35.3147 cubic feet.

### Table 5-9M. Single-Unit Truck Fuel Consumption and Travel: 2007-2010

|  | 2007    | 2008    | 2009       | 2010    |  |
|--|---------|---------|------------|---------|--|
| Number registered (thousands)              | 8,117   | 8,288   | 8,356      | 8,217   |  |
| Vehicle kilometers (millions)              | 193,079 | 204,144 | (R)193,445 | 178,104 |  |
| Fuel consumed (million liters)             | 61,750  | 64,888  | (R)61,516  | 57,047  |  |
| Average kilometers traveled per vehicle    | 23,788  | 24,631  | (R)23,150  | 21,675  |  |
| Average kilometers traveled per liter      | 3.1     | 3.1     | 3.1        | 3.1     |  |
| Average fuel consumed per vehicle (liters) | 7,608   | 7,827   | (R)7,362   | 6,942   |  |

Key: R = revised.

**Notes:** 1 kilometer = 0.6214 miles; 1 liter = 0.2642 gallons. Based on a new methodology, FHWA revised its annual vehicle miles travelled, number of vehicles, and fuel economy data beginning with 2007. Information on the new methodology is available at www.fhwa.dot.gov/policyinformation/statistics.cfm. Data in this table should not be compared

to those in pre-2011 editions of *Freight Facts and Figures*.

### TABLE 5-7M. FUEL CONSUMPTION BY TRANSPORTATION MODE: 2007-2010

Sources: Highway: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: annual issues), table VM-1. **Rail:** Association of American Railroads, *Railroad Facts* (Washington, DC: annual issues), p. 40. Water: U.S. Department of Energy, Energy Information Administration, *Fuel Oli and Kerosene Sales 2010* (Washington, DC: 2011), tables 2, 4, and similar tables in earlier editions; U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: annual issues), table MF-24, available at www.fhwa.dot.gov/policyinformation/statistics/2010/ as of July 20, 2012. **Pipeline:** U.S. Department of Energy, *Natural Gas Annual 2010*, (Washington, DC: December 2011), table 15 and similar tables in earlier editions.

#### TABLE 5-9M. SINGLE-UNIT TRUCK FUEL CONSUMPTION AND TRAVEL: 2007-2010

**Source:** U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: annual issues), table VM-1, available at www.fhwa.dot.gov/policyinformation/statistics/2010/ as of June 25, 2012.

# Table 5-10M. Combination Truck Fuel Consumption and Travel: 2007-2010

|  | 2007    | 2008    | 2009       | 2010    |
|--|---------|---------|------------|---------|
| Number registered (thousands)              | 2,635   | 2,585   | 2,617      | 2,553   |
| Vehicle kilometers traveled (millions)     | 296,426 | 295,826 | (R)270,518 | 283,088 |
| Fuel consumed (million liters)             | 116,973 | 115,673 | (R)106,170 | 113,115 |
| Average kilometers traveled per vehicle    | 112,481 | 114,429 | (R)103,365 | 110,890 |
| Average kilometers traveled per liter      | 2.5     | 2.6     | 2.5        | 2.5     |
| Average fuel consumed per vehicle (liters) | 44,387  | 44,743  | (R)40,567  | 44,309  |

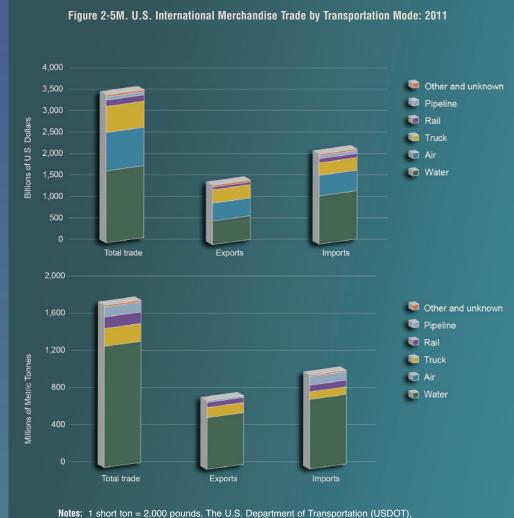
#### Key: R = revised.

**Notes:** 1 kilometer = 0.6214 miles; 1 liter = 0.2642 gallons. Based on a new methodology, FHWA revised its annual vehicle miles travelled, number of vehicles, and fuel economy data beginning with 2007. Information on the new methodology is available at

www.fhwa.dot.gov/policyinformation/statistics.cfm. Data in this table should not be compared to those in pre-2011 editions of *Freight Facts and Figures*.

 TABLE 5-10M. COMBINATION TRUCK FUEL CONSUMPTION AND TRAVEL: 2007-2010

 Source:
 U.S. Department of Transportation, Federal Highway Administration, Highway Statistics (Washington, DC: annual issues), table VM-1, available at www.fhwa.dot.gov/policyinformation/statistics/2010/ as of June 25, 2012.



Research and Innovative Technology Administration, Bureau of Transportation Statistics estimated 2011 weight data for truck, rail, pipeline, and other modes using value-to-weight ratios derived from imported commodities. Totals for the most recent year differ slightly from the USDOT, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework (FAF) due to variations in coverage and FAF conversion of values to constant dollars. Numbers may not add to totals due to rounding.

FIGURE 2-5M. U.S. INTERNATIONAL MERCHANDISE TRADE BY TRANSPORTATION MODE: 2011 Sources: Total, water and air data: U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, FT920 - U.S. Merchandise Trade: Selected Highlights (Washington, DC: February 2012). Truck, rail, and pipeline data: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transporation Statistics, North American Transborder Freight Data, available at www.bts.gov/transborder as of August 10, 2012. Other and unknown: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transporation Statistics, special tabulation, July 2012.