# APPENDIX A. SELECTED METRIC DATA

# Table 2-1M. Weight of Shipments by Transportation Mode: 2002, 2007, and 2035 (millions of metric tonnes)

	2002				2007				2035			
	Total Domestic Exports <sup>3</sup> Imports <sup>3</sup>			Total Domestic Exports <sup>3</sup> Imports <sup>3</sup>			Total	Domestic		Imports <sup>3</sup>		
Total	17,588	16,079	477	1,031	19,315	17,534	563	1,218	(R) 33,862	(R) 30,637	1,012	2,213
Truck	10,501	10,316	97	88	11,735	11,549	98	88	(R) 20,760	20,230	239	291
Rail	1,710	1,610	29	71	1,847	1,703	59	84	3,208	2,996	52	160
Water	638	541	57	40	627	523	52	52	948	795	104	49
Air, air & truck	10	3	3	5	13	4	4	5	56	9	12	35
Intermodal <sup>1</sup>	1,176	178	288	709	1,370	174	345	851	2,364	304	601	1,460
Pipeline & unknown <sup>2</sup>	3,554	3,432	4	118	3,723	3,580	6	138	6,526	6,303	5	219

#### Key: R = revised.

<sup>1</sup>Intermodal includes U.S. Postal Service and courier shipments and all intermodal combinations, except air and truck. Intermodal also includes oceangoing exports and imports that move between ports and interior domestic locations by modes other than water.

<sup>2</sup>Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

<sup>3</sup>Data do not include inbound and outbound shipments that pass through the United States from a foreign origin to a foreign destination by any mode. **Notes:** 1 metric tonne = 1.1 short tons. The 2007 data are provisional estimates, which are based on selected modal and economic trend data. Methods used to develop these estimates have improved over time, and as a consequence, previously released annual provisional estimates are superseded by the 2007 estimates in this table. Numbers may not add to totals due to rounding.

### Table 2-3M. Top Commodities: 2002

Metric Tonnes (mil	lions)	Value (\$ billions)				
Total	(R) 17,588	Total	(R) 13,228			
Natural gas & related <sup>1</sup>	(R) 2,445	Machinery	1,866			
Gravel	(R) 1,863	Electronics	948			
Cereal grains	(R) 1,211	Mixed freight	944			
Crude petroleum	(R) 1,169	Motorized vehicles	855			
Coal	(R) 1,148	Natural gas & related <sup>1</sup>	729			
Nonmetal mineral products	(R) 1,035	Textiles/leather	545			
Gasoline	(R) 992	Pharmaceuticals	519			
Waste/scrap	(R) 842	Unknown	458			
Fuel oils	(R) 509	Chemical products	444			
Natural sands	(R) 507	Miscellaneous manufactured products	411			

#### **Key:** R = revised.

<sup>1</sup>Natural gas, selected coal products, and products of petroleum refining, excluding gasoline, aviation fuel, and fuel oil.

**Note:** 1 metric tonne = 1.1 short tons.



#### TABLE 2-1M. WEIGHT OF SHIPMENTS BY TRANSPORTATION MODE: 2002, 2007, AND 2035

Source: 2002 and 2035: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, Version 2.2, 2007. 2007: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, 2007 provisional estimates, 2008.

#### TABLE 2-3M. TOP COMMODITIES: 2002

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 2.2, 2007.



	Val	ue	Metric tonnes		Tonne kilometers		Average distance per	
	US\$						shipment	
Transportation mode	Billions	Percent	Millions	Percent	Billions	Percent	(kilometers)	
TOTAL all modes	660.2	100.0	1,988.1	100.0	477.0	100.0	219	
Single modes, total	644.5	97.6	1,958.2	98.5	455.4	95.5	169	
Truck <sup>1</sup>	419.6	63.6	1,051.9	52.9	160.8	33.7	138	
For-hire	189.8	28.8	407.8	20.5	95.1	19.9	459	
Private <sup>2</sup>	226.7	34.3	637.0	32.0	64.4	13.5	61	
Rail	31.3	4.7	99.2	5.0	105.2	22.1	1,118	
Water	46.9	7.1	207.0	10.4	103.1	21.6	S	
Air	1.6	0.2	0.1	Z	0.1	Z	3,347	
Pipeline <sup>3</sup>	145.0	22.0	600.0	30.2	S	S	S	
Multiple modes, total	9.6	1.5	17.0	0.9	18.2	3.8	1,366	
Parcel, U.S. Postal Service, or courier	4.3	0.6	0.2	Z	0.2	Z	1,347	
Other	5.4	0.8	16.8	0.8	18.1	3.8	2,206	
Unknown and other modes, total	6.1	0.9	12.9	0.6	3.4	0.7	92	

### Table 2-4M. Hazardous Materials Shipments by Transportation Mode: 2002

**Key:** S = data are not published because of high sampling variability or other reasons; Z = zero or less than 1 unit of measure. <sup>1</sup>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 most shipments of crude oil.

Notes: 1 metric tonne = 1.1 short tons; 1 tonne kilometer = 0.7 ton miles. Numbers and percents may not add to totals due to rounding.

### Table 2-5M. Hazardous Materials Shipments by Hazard Class: 2002

		Value		Metric tonnes		Tonne kilometers	
Hazard Class	Description	\$ Billions	Percent	Millions	Percent	Billions	Percent
Class 1	Explosives	7.9	1.2	4.5	0.2	2.3	0.5
Class 2	Gases	73.9	11.2	193.6	9.7	54.4	11.4
Class 3	Flammable liquids	490.2	74.3	1,622.9	81.6	319.1	66.9
Class 4	Flammable solids	6.6	1.0	10.3	0.5	6.4	1.3
Class 5	Oxidizers and organic peroxides	5.5	0.8	11.5	0.6	6.2	1.3
Class 6	Toxics	8.3	1.3	7.7	0.4	6.2	1.3
Class 7	Radioactive materials	5.9	0.9	0.1	0.003	0.1	0.01
Class 8	Corrosive materials	38.3	5.8	82.3	4.1	52.9	11.1
Class 9	Miscellaneous dangerous good	s 23.6	3.6	55.4	2.8	29.4	6.2
Total		660.2	100.0	1,988.1	100.0	477.0	100.0

**Notes:** 1 metric tonne = 1.1 short tons; 1 tonne kilometer = 0.7 ton miles. Numbers and percents may not add to totals due to rounding.

### TABLE 2-4M. HAZARDOUS MATERIALS SHIPMENTS BY TRANSPORTATION MODE: 2002

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, 2002 Commodity Flow Survey, Hazardous Materials (Washington, DC: December 2004), table 1a, available at www.bts.gov/publications/commodity\_flow\_survey/2002/ united\_states/ as of September 23, 2008.

### TABLE 2-5M. HAZARDOUS MATERIALS SHIPMENTS BY HAZARD CLASS: 2002

Source: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics and U.S. Department of Commerce, Census Bureau, 2002 Commodity Flow Survey, Hazardous Materials (Washington, DC: December 2004), table 2a, available at www.bts.gov/publications/commodity\_flow\_survey/2002/united\_states/ as of September 23, 2008.

# Table 2-6M. Domestic Mode of Exports and Imports by Tonnage and Value: 2002 and 2035<sup>R</sup>

	Metric Tonnes	s (millions)	Value (\$ billions)		
	2002	2035	2002	2035	
Total	1,509	3,225	2,145	12,277	
Truck <sup>1</sup>	725	1,926	1,198	6,193	
Rail	182	361	114	275	
Water	97	153	26	49	
Air, air & truck <sup>2</sup>	8	49	614	5,242	
Intermodal <sup>3</sup>	20	46	52	281	
Pipeline & unknown <sup>4</sup>	477	692	141	238	

### Key: R = revised.

<sup>1</sup>Excludes truck moves to and from airports.

<sup>2</sup>Includes truck moves to and from airports.

<sup>3</sup>Intermodal includes U.S. Postal Service and courier shipments and all intermodal combi-

nations, except air and truck.

<sup>4</sup>Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

**Notes:** 1 metric tonne = 1.1 short tons. In this table, oceangoing exports and imports that move between ports and domestic locations by single modes are classified by the domestic mode rather than as intermodal.

# Table 2-8M. Value and Tonnage of U.S. Merchandise Trade with Canada and Mexico by Transportation Mode: 1998-2007

	1998			000	2	006	2007	
	Value	Weight	Value	Weight	Value	Weight	Value	Weight
	(current US\$	(millions of						
Mode	billions)	metric tonnes)						
Truck	350	NA	429	NA	534	NA	555	NA
Rail	68	NA	94	NA	129	NA	138	NA
Air	30	<1	45	<1	36	<1	38	<1
Water	21	166	33	176	70	(R) 228	74	219
Pipeline	11	NA	24	NA	57	NA	59	NA
Other	23	NA	29	NA	40	NA	44	NA
Total	503	NA	653	NA	865	NA	908	NA

**Key:** NA = not available; R = revised.

**Notes:** 1 metric tonne = 1.1 short tons. Numbers may not add to totals due to rounding. For value, "Other" is the difference between the total and the sum of the individual modes.

 TABLE 2-6M. DOMESTIC MODE OF EXPORTS AND IMPORTS BY TONNAGE AND VALUE: 2002 AND 2035

 Source:
 U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, Version 2.2, 2007.

 TABLE 2-8M.
 VALUE AND TONNAGE OF U.S.
 MERCHANDISE TRADE WITH CANADA AND MEXICO BY TRANSPORTATION MODE: 1998-2007

 Source:
 U.S.
 Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation

 Statistics, TransBorder Freight Data, March 2008.
 Statistics, TransBorder Freight Data, March 2008.



	1980	1990	2000	2006	Percent change, 1980-2006
Public roads, route kilometers	6,211,806	6,223,214	6,358,681	6,493,141	4.5
National Highway System (NHS)	Ν	Ν	259,409	263,182	N
Interstates	66,176	72,540	75,113	75,496	14.1
Other NHS	Ν	Ν	184,296	187,686	N
Other	Ν	N	6,099,272	6,229,958	N
Strategic Highway Corridor Network (STRAHNET)	Ν	Ν	99,886	99,768	N
Interstate	Ν	N	75,116	75,498	N
Non-Interstate	Ν	Ν	24,766	24,271	N
Railroad	294,634 <sup>1</sup>	283,098	274,412	225,286	-23.1
Class I	NA	214,347	194,082	152,630	N
Regional	NA	29,572	33,761	26,908	N
Local	NA	39,167	46,570	45,748	N
Inland waterways					
Navigable channels	17,703	17,703	17,703	17,710	0.0
Great Lakes-St. Lawrence Seaway	3,769	3,769	3,769	3,771	0.0
Pipelines					
Oil	351,469	335,954	284,847	272,647	-22.5
Gas	1,692,666	1,913,832	2,203,675	2,470,223	45.9

Table 3-1M. Kilometers of Infrastructure by Transportation Mode: 1980-2006

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

<sup>1</sup>Excludes Class III railroads.

**Note:** 1 kilometer = 0.6 miles.

# TABLE 3-1M. KILOMETERS OF INFRASTRUCTURE BY TRANSPORTATION MODE: 1980-2006

Sources: Public roads: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: annual issues), table HM-16 and HM-49. **Rail:** Association of American Railroads, *Railroad Facts* (Washington, DC: annual issues). **Navigable channels:** U.S. Army Corps of Engineers, *Corps Facts*, available at www.hq.usace.army.mil/cepa/pubs as of June 27, 2008. **Great Lakes-St. Lawrence Seaway:** The St. Lawrence Seaway Management Corporation, "The Seaway," available at www.greatlakes-seaway.com/en/seaway/facts/index.html as of November 28, 2008. **Oil pipelines:** 1980-2000: Eno Transportation Foundation, *Transportation in America*, 2002 (Washington, DC: 2002). **2006**: 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 November 28, 2008. **Gas pipelines:** American Gas Association, *Gas Facts* (Arlington, VA: annual issues).



# Table 3-3M. Trucks and Truck Kilometers by Average Weight: 1987-2002<sup>1</sup>

	198	37	199	02	199	17	200	2	Percent cha 1987-20	
Average weight	Number	VKT	Number	VKT	Number	VKT	Number	VKT		
(kilograms)	(thousands)	(millions)	(thousands)	(millions)	(thousands)	(millions)	(thousands)	(millions)	Number	VKT
Total	3,624	144,796	4,008	168,960	4,701	237,983	5,415	234,359	49	62
Light-heavy	1,030	17,329	1,259	22,551	1,436	31,890	1,914	42,254	86	144
4,536 to 6,350	525	8,754	694	12,875	819	18,510	1,142	24,440	118	179
6,351 to 7,257	242	4,407	282	4,791	316	6,359	396	9,508	64	116
7,258 to 8,845	263	4,168	282	4,885	301	7,021	376	8,306	43	99
Medium-heavy	766	12,200	732	13,104	729	16,302	910	18,935	19	55
8,846 to 11,793	766	12,200	732	13,104	729	16,302	910	18,935	19	55
Heavy-heavy	1,829	115,266	2,017	133,305	2,536	189,791	2,591	173,169	42	50
11,794 to 14,969	9 377	8,708	387	9,163	428	11,414	437	9,407	16	8
14,969 to 18,144	4 209	6,619	233	8,505	257	10,612	229	6,067	10	-8
18,144 to 22,680	0 292	12,271	339	15,485	400	21,047	318	10,779	9	-12
22,680 to 27,216	6 188	11,518	227	13,999	311	20,362	327	14,404	74	25
27,216 to 36,282	7 723	73,127	781	82,147	1,070	120,256	1,179	124,707	63	71
36,288 to 45,359	9 28	2,018	33	2,460	46	3,906	69	4,747	144	135
45,360 to 58,96	7 8	708	12	1,181	18	1,691	26	2,528	238	257
58,967 or more	4	298	5	365	6	502	6	530	43	78

Key: VKT = vehicle kilometers traveled.

<sup>1</sup>Excludes trucks with an average weight of 10,000 pounds or less.

Notes: 1 kilometer = 0.6 miles; 1 kilogram = 2.2 pounds. Weight includes the empty weight of the vehicle plus the average weight of the load carried.



Sources: U.S. Department of Commerce, Census Bureau, 2002 Vehicle Inventory and Use Survey: United States (Washington, DC: 2004), available at www.census.gov/svsd/www/vius/products.html as of April 24, 2008; U.S. Department of Commerce, Census Bureau, 1992 Truck Inventory and Use Survey: United States (Washington, DC: 1995), available at www.census.gov/svsd/www/vius/products.html as of April 24, 2008.







# Table 3-6M. Truck Kilometers by Products Carried: 2002<sup>1</sup>

Products carried	Millions of kilometers
Total <sup>2</sup>	233,728
Animals and fish, live	1,182
Animal feed and products of animal origin	3,360
Grains, cereal	2,202
All other agricultural products	4,283
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 products foodstuff	11,954
Logs and other wood in the rough	1,849
Paper or paperboard articles	5,053
Printed products	1,231
Pulp, newsprint, paper, paperboard	3,115
Wood products	5,731
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	10,425
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	1,366
Plastic and rubber	3,851
All other coal and refined petroleum products	1,886
Hazardous waste (EPA manifest)	306
All other waste and scrape (non-EPA manifest)	4,261
Recyclable products	1,484
Mail and courier parcels	7,660
Empty shipping containers	1,278
Passengers Mixed traight	440
Mixed freight	23,591
Products, equipment, or materials not elsewhere classified	
Products not specified	10,232
Not applicable <sup>3</sup>	241
No product carried	46,653

<sup>1</sup>Excludes pickups, panels, minivans, sport utilities, and station wagons.

<sup>2</sup>Detail lines may not add to total because multiple products/hazardous materials may be carried at the same time. <sup>3</sup>Vehicles 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 = 0.6 miles.

# TABLE 3-6M. 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 www.census.gov/prod/ec02/ec02tv-us.pdf as of April 24, 2008.

	Number of Trucks (thousands)	Truck Kilometers (millions)	Kilometers per Truck (thousands)
Total	5,520.5	233,632.5	42.3
Off the road	182.9	3,641.6	20.0
50 miles or less	2,942.4	68,447.2	23.3
51 to 100 miles	684.7	30,837.6	45.1
101 to 200 miles	243.5	18,957.9	77.9
201 to 500 miles	231.6	28,195.2	121.8
501 miles or more	293.0	42,979.8	146.8
Not reported	716.3	40,331.9	56.3
Not applicable	226.1	241.2	1.1
Operated in Canada	1.7	115.9	68.7
Operated in Mexico	1.6	47.2	29.8
Operated within the home base state	4,196.4	136,752.2	32.5
Operated in states other than the home base state	495.6	65,824.1	132.8
Not reported	599.1	30,651.7	51.2
Not applicable	226.1	241.2	1.1

### Table 3-7M. Trucks, Truck Kilometers, and Average Distance by Range of Operations and Jurisdictions: 2002

**Notes:** 1 kilometer = 0.6 miles. Includes trucks registered to companies and individuals in the United States except pickups, minivans, other light cars, and sport utility vehicles.





 TABLE 3-7M.
 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

	2006		Landed weight (thousands of metric tonnes)				
Airport	Rank	2000	2003	2004	2005	2006	
Anchorage, AK (Ted Stevens Anchorage International) <sup>2</sup>	1	7,333	8,171	8,930	9,402	9,605	
Memphis, TN (Memphis International)	2	5,732	7,946	8,060	8,476	8,550	
Louisville, KY (Louisville International-Standiford Field)	3	3,617	3,785	3,981	4,165	4,549	
Los Angeles, CA (Los Angeles International)	4	2,624	2,830	2,778	2,655	3,290	
Miami, FL (Miami International)	5	2,657	2,938	3,105	3,221	3,258	
Indianapolis, IN (Indianapolis International)	6	2,616	2,065	2,099	2,308	2,383	
New York, NY (John F. Kennedy International)	7	2,534	2,664	2,629	2,550	2,372	
Chicago, IL (O'Hare International)	8	1,870	2,133	2,140	2,188	2,003	
Newark, NJ (Newark Liberty International)	9	1,778	1,664	1,601	1,697	1,694	
Oakland, CA (Metropolitan Oakland International)	10	1,643	1,537	1,545	1,631	1,631	
Fort Worth, TX (Dallas/Fort Worth International)	11	1,534	1,344	1,298	1,501	1,562	
Ontario, CA (Ontario International)	12	1,107	1,213	1,203	1,219	1,271	
Philadelphia, PA (Philadelphia International)	13	1,319	1,238	1,244	1,271	1,236	
Atlanta, GA (William B. Hartsfield International)	14	989	1,083	1,054	919	1,070	
Honolulu, HI (Honolulu International)	15	628	923	880	751	888	
San Francisco, CA (San Francisco International)	16	1,149	1,089	671	723	752	
Portland, OR (Portland International)	17	800	679	651	677	662	
Phoenix, AZ (Sky Harbor International)	18	835	707	727	706	659	
Denver, CO (Denver International)	19	817	678	692	692	645	
Seattle, WA (Seattle-Tacoma International)	20	961	722	482	643	643	
Houston, TX (George Bush Intercontinental)	21	435	604	632	644	631	
Chicago/Rockford, IL (Chicago/Rockford International)	22	593	567	614	632	631	
Fort Worth, TX (Fort Worth Alliance)	23	461	316	339	454	584	
Minneapolis, MN (Minneapolis-St Paul International/Wold-Chamberlain)	24	564	623	615	637	562	
San Juan, PR (Luis Munoz Marin International)	25	440	591	410	567	550	
Top 25 airports <sup>3</sup>		(R) 47,517	(R) 48,938	(R) 49,463	(R) 50,760	51,683	
United States, all airports <sup>4</sup>		(R) 67,812	(R) 66,287	(R) 67,399	(R) 69,026	69,131	
Top 25 as % of U.S. total		(R) 70.1	(R) 73.8	73.4	73.5	74.8	

# Table 3-10M. Top 25 Airports by Landed Weight of All-Cargo Operations: 2000-2006<sup>1</sup>

### Key: R = revised.

'All-cargo operations are operations dedicated to the exclusive transportation of cargo. This does not include aircraft carrying passengers that may also be carrying cargo. Aircraft landed weight is the certificated maximum gross landed weight of the aircraft as specified by the aircraft manufacturers.

<sup>2</sup>Anchorage includes a large proportion of all-cargo operations in-transit.

<sup>3</sup>Airport rankings change each year. Totals represent the top 25 airports for each year, not necessarily the top 25 airports listed here for 2006. <sup>4</sup>Limited to airports with an aggregate landed weight in excess of 45.36 million kilograms (45,359 metric tonnes) annually. **Note:** 1 metric tonne = 1.1 short tons.

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 TABLE 3-10M. TOP 25 AIRPORTS BY LANDED WEIGHT OF ALL-CARGO OPERATIONS: 2000-2006

 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\_airtraffic/airports/planning\_capacity/ passenger\_allcargo\_stats/passenger/index as of May 29, 2008.

Table 5-7M. Fuel Consumption by Transportation Mode: 1980-2006

	1980	1990	2000	2005	2006
Highway			2000	2005	
Gasoline, diesel and other fuels (million liters)	436,848.0	496,869.0	617,709.0	(R) 664,190.6	664,734.0
Truck, total	75,848.0	93,062.0	133,870.2	(R) 141,322.0	144,088.4
Single-unit 2-axle 6-tire or more truck	26,307.4	31,756.6	36,339.4	(R) 36,103.8	37,403.4
Combination truck	49,540.6	61,305.4	97,530.8	(R) 105,218.2	106,685.0
Truck (percent of total)	17.4	18.7	21.7	(R) 21.3	21.7
Rail, Class I (in freight service)					
Distillate / diesel fuel (million liters)	14,835.2	11,837.0	14,060.0	15,572.4	15,929.6
Water					
Residual fuel oil (million liters)	34,017.6	24,038.8	24,358.0	19,680.2	21,865.2
Distillate / diesel fuel oil (million liters)	5,616.4	7,847.0	8,591.8	7,622.8	7,231.4
Gasoline (million liters)	3,997.6	4,940.0	4,271.2	4,791.8	4,700.6
Pipeline					
Natural gas (million cubic meters)	19,038.7	19,794.5	19,266.3	(R) 17,520.8	17,534.9

Key: R = revised.

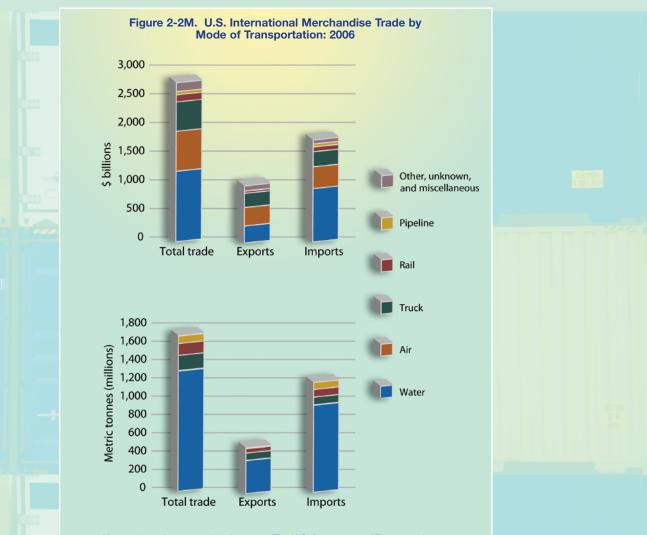
**Notes:** 1 liter = 0.3 gallons; 1 cubic meter = 33.3 cubic feet. Table 5-7M was updated in January 2009 and differs from the print version published November 2008.

TABLE 5-7M. FUEL CONSUMPTION BY TRANSPORTATION MODE: 1980-2006

Sources: Highway: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2006* (Washington, DC: 2006), table VM-1 and similar tables in earlier editions. Rail: Association of American Railroads, *Railroad Facts* (Washington, DC: annual issues), p. 40. Water: U.S. Department of Energy, Energy Information Administration, *Fuel Oil and Kerosene Sales 2006* (Washington, DC: 2007), tables 2, 4, and similar tables in earlier editions. Pipeline: U.S. Department of Energy, *Natural Gas Annual 2006*, DOE/EIA-0131(04) (Washington, DC: January 2008), table 15 and similar tables in earlier editions.







**Notes:** 1 metric tonne = 1.1 short tons. The U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics estimated 2006 data using value-to-weight ratios derived from imported commodities. The U.S. Census Bureau no longer requires these data to be reported. Totals for the most recent year differ slightly from the Freight Analysis Framework due to variations in base year and coverage of methods for calculating values in constant dollars.

FIGURE 2-2M. U.S. INTERNATIONAL MERCHANDISE TRADE BY MODE OF TRANSPORTATION: 2006

Sources: Compiled by U.S. Department of Transportation (USDOT), Research and Innovative Technology Administration (RITA), Bureau of Transportation Statistics (BTS), October 2007. Total, water, and air data: U.S. Department of Commerce, Census Bureau, Foreign Trade Division, FT920 U.S. Merchandise Trade: Selected Highlights, December 2006. Truck, rail, pipeline data: USDOT, RITA, BTS, TransBorder Freight Data, 2006. Other, unknown, and miscellaneous data: USDOT, RITA, BTS, special tabulation, October 2007.



# Table 5-8M. Single-Unit Truck Fuel Consumption and Travel: 1980-2006

	1980	1990	2000	2005	2006
Number registered (thousands)	4,374	4,487	5,926	6,395	6,649
Vehicle kilometers (millions)	64,073	83,527	113,459	(R) 126,327	129,280
Fuel consumed (million liters)	26,206	31,635	36,200	(R) 35,966	37,261
Average kilometers traveled per vehicle	14,649	18,615	19,146	(R) 19,753	19,443
Average kilometers traveled per liter	2.4	2.6	3.1	(R) 3.5	3.5
Average fuel consumed per vehicle (liter)	5,992	7,050	6,109	(R) 5,624	5,604

Key: R = revised.

**Notes:** 1 kilometer = 0.6 miles; 1 liter = 0.3 gallons.

# Table 5-9M. Combination Truck Fuel Consumption and Travel: 1980-2006

	1980	1990	2000	2005	2006
Number registered (thousands)	1,417	1,709	2,097	2,087	2,170
Vehicle kilometers traveled (millions)	110,527	151,827	217,294	(R) 231,791	229,663
Fuel consumed (million liters)	49,350	61,070	97,155	(R) 104,813	106,274
Average kilometers traveled per vehicle	78,008	88,845	103,640	(R) 111,077	105,852
Average kilometers traveled per liter	2.2	2.5	2.2	(R) 2.2	2.2
Average fuel consumed per vehicle (liters)	34,831	35,737	46,339	(R) 50,228	48,982

**Key:** R = revised.

Notes: 1 kilometer = 0.6 miles; 1 liter = 0.3 gallons.

 TABLE 5-8M. SINGLE-UNIT TRUCK FUEL CONSUMPTION AND TRAVEL: 1980-2006

 Source:
 U.S. Department of Transportation, Federal Highway Administration, Highway Statistics (Washington, DC: annual issues), table VM-1 and similar tables in earlier editions.

 TABLE 5-9M. COMBINATION TRUCK FUEL CONSUMPTION AND TRAVEL: 1980-2006

 Source:
 U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics* (Washington, DC: annual issues), table VM-1 and similar tables in earlier editions.



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