## Iowa <br> Transportation Profile



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## Iowa Fast Facts 2000

## Transportation System Extent

All public roads: 113,377 miles
Interstate: 782 miles
Road bridges: 24,632
Class I railroad trackage: 2,431 miles
Inland waterways: 492 miles
Public use airports: 122 ( 10 certificated for air carrier operations $)^{1}$

## Vehicles and Conveyances

Automobiles registered: 1.8 million
Light trucks registered: 1.1 million
Heavy trucks registered: 63,000
Buses registered: 8,200
Motorcycles registered: 127,000
Numbered boats: 224,000

## Geographic

Land area: 55,869 sq. miles (rank: 23)
Percent of land area owned by federal government: $0.5^{2}$ (rank: 48)
Persons per square mile: 52.4 (rank: 33)
Highest point: Osceola County ( $1,670 \mathrm{ft}$.)
Lowest point: Mississippi River ( 480 ft .)
'2002
${ }^{2} 1999$
${ }^{3} 1997$
${ }^{4}$ Apportionment based on 2000 census ${ }^{5} 1990$

## Political Subdivisions

Counties: 99
Municipal governments: $950^{3}$
Congressional districts: $5^{4}$

## Demographic

Population: 2,926,324 (rank: 30)
Percent urban population: $61^{5}$ (rank: 36)

## Socioeconomic

Gross state product: $\$ 85$ billion $^{2}$ (rank: 30)
Civilian labor force: 1.6 million $^{2}$ (rank: 30)
Median household income: $\$ 42,993$
(rank: 21)

## Commuting (percent of workers)

Car, truck, or van-drove alone: 79.6
Car, truck, or van-carpooled: 10.8
Public transportation (including taxi): 0.8
Walked: 3.5
Other means: 1.0
Worked at home: 4.3
State Transportation Department
Iowa Department of Transportation
800 Lincoln Way
Ames, IA 50010
(515) 239-1101
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The Bureau of Transportation Statistics (BTS) presents a profile of transportation in Iowa-part of a series covering the 50 states and the District of Columbia. This collection of transportation information from BTS, other federal government agencies, and other national sources provides a picture of the state's infrastructure, freight movement and passenger travel, safety, vehicles, economy and finance, and energy and environment.

All tables do not necessarily appear in every state profile report due to geographic and other characteristics. For example, border-crossing data are given only for states bordering Canada and Mexico. Data source and accuracy profiles are provided at the end of the report.

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A Infrastructure

Table 1-1: lowa Public Road Length, Miles by Functional System

|  | 1995 | 1996 | 1997 | 1998 | 1999 | $\mathbf{2 0 0 0}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Total rural and urban | 112,702 | 112,708 | 112,804 | 112,810 | 112,904 | 113,377 |
| Rural |  |  |  |  |  |  |
| $\quad$ Interstate | 103,365 | 103,359 | 103,383 | 103,346 | 103,385 | 103,513 |
| Other principal arterial | 634 | 634 | 635 | 635 | 635 | 635 |
| Minor arterial | 3,405 | 3,413 | 3,418 | 3,428 | 3,460 | 3,486 |
| Major arterial | 3,954 | 3,953 | 3,953 | 3,956 | 3,955 | 3,957 |
| Minor collector | 14,294 | 14,294 | 14,300 | 14,297 | 14,303 | 14,311 |
| Local | 16,263 | 16,263 | 16,259 | 16,261 | 16,256 | 16,262 |
|  | 64,815 | 64,802 | 64,818 | 64,769 | 64,776 | 64,862 |
| Urban |  |  |  |  |  |  |
| Interstate | 9,337 | 9,349 | 9,421 | 9,464 | 9,519 | 9,864 |
| Other freeways and expressways | 147 | 147 | 147 | 147 | 147 | 147 |
| Other principal arterial | 0 | 0 | 0 | 0 | 0 | 0 |
| Minor arterial | 697 | 707 | 717 | 717 | 716 | 717 |
| Collector | 1,356 | 1,356 | 1,358 | 1,364 | 1,364 | 1,378 |
| Local | 931 | 931 | 942 | 948 | 944 | 955 |

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Washington, DC: annual editions, table HM-20, available at http://www.fhwa.dot.gov/ohim/hs00/hm20.htm as of Feb. 1, 2002.

Table 1-2: Iowa Public Road Length, Miles by Ownership: 2000

|  | National <br> Highway <br> System | Other <br> federal-aid <br> highway | Nonfederal- <br> aid highway | Total |
| :--- | ---: | ---: | :---: | ---: | ---: |
| Total | 3,162 | 22,424 | 87,791 | 113,377 |
| State highway agency | 3,140 | 6,558 | 546 | 10,244 |
| County | Z | 13,301 | 75,865 | 89,166 |
| Town, township, municipal | 22 | 2,565 | 11,274 | 13,861 |
| Other jurisdiction $^{\text {' }}$ | Z | Z | 2 | 2 |
| Federal agency $^{2}$ | Z | Z | 104 | 104 |

${ }^{1}$ Includes state park, state toll, other state agency, other local agency, and roadways not identified by ownership.
${ }^{2}$ Roadways in federal parks, forests, and reservations that are not part of the state and local highway systems.

KEY: $\mathrm{Z}=$ zero or less than 1 unit of measure.
SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Washington, DC: annual editions, table HM-14, available at http://www.fhwa.dot.gov/ohim/hs00/hm14.htm as of Feb. 1, 2002.

Table 1-3: lowa Toll Bridges and Ferries: 2001

| Facility | Financing or operating authority | Location | Length in miles | Toll collection direction | Electronic collection system |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Noninterstate |  |  |  |  |  |
| Rock Island Centennial | IL Centennial Bridge Commission Rock Island, IL | From Davenport, IA to Rock Island, IL | 0.7 | Both ways | No |
| Fort Madison | Sante Fe Railroad Co.; Topeka, KS | From Fort Madison, IA to Niota, IL | 0.6 | Both ways | No |
| St. Francisville | Wayland Special Road District | From Vincennes, IA to St. Francisville, MO | 0.3 | Both ways | No |
| Bellevue | City of Bellevue, NE Bridge Commission | From State Route 370, IA to Bellevue, NE | 0.4 | Both ways | No |
| Decatur | Burt County, NE Bridge Commission | From Onawa, IA to Decatur, NE | 1.0 | Both ways | No |
| Plattsmouth | Plattsmouth, NE Bridge Commission | From Mills County, IA to Plattsmouth, NE | 0.2 | Both ways | No |
| Vehicular toll ferries |  |  |  |  |  |
| Cassville Car Ferry | Cassville Village, WI | From Millville, IA to Cassville, WI | U | Both ways | No |

KEY: $\mathrm{U}=$ data are unavailable.
SOURCE: U.S. Department of Transportation, Federal Highway Administration, Toll Facilities in the United States: Bridges-Roads-TunnelsFerries, Washington, DC: June 2001, available at http://www.fhwa.dot.gov/ohim/tollpage.htm as of Feb. 18, 2002.

Table 1-4: Iowa Road Condition by Functional System -- Rural (Miles)

|  | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Interstate (total reported) | 618 | 633 | 625 | 635 | 633 | 635 |
| Very good | 26 | 34 | 50 | 61 | 101 | 67 |
| Good | 258 | 238 | 331 | 323 | 308 | 281 |
| Fair | 192 | 234 | 179 | 203 | 190 | 164 |
| Mediocre | 139 | 122 | 65 | 47 | 33 | 123 |
| Poor | 3 | 5 | 0 | 1 | 1 | 0 |
| Not reported | 16 | 1 | 9 | 0 | 1 | 0 |
| Other principal arterial (total reported) |  | 3,147 | 3,248 | 3,279 | 3,298 | 3,272 |
| Very good | 174 | 226 | 202 | 322 | 443 | 369 |
| Good | 802 | 841 | 994 | 1,125 | 1,065 | 1,142 |
| Fair | 1,866 | 1,809 | 1,676 | 1,467 | 1,413 | 1,470 |
| Mediocre | 298 | 370 | 354 | 315 | 286 | 324 |
| Poor | 7 | 2 | 53 | 69 | 65 | 40 |
| Not reported | 258 | 165 | 139 | 131 | 187 | 142 |
|  |  |  |  |  |  |  |
| Minor arterial (total reported) | 3,601 | 3,727 | 3,713 | 3,569 | 3,571 | 3,584 |
| Very good | 152 | 406 | 317 | 554 | 528 | 817 |
| Good | 766 | 691 | 805 | 830 | 839 | 760 |
| Fair | 2,033 | 2,069 | 1,938 | 1,585 | 1,586 | 1,424 |
| Mediocre | 592 | 504 | 538 | 481 | 489 | 444 |
| Poor | 58 | 57 | 115 | 119 | 129 | 139 |
| Not reported | 353 | 226 | 241 | 386 | 384 | 373 |
| Major collector (total reported) |  |  |  |  |  |  |
| Very good | N | N | N | N | N | 911 |
| Good | N | N | N | N | N | 84 |
| Fair | N | N | N | N | N | 227 |
| Mediocre | N | N | N | N | N | 442 |
| Poor | N | N | N | N | N | 55 |
| Not reported | N | N | N | N | N | 103 |

KEY: $\mathrm{N}=$ data do not exist.
NOTE: In 2000, the Federal Highway Administration began reporting road condition for rural major collectors using the International Roughness Index, if available. In prior years, data were only available using the Present Serviceability Rating.

Figure 1-1: Rural Road Conditions in lowa: 2000


NOTE FOR DATA ON THIS PAGE: Road condition is based on measured pavement roughness using the International Roughness Index (IRI). IRI is a measure of surface condition. A comprehensive measure of pavement condition would require data on other pavement distresses such as rutting, cracking, and faulting.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Washington, DC: annual editions, tables HM-63 and HM-64, available at http://www.fhwa.dot.gov/ as of Feb. 1, 2002.

Table 1-5: lowa Road Condition by Functional System -- Urban (Miles)

|  | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interstate (total reported) | 113 | 145 | 134 | 147 | 147 | 147 |
| Very good | 0 | 0 | 0 | 0 | 2 | 4 |
| Good | 28 | 32 | 48 | 50 | 48 | 44 |
| Fair | 37 | 39 | 41 | 32 | 36 | 36 |
| Mediocre | 56 | 59 | 27 | 44 | 40 | 47 |
| Poor | 12 | 15 | 18 | 21 | 21 | 16 |
| Not reported | 14 | 2 | 13 | 0 | 0 | 0 |
| Other freeways and expressways (total reported) | 0 | 0 | 0 | 0 | 0 | 0 |
| Very good | 0 | 0 | 0 | 0 | 0 | 0 |
| Good | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Mediocre | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not reported | 0 | 0 | 0 | 0 | 0 | 0 |
| Other principal arterial (total reported) | 247 | 273 | 550 | 606 | 603 | 631 |
| Very good | 9 | 12 | 11 | 11 | 62 | 17 |
| Good | 41 | 53 | 89 | 117 | 110 | 134 |
| Fair | 162 | 171 | 277 | 308 | 265 | 290 |
| Mediocre | 35 | 31 | 102 | 85 | 82 | 93 |
| Poor | 0 | 6 | 71 | 85 | 84 | 97 |
| Not reported | 450 | 434 | 167 | 110 | 112 | 86 |
| Urban minor arterial (total reported) | N | N | N | N | N | 85 |
| Very good | N | N | N | N | N | 4 |
| Good | N | N | N | N | N | 19 |
| Fair | N | N | N | N | N | 39 |
| Mediocre | N | N | N | N | N | 13 |
| Poor | N | N | N | N | N | 10 |
| Not reported | N | N | N | N | N | N |
| Urban collector (total reported) | N | N | N | N | N | 5 |
| Very good | N | N | N | N | N | 2 |
| Good | N | N | N | N | N | 1 |
| Fair | N | N | N | N | N | 0 |
| Mediocre | N | N | N | N | N | 2 |
| Poor | N | N | N | N | N | 0 |
| Not reported | N | N | N | N | N | N |

KEY: $N=$ data do not exist.
NOTE: In 2000, the Federal Highway Administration began reporting road condition for urban minor arterials and urban collectors using the International Roughness Index, if available. In prior years, data were only available using the Present Serviceability Rating.

Figure 1-2: Urban Road Conditions in lowa: 2000


NOTE FOR DATA ON THIS PAGE: Road condition is based on measured pavement roughness using the International Roughness Index (IRI). IRI is a measure of surface condition. A comprehensive measure of pavement condition would require data on other pavement distresses such as rutting, cracking, and faulting.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, Washington, DC: annual editions, tables HM-63 and HM-64, available at http://www.fhwa.dot.gov/ as of Feb. 1, 2002.

Table 1-6: Highway Bridge Condition: 2001

| State | All bridges (number) | Structurally deficient (number) | $\begin{aligned} & \text { Functionally } \\ & \text { obsolete } \\ & \text { (number) } \end{aligned}$ | Total of both |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | (number) | (percent) |
| Alabama | 15,641 | 2,677 | 2,245 | 4,922 | 31.5 |
| Alaska | 1,433 | 169 | 243 | 412 | 28.8 |
| Arizona | 6,918 | 194 | 541 | 735 | 10.6 |
| Arkansas | 12,434 | 1,479 | 1,996 | 3,475 | 27.9 |
| California | 23,770 | 2,636 | 4,204 | 6,840 | 28.8 |
| Colorado | 8,082 | 596 | 847 | 1,443 | 17.9 |
| Connecticut | 4,171 | 362 | 943 | 1,305 | 31.3 |
| Delaware | 829 | 47 | 82 | 129 | 15.6 |
| District of Columbia | 243 | 25 | 136 | 161 | 66.3 |
| Florida | 11,303 | 300 | 1,814 | 2,114 | 18.7 |
| Georgia | 14,394 | 1,578 | 1,924 | 3,502 | 24.3 |
| Hawaii | 1,071 | 193 | 344 | 537 | 50.1 |
| Idaho | 4,069 | 320 | 436 | 756 | 18.6 |
| Illinois | 25,529 | 2,725 | 2,099 | 4,824 | 18.9 |
| Indiana | 18,067 | 2,257 | 2,161 | 4,418 | 24.5 |
| lowa | 25,030 | 5,036 | 2,060 | 7,096 | 28.3 |
| Kansas | 25,638 | 3,465 | 2,959 | 6,424 | 25.1 |
| Kentucky | 13,442 | 1,189 | 2,864 | 4,053 | 30.2 |
| Louisiana | 13,426 | 2,425 | 2,166 | 4,591 | 34.2 |
| Maine | 2,367 | 354 | 512 | 866 | 36.6 |
| Maryland | 4,957 | 436 | 1,010 | 1,446 | 29.2 |
| Massachusetts | 4,986 | 696 | 1,792 | 2,488 | 49.9 |
| Michigan | 10,631 | 2,012 | 1,354 | 3,366 | 31.7 |
| Minnesota | 12,830 | 1,221 | 563 | 1,784 | 13.9 |
| Mississippi | 16,825 | 3,694 | 1,308 | 5,002 | 29.7 |
| Missouri | 23,604 | 6,083 | 2,747 | 8,830 | 37.4 |
| Montana | 5,009 | 570 | 560 | 1,130 | 22.6 |
| Nebraska | 15,493 | 2,676 | 1,661 | 4,337 | 28.0 |
| Nevada | 1,510 | 67 | 154 | 221 | 14.6 |
| New Hampshire | 2,354 | 387 | 415 | 802 | 34.1 |
| New Jersey | 6,366 | 930 | 1,420 | 2,350 | 36.9 |
| New Mexico | 3,790 | 348 | 355 | 703 | 18.5 |
| New York | 17,378 | 2,406 | 4,182 | 6,588 | 37.9 |
| North Carolina | 16,991 | 2,513 | 2,794 | 5,307 | 31.2 |
| North Dakota | 4,517 | 871 | 266 | 1,137 | 25.2 |
| Ohio | 27,952 | 3,304 | 3,862 | 7,166 | 25.6 |
| Oklahoma | 22,708 | 7,605 | 1,518 | 9,123 | 40.2 |
| Oregon | 7,309 | 362 | 1,291 | 1,653 | 22.6 |
| Pennsylvania | 22,092 | 5,418 | 4,022 | 9,440 | 42.7 |
| Rhode Island | 749 | 187 | 192 | 379 | 50.6 |
| South Carolina | 9,064 | 1,187 | 869 | 2,056 | 22.7 |
| South Dakota | 6,001 | 1,398 | 346 | 1,744 | 29.1 |
| Tennessee | 19,362 | 1,761 | 2,940 | 4,701 | 24.3 |
| Texas | 48,085 | 3,182 | 7,373 | 10,555 | 22.0 |
| Utah | 2,743 | 389 | 245 | 634 | 23.1 |
| Vermont | 2,714 | 452 | 503 | 955 | 35.2 |
| Virginia | 12,789 | 1,222 | 2,243 | 3,465 | 27.1 |
| Washington | 7,939 | 551 | 1,591 | 2,142 | 27.0 |
| West Virginia | 6,767 | 1,172 | 1,495 | 2,667 | 39.4 |
| Wisconsin | 13,516 | 1,862 | 795 | 2,657 | 19.7 |
| Wyoming | 3,076 | 389 | 253 | 642 | 20.9 |
| United States | 590,066 | 83,630 | 81,469 | 165,099 | 28.0 |

SOURCE: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory: Deficient Bridges by State and Highway System, Washington, DC: 2001, available at http://www.fhwa.dot.gov/bridge/britab.htm as of Jan. 31, 2002.

Figure 1-3: Highway Bridge Condition


## United States



SOURCE: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory: Deficient Bridges by State and Highway System, Washington, DC: 2001, available at http://www.fhwa.dot.gov/bridge/britab.htm as of Jan. 31, 2002.

Table 1-7: Characteristics of Directly Operated Motor Bus Transit in Iowa: 2000

|  | Directional route-miles |  |  |
| :--- | :---: | :---: | ---: |
| Transit agency | Exclusive <br> right-of-way | Controlled <br> right-of-way | Mixed <br> right-of-way |
| Bettendorf Transit System | 0.0 | 0.0 | 42.8 |
| Black Hawk County Metro | 0.0 | 94.8 |  |
| City of Dubuque | 0.0 | 0.0 | 119.0 |
| Davenport Public Transit | 0.0 | 0.0 | 134.4 |
| Des Moines Metro Transit | 0.0 | 0.0 | 479.3 |
| Five Seasons Transportation | 0.0 | 0.0 | 84.0 |
| lowa City Transit | 0.0 | 0.0 | 64.5 |
| University of lowa | 0.0 | 0.0 | 28.0 |
| Total | 0.0 | 0.0 | $1,046.8$ |

NOTES: Directional route-miles is the mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route-miles are a measure of the facility or roadway, not the service carried on the facility such as the number of routes or vehicle-miles. Directional route-miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way. Exclusive right-of-way refers to lanes reserved at all times for transit use and other high occupancy vehicles (HOVs). Controlled right-of-way refers to lanes restricted for at least a portion of the day for use by transit vehicles and other HOVs. Mixed right-of-way refers to lanes used for general automobile traffic.
Directly operated transit is service provided by a public transit agency using its own employees to operate transit vehicles. Transit service purchased under contract by a public transit agency is not considered directly operated transit.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, National Transit Database, Data Tables, available at http://www.ntdprogram.com/ as of Feb. 19, 2002.

Table 1-8: Characteristics of Rail Transit in lowa: 2000

|  | Directional <br> route-miles | Miles of <br> track | Number of <br> crossings | Number of <br> stations | Number of ADA <br> accessible <br> stations |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Transit agency <br> Fenelon Place Elevator (Dubuque) | 0.1 | 0.1 | 0 | 2 | 0 |

KEY: ADA = Americans with Disabilities Act of 1990.
NOTE: Directional route-miles is the mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route-miles are a measure of the facility or roadway, not the service carried on the facility such as the number of routes or vehicle-miles. Directional route-miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way.

SOURCE: American Public Transportation Association, Public Transportation Fact Book, 2001, Washington, DC: 2001, available at http://www.apta.com/stats/ as of June 27, 2002.

Table 1-9: Civil and Joint-Use Airports, Heliports, STOLports, and Seaplane Bases in lowa: $2002{ }^{1}$

| Ownership and usage | Airports | Heliports | STOLports | Seaplane <br> bases | Total |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Publicly owned | 114 | 22 | 0 | 0 | 136 |
| Open to public | 113 | 0 | 0 | 0 | 113 |
| Closed to public | 1 | 22 | 0 | 0 | 23 |
|  |  |  |  |  |  |
| Privately owned | 116 | 61 | 1 | 0 | 178 |
| Open to public | 9 | 0 | 0 | 0 | 9 |
| Closed to public | 107 | 61 | 1 | 0 | 169 |
| Total | 230 | 83 | 1 | 0 | 314 |

${ }^{1}$ Data are current as of Jan. 31, 2002.
KEY: STOLport $=$ Short take-off and landing airport.

NOTE: Publicly owned facilities are open for public use with no prior authorization or permission. Publicly owned facilities closed to the public include medical, law enforcement, and other such facilities.
SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Office of Airports, Airport Safety Data Branch.

## Infrastructure

Table 1-10: lowa Commercial Service Airport Enplanements: 2000 (For airports with scheduled service and 2,500 or more passengers enplaned)

|  | Large <br> certificated air <br> carriers | Commuter and <br> small certificated <br> air carriers | Air taxi <br> commuter <br> operators | Foreign air <br> carriers | Total <br> enplanements |  |
| :--- | ---: | :---: | ---: | :---: | :---: | :---: |
| Airport | 756,221 | 86,634 | 312 | 123 | 843,290 |  |
| Des Moines International Airport | 467,288 | 26,366 | 141 | 0 | 493,795 |  |
| The Eastern lowa Airport | 71,176 | 14,506 | 2 | 0 | 85,684 |  |
| Sioux Gateway Airport | 41,445 | 17,068 | 18 | 0 | 58,531 |  |
| Dubuque Regional Airport | 29,740 | 24,816 | 24 | 0 | 54,580 |  |
| Waterloo Municipal Airport | 3,633 | 12,848 | 30 | 0 | 16,511 |  |
| Burlington Regional Airport | 12,595 | 0 | 17 | 0 | 12,612 |  |
| Mason City Municipal Airport | 11,676 | 40 | 13 | 0 | 11,729 |  |
| Fort Dodge Regional Airport | 0 | 4,391 | 94 | 0 | 4,485 |  |
| Spencer Municipal Airport |  |  |  |  |  |  |

NOTE: Rank order by total enplaned passengers on air carriers of all types, including foreign air carriers.

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Office of the Associate Administrator for Airports, CY 2000 Enplanement Activity at U.S. Commercial Service Airports, available at http://www.faa.gov/arp/Planning/v3.htm as of Mar. 26, 2002.

Table 1-11: Freight Railroads in lowa and the United States: 2000

| Type of railroad | Number of railroads |  | Miles operated ${ }^{2}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | United States | lowa |  |  |
|  | United States | lowa |  | Excluding trackage rights | Including trackage rights | Percent of U.S. total |
| Total | 562 | 17 | 172,101 | 4,162 | 4,389 | 2.6 |
| Class I | 8 | 3 | 120,597 | 2,278 | 2,431 | 2.0 |
| Regional | 35 | 4 | 20,978 | 1,511 | 1,547 | 7.4 |
| Local | 304 | 7 | 21,512 | 332 | 363 | 1.7 |
| Switching and terminal | 213 | 3 | 7,425 | 41 | 48 | 0.6 |
| Canadian ${ }^{1}$ | 2 | 0 | 1,589 | 0 | 0 | 0.0 |

${ }^{1}$ Refers to non-Class I, Canadian-owned lines.
${ }^{2}$ Miles operated is in terms of railroad so that a mile of single track is counted the same as a mile of double track. Sidings, turnouts, yard switching mileage, and mileage not operated are excluded. Miles operated under trackage rights provided by another (owning) railroad are included.

## NOTES:

1. As defined by the Surface Transportation Board in 2000, a Class I Railroad is a railroad with operating revenues of at least $\$ 261.9$ million.
2. A Regional Railroad is a non-Class I, line-haul railroad operating 350 or more miles of road or with revenues of at least $\$ 40$ million or both.
3. A Local Railroad is a railroad which is neither a Class I nor a Regional Railroad, and is engaged primarily in line-haul service.
4. A Switching and Terminal Railroad is a non-Class I railroad engaged primarily in switching and/or terminal services for other railroads.

SOURCE: Association of American Railroads, Railroads and States - 2000, Washington, DC: 2002, available at http://www.aar.org/AboutTheIndustry/StateInformation.asp as of Mar. 19, 2002.

Table 1-12: Freight Railroads Operating in lowa by Class: 2000

|  | Miles operated in <br> Railroad |
| :--- | ---: |
| Class I railroads |  |
| Burlington Northern and Santa Fe Railway Co. | 2,431 |
| Norfolk Southern Corp. | 708 |
| Union Pacific Railroad Co. | 44 |
|  | 1,679 |
| Regional railroads | 1,547 |
| Chicago, Central, and Pacific Railroad | 558 |
| Dakota, Minnesota, \& Eastern Railroad Corp. | 25 |
| I \& M Rail Link, LLC | 619 |
| lowa Interstate Railroad, Ltd. | 345 |
|  |  |
| Local railroads | 363 |
| Cedar Rapids and lowa City Railway Co. | 60 |
| Cedar River Railroad Co. | 83 |
| D \& I Railroad Co. | 41 |
| lowa Northern Railway Co. | 162 |
| lowa Traction Railroad Co. | 13 |
| Keokuk Junction Railway Co. | 1 |
| Toledo, Peoria, \& Western Railway Corp. | 3 |
| Switching and terminal railroads |  |
| Appanoose County Community Railroad Inc. | 48 |
| Burlington Junction Railway | 36 |
| Great Western Railway of lowa | 5 |

${ }^{1}$ Miles operated is in terms of railroad so that a mile of single track is counted the same as a mile of double track. Sidings, turnouts, yard switching mileage, and mileage not operated are excluded. Miles operated under trackage rights provided by another (owning) railroad are included.

NOTE: For definition of railroad types see previous table.
SOURCE: Association of American Railroads, Railroads and States - 2000, Washington, DC: 2002, available at http://www.aar.org/AboutThelndustry/Statelnformation.asp as of Mar. 19, 2002.

Table 1-13: Inland Waterway Mileage: 2000 (Includes 39 states and the District of Columbia)

| State | Miles | State | Miles |
| :---: | :---: | :---: | :---: |
| Alabama | 1,270 | Mississippi | 873 |
| Alaska | 5,497 | Missouri | 1,033 |
| Arkansas | 1,860 | Nebraska | 318 |
| California | 286 | New Hampshire | 8 |
| Connecticut | 117 | New Jersey | 360 |
| Delaware | 99 | New York | 394 |
| District of Columbia | 7 | North Carolina | 1,152 |
| Florida | 1,540 | Ohio | 444 |
| Georgia | 721 | Oklahoma | 150 |
| Idaho | 111 | Oregon | 681 |
| Illinois | 1,095 | Pennsylvania | 259 |
| Indiana | 353 | Rhode Island | 39 |
| lowa | 492 | South Carolina | 482 |
| Kansas | 120 | South Dakota | 75 |
| Kentucky | 1,591 | Tennessee | 946 |
| Louisiana | 2,823 | Texas | 834 |
| Maine | 73 | Virginia | 674 |
| Maryland | 532 | Washington | 1,057 |
| Massachusetts | 90 | West Virginia | 682 |
| Minnesota | 258 | Wisconsin | 231 |

NOTES: Waterway mileages were determined by including the length of channels 1) with a controlling draft of nine feet or greater, 2) with commercial cargo traffic reported for 1998 and 1999, but 3) were not offshore (i.e., channels in coastal areas included only the miles from the entrance channel inward). Channels within major bays are included (e.g., Chesapeake Bay, San Francisco Bay, Puget Sound, Long Island Sound, major sounds and straits in southeastern Alaska). Channels in the Great Lakes are not included, but waterways connecting lakes and the St. Lawrence Seaway inside the United States are included.

SOURCE: U.S. Army Corps of Engineers, Navigation Data Center, National Waterway Network, January 2002.


## B Safety

Table 2-1: Highway Traffic Fatalities and Fatality Rates: 2000

| State | Traffic fatalities | Licensed drivers (thousands) | Registered vehicles <br> (thousands) | Vehicle-miles traveled (millions) | Fatality rate per |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 100,000 licensed drivers | $\begin{gathered} \hline 100,000 \\ \text { registered } \\ \text { vehicles } \\ \hline \end{gathered}$ | 100 million vehicle-miles traveled |
| Alabama | 995 | 3,521 | 4,015 | 56,534 | 28.3 | 24.8 | 1.8 |
| Alaska | 103 | 465 | 611 | 4,613 | 22.2 | 16.9 | 2.2 |
| Arizona | 1,036 | 3,434 | 3,960 | 49,768 | 30.2 | 26.2 | 2.1 |
| Arkansas | 652 | 1,948 | 1,865 | 29,167 | 33.5 | 35.0 | 2.2 |
| California | 3,753 | 21,244 | 28,146 | 306,649 | 17.7 | 13.3 | 1.2 |
| Colorado | 681 | 3,107 | 3,724 | 41,771 | 21.9 | 18.3 | 1.6 |
| Connecticut | 342 | 2,653 | 2,907 | 30,756 | 12.9 | 11.8 | 1.1 |
| Delaware | 123 | 557 | 641 | 8,240 | 22.1 | 19.2 | 1.5 |
| District of Columbia | 49 | 348 | 244 | 3,498 | 14.1 | 20.1 | 1.4 |
| Florida | 2,999 | 12,853 | 12,036 | 152,136 | 23.3 | 24.9 | 2.0 |
| Georgia | 1,541 | 5,550 | 7,243 | 105,010 | 27.8 | 21.3 | 1.5 |
| Hawaii | 131 | 769 | 758 | 8,543 | 17.0 | 17.3 | 1.5 |
| Idaho | 276 | 884 | 1,220 | 13,534 | 31.2 | 22.6 | 2.0 |
| Illinois | 1,418 | 7,961 | 9,168 | 102,866 | 17.8 | 15.5 | 1.4 |
| Indiana | 875 | 3,976 | 5,689 | 70,862 | 22.0 | 15.4 | 1.2 |
| lowa | 445 | 1,953 | 3,233 | 29,433 | 22.8 | 13.8 | 1.5 |
| Kansas | 461 | 1,908 | 2,346 | 28,130 | 24.2 | 19.7 | 1.6 |
| Kentucky | 820 | 2,694 | 2,870 | 46,803 | 30.4 | 28.6 | 1.8 |
| Lovisiana | 937 | 2,759 | 3,605 | 40,849 | 34.0 | 26.0 | 2.3 |
| Maine | 169 | 920 | 1,053 | 14,190 | 18.4 | 16.1 | 1.2 |
| Maryland | 588 | 3,382 | 3,897 | 50,174 | 17.4 | 15.1 | 1.2 |
| Massachusetts | 433 | 4,490 | 5,372 | 52,796 | 9.6 | 8.1 | 0.8 |
| Michigan | 1,382 | 6,925 | 8,619 | 97,792 | 20.0 | 16.0 | 1.4 |
| Minnesota | 625 | 2,941 | 4,773 | 52,601 | 21.3 | 13.1 | 1.2 |
| Mississippi | 949 | 2,008 | 2,321 | 35,536 | 47.3 | 40.9 | 2.7 |
| Missouri | 1,157 | 3,856 | 4,641 | 67,083 | 30.0 | 24.9 | 1.7 |
| Montana | 237 | 679 | 1,053 | 9,882 | 34.9 | 22.5 | 2.4 |
| Nebraska | 276 | 1,195 | 1,640 | 18,081 | 23.1 | 16.8 | 1.5 |
| Nevada | 323 | 1,371 | 1,245 | 17,639 | 23.6 | 25.9 | 1.8 |
| New Hampshire | 126 | 930 | 1,100 | 12,021 | 13.6 | 11.5 | 1.0 |
| New Jersey | 731 | 5,655 | 6,502 | 67,446 | 12.9 | 11.2 | 1.1 |
| New Mexico | 430 | 1,239 | 1,557 | 22,760 | 34.7 | 27.6 | 1.9 |
| New York | 1,458 | 10,871 | 10,342 | 129,057 | 13.4 | 14.1 | 1.1 |
| North Carolina | 1,472 | 5,690 | 6,305 | 89,504 | 25.9 | 23.3 | 1.6 |
| North Dakota | 86 | 459 | 711 | 7,217 | 18.7 | 12.1 | 1.2 |
| Ohio | 1,351 | 8,206 | 10,722 | 105,898 | 16.5 | 12.6 | 1.3 |
| Oklahoma | 652 | 2,295 | 3,072 | 43,355 | 28.4 | 21.2 | 1.5 |
| Oregon | 451 | 2,495 | 3,091 | 35,010 | 18.1 | 14.6 | 1.3 |
| Pennsylvania | 1,520 | 8,229 | 9,476 | 102,337 | 18.5 | 16.0 | 1.5 |
| Rhode Island | 80 | 654 | 779 | 8,359 | 12.2 | 10.3 | 1.0 |
| South Carolina | 1,065 | 2,843 | 3,146 | 45,538 | 37.5 | 33.9 | 2.3 |
| South Dakota | 173 | 544 | 822 | 8,432 | 31.8 | 21.0 | 2.1 |
| Tennessee | 1,306 | 4,251 | 4,891 | 65,732 | 30.7 | 26.7 | 2.0 |
| Texas | 3,769 | 13,462 | 14,257 | 220,064 | 28.0 | 26.4 | 1.7 |
| Utah | 373 | 1,463 | 1,656 | 22,597 | 25.5 | 22.5 | 1.7 |
| Vermont | 79 | 506 | 537 | 6,811 | 15.6 | 14.7 | 1.2 |
| Virginia | 930 | 4,837 | 6,107 | 74,801 | 19.2 | 15.2 | 1.2 |
| Washington | 632 | 4,155 | 5,235 | 53,330 | 15.2 | 12.1 | 1.2 |
| West Virginia | 410 | 1,347 | 1,468 | 19,242 | 30.4 | 27.9 | 2.1 |
| Wisconsin | 799 | 3,770 | 4,545 | 57,266 | 21.2 | 17.6 | 1.4 |
| Wyoming | 152 | 371 | 605 | 8,090 | 41.0 | 25.1 | 1.9 |
| United States | 41,821 | 190,625 | 217,028 | 2,749,803 | 21.9 | 19.3 | 1.5 |

SOURCES: U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 2000, Washington, DC: 2001, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2000.pdf as of Jan. 4, 2002; U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000, Washington, DC: 2001, available at http://www.fhwa.dot.gov/ohim/ohimstat.htm as of Dec. 6, 2001.

Table 2-2: Passenger Car Occupants Killed and Restraint Use: 2000

| State | Restraint used |  | No restraint used |  | Restraint use unknown |  | Total occupants |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Alabama | 204 | 38.2 | 308 | 57.7 | 22 | 4.1 | 534 | 100.0 |
| Alaska | 11 | 39.3 | 17 | 60.7 | 0 | 0.0 | 28 | 100.0 |
| Arizona | 131 | 36.0 | 183 | 50.3 | 50 | 13.7 | 364 | 100.0 |
| Arkansas | 95 | 32.3 | 160 | 54.4 | 39 | 13.3 | 294 | 100.0 |
| California | 917 | 53.5 | 499 | 29.1 | 298 | 17.4 | 1,714 | 100.0 |
| Colorado | 129 | 47.1 | 142 | 51.8 | 3 | 1.1 | 274 | 100.0 |
| Connecticut | 69 | 38.1 | 90 | 49.7 | 22 | 12.2 | 181 | 100.0 |
| Delaware | 20 | 29.0 | 47 | 68.1 | 2 | 2.9 | 69 | 100.0 |
| District of Columbia | 4 | 22.2 | 7 | 38.9 | 7 | 38.9 | 18 | 100.0 |
| Florida | 523 | 37.7 | 836 | 60.3 | 27 | 1.9 | 1,386 | 100.0 |
| Georgia | 337 | 42.9 | 351 | 44.7 | 98 | 12.5 | 786 | 100.0 |
| Hawaii | 23 | 37.7 | 29 | 47.5 | 9 | 14.8 | 61 | 100.0 |
| Idaho | 42 | 35.9 | 69 | 59.0 | 6 | 5.1 | 117 | 100.0 |
| Illinois | 234 | 34.3 | 311 | 45.6 | 137 | 20.1 | 682 | 100.0 |
| Indiana | 203 | 43.0 | 222 | 47.0 | 47 | 10.0 | 472 | 100.0 |
| lowa | 107 | 41.6 | 98 | 38.1 | 52 | 20.2 | 257 | 100.0 |
| Kansas | 77 | 33.2 | 127 | 54.7 | 28 | 12.1 | 232 | 100.0 |
| Kentucky | 156 | 36.3 | 269 | 62.6 | 5 | 1.2 | 430 | 100.0 |
| Lovisiana | 127 | 30.1 | 232 | 55.0 | 63 | 14.9 | 422 | 100.0 |
| Maine | 37 | 36.6 | 58 | 57.4 | 6 | 5.9 | 101 | 100.0 |
| Maryland | 167 | 55.3 | 117 | 38.7 | 18 | 6.0 | 302 | 100.0 |
| Massachusetts | 63 | 25.9 | 128 | 52.7 | 52 | 21.4 | 243 | 100.0 |
| Michigan | 364 | 51.3 | 260 | 36.6 | 86 | 12.1 | 710 | 100.0 |
| Minnesota | 129 | 37.5 | 174 | 50.6 | 41 | 11.9 | 344 | 100.0 |
| Mississippi | 144 | 28.3 | 354 | 69.5 | 11 | 2.2 | 509 | 100.0 |
| Missouri | 198 | 33.4 | 326 | 55.0 | 69 | 11.6 | 593 | 100.0 |
| Montana | 38 | 37.3 | 56 | 54.9 | 8 | 7.8 | 102 | 100.0 |
| Nebraska | 35 | 27.1 | 76 | 58.9 | 18 | 14.0 | 129 | 100.0 |
| Nevada | 52 | 38.2 | 81 | 59.6 | 3 | 2.2 | 136 | 100.0 |
| New Hampshire | 13 | 21.0 | 43 | 69.4 | 6 | 9.7 | 62 | 100.0 |
| New Jersey | 161 | 42.4 | 197 | 51.8 | 22 | 5.8 | 380 | 100.0 |
| New Mexico | 72 | 41.9 | 90 | 52.3 | 10 | 5.8 | 172 | 100.0 |
| New York | 360 | 50.8 | 290 | 40.9 | 59 | 8.3 | 709 | 100.0 |
| North Carolina | 369 | 45.0 | 354 | 43.2 | 97 | 11.8 | 820 | 100.0 |
| North Dakota | 8 | 19.0 | 33 | 78.6 | 1 | 2.4 | 42 | 100.0 |
| Ohio | 319 | 41.5 | 396 | 51.6 | 53 | 6.9 | 768 | 100.0 |
| Oklahoma | 128 | 40.4 | 187 | 59.0 | 2 | 0.6 | 317 | 100.0 |
| Oregon | 147 | 67.1 | 60 | 27.4 | 12 | 5.5 | 219 | 100.0 |
| Pennsylvania | 265 | 31.7 | 443 | 53.1 | 127 | 15.2 | 835 | 100.0 |
| Rhode Island | 8 | 18.6 | 33 | 76.7 | 2 | 4.7 | 43 | 100.0 |
| South Carolina | 158 | 38.3 | 246 | 59.7 | 8 | 1.9 | 412 | 100.0 |
| South Dakota | 11 | 15.3 | 58 | 80.6 | 3 | 4.2 | 72 | 100.0 |
| Tennessee | 207 | 28.6 | 479 | 66.1 | 39 | 5.4 | 725 | 100.0 |
| Texas | 914 | 54.7 | 723 | 43.2 | 35 | 2.1 | 1,672 | 100.0 |
| Utah | 66 | 39.3 | 97 | 57.7 | 5 | 3.0 | 168 | 100.0 |
| Vermont | 23 | 57.5 | 15 | 37.5 | 2 | 5.0 | 40 | 100.0 |
| Virginia | 199 | 40.4 | 264 | 53.7 | 29 | 5.9 | 492 | 100.0 |
| Washington | 153 | 44.5 | 185 | 53.8 | 6 | 1.7 | 344 | 100.0 |
| West Virginia | 71 | 31.1 | 151 | 66.2 | 6 | 2.6 | 228 | 100.0 |
| Wisconsin | 161 | 37.3 | 231 | 53.5 | 40 | 9.3 | 432 | 100.0 |
| Wyoming | 23 | 46.0 | 27 | 54.0 | 0 | 0.0 | 50 | 100.0 |
| United States | 8,472 | 41.3 | 10,229 | 49.9 | 1,791 | 8.7 | 20,492 | 100.0 |

NOTE: Fatalities in this table include passenger car occupants only. Occupants of other vehicle types - light trucks, heavy trucks, motorcycles, and buses - are excluded as are other types of highway related fatalities such as pedestrian fatalities. Hence, the fatalities represented here are lower then those in table 2-1. Percents may not add to totals due to rounding.
SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 2000, Washington, DC: 2002, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn /TSF2000.pdf as of Jan. 4, 2002.

Table 2-3: Key Provisions of Safety Belt Use Laws: 2000

| State | Effective ${ }^{1}$ | Enforcement ${ }^{2}$ | Fine | Seats | Vehicles exempted ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 7/18/1992 | Primary | \$25 | Front | Designed for more than 10 passengers |
| Alaska | 9/12/1990 | Secondary | \$15 | All | School bus |
| Arizona | 1/1/1991 | Secondary | \$10 | Front | Designed for more than 10 passengers; model year before 1972 |
| Arkansas | 7/15/1991 | Secondary | \$25 ${ }^{4}$ | Front | School bus, church bus, public bus |
| California | 1/1/1986 | Primary | \$20 ${ }^{5}$ | All | None |
| Colorado | 7/1/1987 | Secondary | \$15 | Front | Passenger bus, school bus |
| Connecticut | 1/1/1986 | Primary | \$15 | Front | Truck or bus over 15,000 lbs. |
| Delaware | 1/1/1992 | Secondary | \$20 | Front | None |
| District of Columbia | 12/12/1985 | Primary | \$50 ${ }^{6}$ | All | Seating more than 8 people |
| Florida | 7/1/1986 | Secondary | \$30 | Front | School bus, public bus, truck over 5,000 lbs. |
| Georgia | 9/1/1988 | Primary | \$15 | Front | Designed for more than 10 passengers, pickup |
| Hawaii | 2/16/1985 | Primary | \$45 | Front | Bus or school bus over 10,000 lbs. |
| Idaho | 7/1/1986 | Secondary | \$5 | Front | Over 8,000 lbs. |
| Illinois | 7/1/1985 | Secondary | \$25 | Front | None |
| Indiana | 7/1/1987 | Primary | \$25 | Front | Truck, tractor, RV |
| lowa | 7/1/1986 | Primary | \$10 | Front | None |
| Kansas | 7/1/1986 | Secondary | \$10 | Front | Designed for more than 10 people, truck over $12,000 \mathrm{lbs}$. |
| Kentucky | 7/13/1994 | Secondary | \$25 | All | Designed for more than 10 people |
| Louisiana | 7/1/1986 | Primary | \$25 ${ }^{7}$ | Front | Manufactured before 1/1/81 |
| Maine | 12/27/1995 | Secondary | \$50 | All | None |
| Maryland | 7/1/1986 | Primary | \$25 | Front | Historic vehicle |
| Massachusetts | 2/1/1994 | Secondary | \$25 | All | Truck over 18,000 lbs., bus, taxi |
| Michigan | 7/1/1985 | Primary | \$25 | Front | Bus |
| Minnesota | 8/1/1986 | Secondary | \$25 | Front | Farm pickup truck |
| Mississippi | 3/20/1990 | Secondary | \$25 | Front | Farm vehicle, bus |
| Missouri | 9/28/1985 | Secondary | \$10 | Front | Designed for more than 10 people, truck over $12,000 \mathrm{lbs}$. |
| Montana | 10/1/1987 | Secondary | \$20 | All | None |
| Nebraska | 1/1/1993 | Secondary | \$25 | Front | Manufactured before 1973 |
| Nevada | 7/1/1987 | Secondary | \$25 | All | Taxi, bus, school bus |
| New Hampshire | None | NA | NA | NA | NA |
| New Jersey | 3/1/1985 | Secondary | \$20 | Front | None |
| New Mexico | 1/1/1986 | Primary | \$25 | Front | Vehicle over 10,000 lbs. |
| New York | 12/1/1984 | Primary | \$50 | Front | Bus, school bus, taxi |
| North Carolina | 10/1/1985 | Primary | \$25 | Front | Designed for more than 10 people |
| North Dakota | 7/14/1994 | Secondary | \$20 | Front | Designed for more than 10 people |
| Ohio | 5/6/1986 | Secondary | \$25 | Front | None |
| Oklahoma | 2/1/1987 | Primary | $\$ 20$ $\$ 75$ | Front | Farm vehicle, truck, truck tractor, RV |
| Oregon Pennsylvania | 11/23/1987 | Primary | \$75 $\$ 10$ | Front | None Truck over 7,000 lbs. |
| Rhode Island | 6/18/1991 | Secondary | \$50 | All | None |
| South Carolina | 7/1/1989 | Secondary | \$10 | All | School bus, public bus |
| South Dakota | 1/1/1995 | Secondary | \$20 | Front | Bus, school bus |
| Tennessee | 4/21/1986 | Secondary | \$50 | Front | Vehicle over 8,500 lbs. |
| Texas | 9/1/1985 | Primary | \$50 | Front | Designed for more than 10 people, truck over $15,000 \mathrm{lbs}$. |
| Utah | 4/28/1986 | Secondary | \$45 | Front | Vehicle over 10,000 lbs., school/public bus, taxi |
| Vermont | 1/1/1994 | Secondary | \$10 | All | Bus, taxi |
| Virginia | 1/1/1988 | Secondary | \$25 | Front | Designed for more than 10 people, taxi |
| Washington | 6/11/1986 | Secondary | \$35 | All | Designed for more than 10 people |
| West Virginia | 9/1/1993 | Secondary | \$25 | Front | Designed for more than 10 people |
| Wisconsin | 12/1/1987 | Secondary | \$10 | All | Taxi, farm truck |
| Wyoming | 6/8/1989 | Secondary | \$25 | Front | Designed for more than 10 people, bus |

${ }^{1}$ Effective date of first belt law in the state; ${ }^{2}$ Primary enforcement enables police officers to stop vehicles and write citations whenever they observe a violation of the seat belt law. Secondary enforcement allows police officers to write a citation for seat belt infractions only after stopping a vehicle for some other traffic infraction; ${ }^{3}$ Most states exempt vehicles not manufactured with seat belts; ${ }^{4}$ Plus 3 points on license; ${ }^{5}$ Fine for first offense; ${ }^{6}$ Plus 2 points on license; ${ }^{7}$ Penalty could include 30 days in jail.

KEY: NA $=$ not applicable; $\mathrm{RV}=$ recreational vehicle.
SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 2000, Washington, DC: 2001, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2000.pdf as of Jan. 4, 2002.

Table 2-4: Shoulder Belt Use: 2000

| State | Percent | State | Percent |
| :---: | :---: | :---: | :---: |
| Alabama | 70.6 | Montana | 75.6 |
| Alaska | 61.0 | Nebraska | 70.5 |
| Arizona | 75.2 | Nevada | 78.5 |
| Arkansas | 52.4 | New Hampshire | N |
| California | 88.9 | New Jersey | 74.2 |
| Colorado | 65.1 | New Mexico | 86.6 |
| Connecticut | 76.3 | New York | 77.3 |
| Delaware | 66.1 | North Carolina | 80.5 |
| District of Columbia | 82.6 | North Dakota | 47.7 |
| Florida | 64.8 | Ohio | 65.3 |
| Georgia | 73.6 | Oklahoma | 67.5 |
| Hawaii | 80.4 | Oregon | 83.6 |
| Idaho | 58.6 | Pennsylvania | 70.7 |
| Illinois | 70.2 | Rhode Island | 64.4 |
| Indiana | 62.1 | South Carolina | 73.9 |
| lowa | 78.0 | South Dakota | 53.4 |
| Kansas | 61.6 | Tennessee | 59.0 |
| Kentucky | 60.0 | Texas | 76.6 |
| Louisiana | 68.2 | Utah | 75.7 |
| Maine | N | Vermont | 61.6 |
| Maryland | 85.0 | Virginia | 69.6 |
| Massachusetts | 50.0 | Washington | 81.6 |
| Michigan | 83.5 | West Virginia | 49.5 |
| Minnesota | 73.4 | Wisconsin | 65.4 |
| Mississippi | 50.4 | Wyoming | 66.8 |

KEY: $\mathrm{N}=$ data do not exist.

Figure 2-1: Shoulder Belt Use


SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, National Highway Traffic Safety Administration, 1998-2000 State Shoulder Belt Use Survey Results, Research Note, Washington, DC: May 2001, available at http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/availinf.html as of Mar. 20, 2002.

Table 2-5: Pedestrian Fatalities Involving Motor Vehicles: 2000

| State | Total traffic fatalities | Pedestrians killed | Pedestrian fatalities as percent of total | State population (thousands) | Pedestrian fatality rate per 100,000 population |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 995 | 61 | 6.1 | 4,451 | 1.4 |
| Alaska | 103 | 8 | 7.8 | 653 | 1.2 |
| Arizona | 1,036 | 130 | 12.5 | 4,798 | 2.7 |
| Arkansas | 652 | 38 | 5.8 | 2,631 | 1.4 |
| California | 3,753 | 670 | 17.9 | 32,521 | 2.1 |
| Colorado | 681 | 80 | 11.7 | 4,168 | 1.9 |
| Connecticut | 342 | 49 | 14.3 | 3,284 | 1.5 |
| Delaware | 123 | 22 | 17.9 | 768 | 2.9 |
| District of Columbia | 49 | 18 | 36.7 | 523 | 3.4 |
| Florida | 2,999 | 492 | 16.4 | 15,233 | 3.2 |
| Georgia | 1,541 | 137 | 8.9 | 7,875 | 1.7 |
| Hawaii | 131 | 29 | 22.1 | 1,257 | 2.3 |
| Idaho | 276 | 6 | 2.2 | 1,347 | 0.4 |
| Illinois | 1,418 | 187 | 13.2 | 12,051 | 1.6 |
| Indiana | 875 | 51 | 5.8 | 6,045 | 0.8 |
| lowa | 445 | 25 | 5.6 | 2,900 | 0.9 |
| Kansas | 461 | 19 | 4.1 | 2,668 | 0.7 |
| Kentucky | 820 | 53 | 6.5 | 3,995 | 1.3 |
| Lovisiana | 937 | 100 | 10.7 | 4,425 | 2.3 |
| Maine | 169 | 15 | 8.9 | 1,259 | 1.2 |
| Maryland | 588 | 91 | 15.5 | 5,275 | 1.7 |
| Massachusetts | 433 | 82 | 18.9 | 6,199 | 1.3 |
| Michigan | 1,382 | 170 | 12.3 | 9,679 | 1.8 |
| Minnesota | 625 | 38 | 6.1 | 4,830 | 0.8 |
| Mississippi | 949 | 64 | 6.7 | 2,816 | 2.3 |
| Missouri | 1,157 | 88 | 7.6 | 5,540 | 1.6 |
| Montana | 237 | 11 | 4.6 | 950 | 1.2 |
| Nebraska | 276 | 20 | 7.2 | 1,705 | 1.2 |
| Nevada | 323 | 43 | 13.3 | 1,871 | 2.3 |
| New Hampshire | 126 | 7 | 5.6 | 1,224 | 0.6 |
| New Jersey | 731 | 145 | 19.8 | 8,178 | 1.8 |
| New Mexico | 430 | 47 | 10.9 | 1,860 | 2.5 |
| New York | 1,458 | 335 | 23.0 | 18,146 | 1.8 |
| North Carolina | 1,472 | 144 | 9.8 | 7,777 | 1.9 |
| North Dakota | 86 | 5 | 5.8 | 662 | 0.8 |
| Ohio | 1,351 | 96 | 7.1 | 11,319 | 0.8 |
| Oklahoma | 652 | 43 | 6.6 | 3,373 | 1.3 |
| Oregon | 451 | 50 | 11.1 | 3,397 | 1.5 |
| Pennsylvania | 1,520 | 170 | 11.2 | 12,202 | 1.4 |
| Rhode Island | 80 | 6 | 7.5 | 998 | 0.6 |
| South Carolina | 1,065 | 84 | 7.9 | 3,858 | 2.2 |
| South Dakota | 173 | 13 | 7.5 | 777 | 1.7 |
| Tennessee | 1,306 | 99 | 7.6 | 5,657 | 1.7 |
| Texas | 3,769 | 412 | 10.9 | 20,119 | 2.0 |
| Utah | 373 | 33 | 8.8 | 2,207 | 1.5 |
| Vermont | 79 | 7 | 8.9 | 617 | 1.1 |
| Virginia | 930 | 92 | 9.9 | 6,997 | 1.3 |
| Washington | 632 | 66 | 10.4 | 5,858 | 1.1 |
| West Virginia | 410 | 25 | 6.1 | 1,841 | 1.4 |
| Wisconsin | 799 | 51 | 6.4 | 5,326 | 1.0 |
| Wyoming | 152 | 12 | 7.9 | 525 | 2.3 |
| United States | 41,821 | 4,739 | 11.3 | 274,634 | 1.7 |

SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Traffic Safety Facts 2000: Pedestrians, Washington, DC: 2001, available at http://www.nhtsa.dot.gov/people/ncsa/factshet.html as of Dec. 5, 2001.

Table 2-6: Motor Vehicle Fatalities Involving High Blood Alcohol Concentration (BAC $\geq 0.10$ grams per deciliter)

| State | 1995 |  |  | 2000 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total fatalities | Fatalities involving high blood alcohol | Percent | Total fatalities | Fatalities involving high blood alcohol | Percent |
| Alabama | 1,113 | 381 | 34 | 995 | 326 | 33 |
| Alaska | 87 | 37 | 42 | 103 | 44 | 43 |
| Arizona | 1,031 | 347 | 34 | 1,036 | 354 | 34 |
| Arkansas | 631 | 148 | 23 | 652 | 139 | 21 |
| California | 4,192 | 1,308 | 31 | 3,753 | 1,061 | 28 |
| Colorado | 645 | 226 | 35 | 681 | 198 | 29 |
| Connecticut | 317 | 130 | 41 | 342 | 119 | 35 |
| Delaware | 121 | 38 | 31 | 123 | 49 | 40 |
| District of Columbia | 58 | 25 | 44 | 49 | 14 | 29 |
| Florida | 2,805 | 873 | 31 | 2,999 | 930 | 31 |
| Georgia | 1,488 | 400 | 27 | 1,541 | 438 | 28 |
| Hawaii | 130 | 41 | 32 | 131 | 37 | 28 |
| Idaho | 262 | 69 | 27 | 276 | 81 | 29 |
| Illinois | 1,586 | 551 | 35 | 1,418 | 489 | 34 |
| Indiana | 960 | 263 | 27 | 875 | 214 | 24 |
| lowa | 527 | 159 | 30 | 445 | 100 | 22 |
| Kansas | 442 | 152 | 34 | 461 | 118 | 26 |
| Kentucky | 849 | 227 | 27 | 820 | 203 | 25 |
| Louisiana | 883 | 353 | 40 | 937 | 352 | 38 |
| Maine | 187 | 44 | 24 | 169 | 38 | 22 |
| Maryland | 671 | 176 | 26 | 588 | 161 | 27 |
| Massachusetts | 444 | 148 | 33 | 433 | 153 | 35 |
| Michigan | 1,530 | 483 | 32 | 1,382 | 397 | 29 |
| Minnesota | 597 | 215 | 36 | 625 | 207 | 33 |
| Mississippi | 868 | 306 | 35 | 949 | 289 | 30 |
| Missouri | 1,109 | 450 | 41 | 1,157 | 387 | 33 |
| Montana | 215 | 79 | 37 | 237 | 92 | 39 |
| Nebraska | 254 | 64 | 25 | 276 | 70 | 25 |
| Nevada | 313 | 127 | 41 | 323 | 112 | 35 |
| New Hampshire | 118 | 30 | 25 | 126 | 40 | 31 |
| New Jersey | 773 | 243 | 32 | 731 | 231 | 32 |
| New Mexico | 485 | 202 | 42 | 430 | 159 | 37 |
| New York | 1,674 | 405 | 24 | 1,458 | 293 | 20 |
| North Carolina | 1,448 | 399 | 28 | 1,472 | 419 | 28 |
| North Dakota | 74 | 32 | 44 | 86 | 36 | 42 |
| Ohio | 1,366 | 344 | 25 | 1,351 | 411 | 30 |
| Oklahoma | 669 | 205 | 31 | 652 | 169 | 26 |
| Oregon | 572 | 176 | 31 | 451 | 132 | 29 |
| Pennsylvania | 1,480 | 485 | 33 | 1,520 | 511 | 34 |
| Rhode Island | 69 | 22 | 32 | 80 | 31 | 38 |
| South Carolina | 881 | 229 | 26 | 1,065 | 329 | 31 |
| South Dakota | 158 | 63 | 40 | 173 | 66 | 38 |
| Tennessee | 1,259 | 420 | 33 | 1,306 | 399 | 31 |
| Texas | 3,181 | 1,407 | 44 | 3,769 | 1,450 | 38 |
| Utah | 326 | 69 | 21 | 373 | 68 | 18 |
| Vermont | 106 | 33 | 31 | 79 | 27 | 34 |
| Virginia | 900 | 272 | 30 | 930 | 257 | 28 |
| Washington | 653 | 248 | 38 | 632 | 217 | 34 |
| West Virginia | 376 | 132 | 35 | 410 | 149 | 36 |
| Wisconsin | 745 | 263 | 35 | 799 | 288 | 36 |
| Wyoming | 170 | 63 | 37 | 152 | 40 | 26 |
| United States | 41,798 | 13,564 | 32 | 41,821 | 12,892 | 31 |

SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Traffic Safety Facts 2000: State Alcohol Estimates, Washington, DC: 2001, available at http://www.nhtsa.dot.gov/people/ncsa/factshet.html as of Dec. 5, 2001.

Table 2-7: Impaired Driving Laws: 2000

| State | Administrative per se (BAC level) | Illegal per se (BAC level) | Lower BAC for youthful DWI offenders (BAC level and age) | License sanction (Mandatory minimum for a DWI conviction) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | First offense | Second offense | Third offense |
| Alabama | Y-0.08 | 0.08 | Y-0.02 (<21) | S-90 days | R-1 yr | $\mathrm{R}-3 \mathrm{yrs}$ |
| Alaska | Y-0.10 | 0.10 | Y-0.00 (<21) | R-30 days | R-1 yr | $\mathrm{R}-10 \mathrm{yrs}$ |
| Arizona | Y-0.10 | 0.10 | Y-0.00 (<21) | S-90 days | R-1 yr | R-3 yrs |
| Arkansas | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | Nms | Nms |
| California | $\mathrm{Y}-0.08$ | 0.08 | Y-0.01 (<21) | Nms | Nms | $\mathrm{R}-18 \mathrm{mos}$ |
| Colorado | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | R-1 yr | $\mathrm{R}-1 \mathrm{yr}$ |
| Connecticut | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | Nms | Nms |
| Delaware | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | R-6 mos | R-6 mos |
| District of Columbia | $\mathrm{Y}-0.05$ | 0.08 | Y-0.00 (<21) | R-6 mos | $\mathrm{R}-1 \mathrm{yr}$ | R-2 yrs |
| Florida | $\gamma-0.08$ | 0.08 | Y-0.02 (<21) | Nms | R-12 mos | R-24 mos |
| Georgia | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | S-120 days | R-5 yrs |
| Hawaii | Y-0.08 | 0.08 | Y-0.02 (<21) | S-30 days | S-1 yr | $\mathrm{R}-1 \mathrm{yr}$ |
| Idaho | Y-0.08 | 0.08 | Y-0.02 (<21) | S-30 days | S-1 yr | S-1 yr |
| Illinois | Y-0.08 | 0.08 | Y-0.02 (<21) | Nms | Nms | Nms |
| Indiana | $\mathrm{Y}-0.10$ | 0.10 | Y-0.02 (<21) | S-30 days | S-1 yr | S-1 yr |
| lowa | Y-0.10 | 0.10 | $\mathrm{Y}-0.02(<21)$ | R-30 days | R-1 yr | R-1 yr |
| Kansas | $\mathrm{Y}-0.08$ | 0.08 | Y-0.02 (<21) | S-30 days | S-1 yr | S-1 yr |
| Kentucky | A | 0.08 | Y-0.02 (<21) | S-30 days | R-12 mos | R-24 mos |
| Louisiana | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | Nms | Nms |
| Maine | Y-0.08 | 0.08 | Y-0.00 (<21) | S-60 days | S-18 mos | S-4 yrs |
| Maryland | $Y-0.10$ | 0.10 | Y-0.02 (<21) | Nms | Nms | Nms |
| Massachusetts | Y-0.08 | N | Y-0.02 (<21) | S-45 days | R-6 mos | R-2 yrs |
| Michigan | N | 0.10 | Y-0.02 (<21) | Nms | R-1 yr | S-5 yrs |
| Minnesota | Y-0.10 | 0.10 | Y-0.00 (<21) | R-15 days | R-90 days | R-90 days |
| Mississippi | Y-0.10 | 0.10 | Y-0.02 (<21) | S-30 days | $\mathrm{S}-1 \mathrm{yr}$ | S-3 yrs |
| Missouri | Y-0.10 | 0.10 | Y-0.02 (<21) | S-30 days | R-2 yrs | R-3 yrs |
| Montana | N | 0.10 | Y-0.02 (<21) | Nms | $\mathrm{R}-3 \mathrm{mos}$ | R-3 mos |
| Nebraska | Y-0.10 | 0.10 | Y-0.02 (<21) | R-60 days | $\mathrm{R}-1 \mathrm{yr}$ | R-1 yr |
| Nevada | Y-0.10 | 0.10 | Y-0.02 (<21) | R-45 days | R-1 yr | R-1.5 yrs |
| New Hampshire | Y-0.08 | 0.08 | Y-0.02 (<21) | R-90 days | $\mathrm{R}-3 \mathrm{yrs}$ | $\mathrm{R}-3 \mathrm{yrs}$ |
| New Jersey | N | 0.10 | Y-0.01 (<21) | R-6 mos | $\mathrm{R}-2 \mathrm{yrs}$ | R-10 yrs |
| New Mexico | Y-0.08 | 0.08 | Y-0.02 (<21) | Nms | $\mathrm{R}-30$ days | R-30 days |
| New York | A | 0.10 | Y-0.02 (<21) | Nms | R-1 yr | R-1 yr |
| North Carolina | $\mathrm{Y}-0.08$ | 0.08 | Y-0.00 (<21) | Nms | R-2 yrs | R-3 yrs |
| North Dakota | Y-0.10 | 0.10 | Y-0.02 (<21) | S-30 days | S-365 days | S-2 yrs |
| Ohio | Y-0.10 | 0.10 | Y-0.02 (<21) | S-15 days | $\mathrm{S}-30$ days | S-180 days |
| Oklahoma | Y-0.10 | 0.10 | Y-0.00 (<21) | Nms | R-1 yr | R-1 yr |
| Oregon | Y-0.08 | 0.08 | Y-0.00 (<21) | Nms | S-90 days | S-1 yr |
| Pennsylvania | N | 0.10 | Y-0.02 (<21) | $\mathrm{S}-1 \mathrm{mo}$ | $\mathrm{S}-12 \mathrm{mos}$ | $\mathrm{S}-12 \mathrm{mos}$ |
| Rhode Island | N | 0.08 | Y-0.02 (<21) | S-3 mos | S-1 yr | S-2 yrs |
| South Carolina | Y-0.15 | 0.10 | Y-0.02 (<21) | Nms | S-1 yr | S-4 yrs |
| South Dakota | N | 0.10 | Y-0.02 (<21) | Nms | $\mathrm{R}-1 \mathrm{yr}$ | R-1 yr |
| Tennessee | N | 0.10 | Y-0.02 (<21) | Nms | $\mathrm{R}-2 \mathrm{yrs}$ | R-3 yrs |
| Texas | Y-0.08 | 0.08 | Y-0.00 (<21) | Nms | Nms | Nms |
| Utah | Y-0.08 | 0.08 | Y-0.00 (<21) | S-90 days | R-1 yrs | $\mathrm{R}-1 \mathrm{yrs}$ |
| Vermont | Y-0.08 | 0.08 | Y-0.02 (<21) | S-90 days | $\mathrm{S}-18 \mathrm{mos}$ | R-2 yrs |
| Virginia | Y-0.08 | 0.08 | Y-0.02 (<21) | Nms | R-1 yr | R-3 yrs |
| Washington | Y-0.08 | 0.08 | Y-0.02 (<21) | S-30 days | R-1 yr | R-2 yrs |
| West Virginia | Y-0.10 | 0.10 | Y-0.02 (<21) | R-30 days | $\mathrm{R}-1 \mathrm{yr}$ | $\mathrm{R}-1 \mathrm{yr}$ |
| Wisconsin | Y-0.10 | 0.10 | Y-0.02 (<21) | Nms | R-60 days | R-90 days |
| Wyoming | Y-0.10 | 0.10 | $\mathrm{Y}-0.02$ (<21) | Nms | $\mathrm{S}-1 \mathrm{yr}$ | R-3 yrs |

KEY: $\mathrm{BAC}=$ blood alcohol concentration; $\mathrm{DWI}=$ driving while intoxicated; $\mathrm{Y}=$ yes; $\mathrm{N}=$ no; $\mathrm{A}=$ alternative; $\mathrm{S}=$ suspension; $\mathrm{R}=$ revocation; Nms $=$ no mandatory sanction.

NOTES: An "administrative per se law" allows a state's driver licensing agency to either suspend or revoke a driver's license based on a specific alcohol (or drug) concentration or on some other criterion related to alcohol or drug use and driving. Such action is independent of any licensing action related to a DWI criminal offense. The term "illegal per se" refers to state laws that make it a criminal offense to operate a motor vehicle at or above a specified alcohol (or drug) concentration in the blood, breath, or urine. In those columns showing mandatory sanctions, "nms" does not mean that a state does not have a sanction. It only means that the state does not have a mandatory sanction for that offense or violation.

SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Facts 2000, Washington, DC: 2001, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2000.pdf as of Jan. 4, 2002.

Table 2-8: Maximum Posted Speed Limits by System: 2001 (Speed limit in miles per hour) ${ }^{1}$

| State | Interstate |  | Other limited-access roads ${ }^{2}$ | Other roads |
| :---: | :---: | :---: | :---: | :---: |
|  | Rural | Urban |  |  |
| Alabama | 70 | 70 | 65 | 65 |
| Alaska | 65 | 55 | 65 | 55 |
| Arizona | 75 | 55 | 55 | 55 |
| Arkansas | 70, Trucks: 65 | 55 | 60 | 55 |
| California | 70, Trucks: 55 | 65 | 70 | 55 |
| Colorado | 75 | 65 | 65 | 55 |
| Connecticut | 65 | 55 | 65 | 55 |
| Delaware | 65 | 55 | 65 | 55 |
| District of Columbia | NA | 55 | NA | 25 |
| Florida | 70 | 65 | 70 | 65 |
| Georgia | 70 | 65 | 65 | 65 |
| Hawaii | $55$ | 50 | 45 | 45 |
| Idaho | 75, Trucks: 65 | 65 | 65 | 65 |
| Illinois | 65, Trucks: 55 | 55 | 65 | 55 |
| Indiana | 65, Trucks: 60 | 55 | 55 | 55 |
| Iowa | 65 | 55 | 65 | 55 |
| Kansas | 70 | 70 | 70 | 65 |
| Kentucky | 65 | 55 | 55 | 55 |
| Louisiana | 70 | 55 | 70 | 65 |
| Maine | 65 | 55 | 55 | 55 |
| Maryland | 65 | 65 | 65 | 55 |
| Massachusetts | 65 | 65 | 65 | 55 |
| Michigan | 70, Trucks: 55 | 65 | 70 | 55 |
| Minnesota | 70 | 65 | 65 | 55 |
| Mississippi | 70 | 70 | 70 | 65 |
| Missouri | 70 | 60 | 70 | 65 |
| Montana | 75, Trucks: 65 | 65 | Day: 70, Night: 65 | Day: 70, Night: 65 |
| Nebraska | 75 | 65 | 65 | 60 |
| Nevada | 75 | 65 | 70 | 70 |
| New Hampshire | 65 | 65 | 55 | 55 |
| New Jersey | 65 | 55 | 65 | 55 |
| New Mexico | 75 | 55 | 65 | 55 |
| New York | 65 | 65 | 65 | 55 |
| North Carolina | 70 | 65 | 65 | 55 |
| North Dakota | 70 | 55 | 65 | Day: 65, Night: 55 |
| Ohio | 65, Trucks: 55 | 65 | 55 | 55 |
| Oklahoma | 75 | 70 | 70 | 70 |
| Oregon | 65, Trucks: 55 | 55 | 55 | 55 |
| Pennsylvania | 65 | 55 | 65 | 55 |
| Rhode Island | 65 | 55 | 55 | 55 |
| South Carolina | 70 | 70 | 60 | 55 |
| South Dakota | 75 | 65 | 65 | 65 |
| Tennessee | 70 | 70 | 70 | 55 |
| Texas | 70 | 70 | 70 | 70 |
| Utah | 75 | 65 | 55 | 55 |
| Vermont | 65 | 55 | 50 | 50 |
| Virginia | 65 | 55 | 65 | 55 |
| Washington | 70, Trucks: 60 | 60 | 55 | 55 |
| West Virginia | 70 | 55 | 65 | 55 |
| Wisconsin | 65 | 65 | 65 | 55 |
| Wyoming | 75 | 60 | 65 | 65 |

${ }^{1}$ Many roads, particularly urban interstates, often have a lower posted speed limit than the maximum allowable shown in this table.
${ }^{2}$ Limited-access roads are multilaned roads with restricted access using exit and entrance ramps rather than intersections.
KEY: $\mathrm{NA}=$ not applicable.
NOTE: Interstates are divided into urban and rural sections based primarily on population size and population density.
SOURCE: Insurance Institute for Highway Safety, Highway Loss Data Institute, available at http://www.hwysafety.org/ safety_facts/state_laws/speed_limit_laws.htm as of Oct. 1, 2001.

Table 2-9: Total Rail Accidents/Incidents: 2000

| State | Accidents/ Incidents | Fatalities | Injuries | State | Accidents/ Incidents | Fatalities | Injuries |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 257 | 20 | 143 | Montana | 156 | 4 | 108 |
| Alaska | 89 | 2 | 82 | Nevada | 40 | 1 | 25 |
| Arizona | 222 | 27 | 147 | New Hampshire | 18 | 0 | 15 |
| Arkansas | 371 | 30 | 225 | New Jersey | 528 | 28 | 432 |
| California | 1,133 | 101 | 808 | Nebraska | 362 | 8 | 247 |
| Colorado | 199 | 10 | 112 | New Mexico | 138 | 4 | 106 |
| Connecticut | 203 | 6 | 159 | New York | 1,330 | 32 | 1,168 |
| Delaware | 59 | 2 | 47 | North Carolina | 243 | 24 | 121 |
| District of Columbia | 107 | 0 | 90 | North Dakota | 122 | 9 | 82 |
| Florida | 405 | 45 | 303 | Ohio | 575 | 28 | 339 |
| Georgia | 395 | 23 | 231 | Oklahoma | 231 | 22 | 124 |
| Hawaii | 0 | 0 | 0 | Oregon | 214 | 9 | 152 |
| Idaho | 109 | 11 | 53 | Pennsylvania | 752 | 23 | 583 |
| Illinois | 1,484 | 69 | 1,109 | Rhode Island | 21 | 1 | 19 |
| Indiana | 540 | 36 | 317 | South Carolina | 192 | 20 | 141 |
| lowa | 367 | 9 | 211 | South Dakota | 64 | 3 | 43 |
| Kansas | 337 | 21 | 226 | Tennessee | 296 | 15 | 163 |
| Kentucky | 272 | 14 | 170 | Texas | 1,260 | 90 | 777 |
| Louisiana | 465 | 16 | 310 | Utah | 129 | 5 | 88 |
| Maine | 79 | 2 | 58 | Vermont | 29 | 1 | 22 |
| Maryland | 173 | 9 | 103 | Virginia | 252 | 13 | 169 |
| Massachusetts | 228 | 17 | 183 | Washington | 317 | 16 | 230 |
| Michigan | 434 | 23 | 300 | West Virginia | 128 | 9 | 93 |
| Minnesota | 431 | 11 | 303 | Wisconsin | 390 | 20 | 258 |
| Mississippi | 250 | 17 | 120 | Wyoming | 156 | 2 | 107 |
| Missouri | 367 | 29 | 221 | United States | 16,919 | 937 | 11,643 |

Figure 2-2: lowa Train Accidents
(Excludes highway-grade crossing incidents and other incidents)


NOTE FOR DATA ON THIS PAGE: "Accidents/incidents" includes all events reportable to the U.S. Department of Transportation, Federal Railroad Administration under applicable regulations. These include: train accidents, reported on Form F 6180.54, comprised of collisions, derailments, and other events involving the operation of on-track equipment and causing reportable damage above an established threshold ( $\$ 6,600$ in 1998); highway-rail grade crossing incidents, reported on Form F 6180.57, involving impact between railroad on-track equipment and highway users at crossings; and other incidents, reported on Form F 6180.55a, involving all other reportable incidents or exposures that cause a fatality or injury to any person, or an occupational illness to a railroad employee.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Railroad Administration, Railroad Safety Statistics Annual Report 2000, Washington, DC: 2001, table 2-11, available at http://safetydata.fra.dot.gov/officeofsafety/ as of Oct. 22, 2001.

Table 2-10: Highway-Rail Grade Crossing Incidents: 2000

| State | Number of grade crossings | Incidents | Fatalities | Injuries | State | Number of grade crossings | Incidents | Fatalities | Injuries |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 5,418 | 95 | 10 | 39 | Montana | 3,514 | 24 | 1 | 2 |
| Alaska | 336 | 7 | 0 | 0 | Nebraska | 6,575 | 55 | 7 | 14 |
| Arizona | 1,628 | 29 | 8 | 13 | Nevada | 571 | 2 | 0 | 0 |
| Arkansas | 4,655 | 115 | 27 | 36 | New Hampshire | 637 | 3 | 0 | 0 |
| California | 12,775 | 174 | 27 | 54 | New Jersey | 2,493 | 36 | 5 | 10 |
| Colorado | 3,271 | 36 | 6 | 8 | New Mexico | 1,355 | 17 | 0 | 11 |
| Connecticut | 624 | 8 | 2 | 0 | New York | 6,216 | 41 | 5 | 14 |
| Delaware | 456 | 10 | 0 | 7 | North Carolina | 7,813 | 113 | 14 | 25 |
| District of Columbia | 42 | 2 | 0 | 0 | North Dakota | 6,343 | 17 | 6 | 2 |
| Florida | 5,324 | 86 | 15 | 67 | Ohio | 9,633 | 148 | 15 | 38 |
| Georgia | 8,453 | 128 | 10 | 38 | Oklahoma | 5,913 | 89 | 12 | 47 |
| Hawaii | 8 | 0 | 0 | 0 | Oregon | 5,213 | 30 | 0 | 13 |
| Idaho | 2,645 | 33 | 11 | 1 | Pennsylvania | 8,946 | 69 | 8 | 17 |
| Illinois | 13,916 | 217 | 31 | 68 | Rhode Island | 189 | 0 | 0 | 0 |
| Indiana | 9,129 | 194 | 23 | 55 | South Carolina | 4,270 | 80 | 10 | 24 |
| lowa | 9,317 | 109 | 6 | 31 | South Dakota | 3,495 | 11 | 0 | 5 |
| Kansas | 10,756 | 67 | 11 | 18 | Tennessee | 5,062 | 90 | 8 | 26 |
| Kentucky | 5,037 | 69 | 5 | 20 | Texas | 18,289 | 388 | 52 | 164 |
| Lovisiana | 6,726 | 181 | 14 | 88 | Utah | 1,755 | 18 | 2 | 7 |
| Maine | 1,680 | 8 | 1 | 1 | Vermont | 1,192 | 2 | 0 | 0 |
| Maryland | 1,390 | 19 | 1 | 2 | Virginia | 4,829 | 54 | 3 | 21 |
| Massachusetts | 1,679 | 12 | 1 | 4 | Washington | 5,749 | 45 | 1 | 10 |
| Michigan | 8,028 | 134 | 13 | 51 | West Virginia | 3,632 | 20 | 1 | 8 |
| Minnesota | 8,219 | 91 | 6 | 40 | Wisconsin | 7,043 | 122 | 15 | 49 |
| Mississippi | 4,850 | 113 | 15 | 44 | Wyoming | 1,151 | 3 | 0 | 0 |
| Missouri | 8,001 | 88 | 17 | 27 | United States | 256,241 | 3,502 | 425 | 1,219 |

Figure 2-3: Iowa Highway-Rail Grade Crossing Fatalities and Injuries


NOTE FOR DATA ON THIS PAGE: Any impact, regardless of severity, between railroad on-track equipment and any user of a public or private crossing site must be reported to the U.S. Department of Transportation, Federal Railroad Administration on Form F 6180.57. The crossing site includes sidewalks and pathways at, or associated with, the crossing. Counts of fatalities and injuries include motor vehicle occupants, people not in vehicles or on the trains, as well as people on the train or railroad equipment.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Railroad Administration, Railroad Safety Statistics Annual Report 2000, Washington, DC: 2001, available at http://safetydata.fra.dot.gov/officeofsafety/ as of Oct. 22, 2001.

Table 2-11: Highway-Rail Grade Crossings by Type: 2000

|  | lowa |  |  | United States |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent |  |  |
| Total | 9,317 | 100.0 |  | 256,241 | 100.0 |  |
| Public, motor vehicle | 5,134 | 55.1 |  | 155,370 | 60.6 |  |
| Private, motor vehicle | 4,140 | 44.4 |  | 98,918 | 38.6 |  |
| Pedestrian | 43 | 0.5 |  |  | 1,953 | 0.8 |

SOURCE: U.S. Department of Transportation, Federal Railway Administration, Office of Railway Safety, Railroad Safety Statistics Annual Report 2000, Washington, DC: 2001, table 9-2, available at http://safetydata.fra.dot.gov/officeofsafety as of Nov. 21, 2001.

Table 2-12: Warning Devices at Public Highway-Rail Grade Crossings: 2000

|  | lowa |  | United States |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent |
| Total | 5,134 | 100.0 | 155,370 | 100.0 |
| Cross bucks | 2,932 | 57.1 | 71,468 | 46.0 |
| Gates | 672 | 13.1 | 34,296 | 22.1 |
| Flashing lights | 994 | 19.4 | 27,100 | 17.4 |
| Stop signs | 385 | 7.5 | 11,630 | 7.5 |
| Unknown | 81 | 1.6 | 5,253 | 3.4 |
| Special warning | 39 | 0.8 | 3,723 | 2.4 |
| HWTS, WW, bells | 30 | 0.6 | 1,417 | 0.9 |
| Other | 1 | <0.1 | 483 | 0.3 |

KEY: HWTS = highway traffic signals; $\mathrm{WW}=$ wigwags.

SOURCE: U.S. Department of Transportation, Federal Railway Administration, Office of Railway Safety, Railroad Safety Statistics Annual Report 2000, Washington, DC: 2001, table 9-4, available at http://safetydata.fra.dot.gov/officeofsafety as of Nov. 21, 2001.

Table 2-13: Types of People Injured in lowa Train Accidents/Incidents: 2000 (Includes highway-rail crossing)

| Type of person | Fatalities | Injuries |
| :--- | :---: | :---: |
| Worker on duty (railroad employee) | 1 | 164 |
| Employee not on duty | 0 | 4 |
| Passenger on train | 0 | 0 |
| Nontrespasser | 6 | 27 |
| Trespasser | 2 | 10 |
| Worker on duty (contractor) | 0 | 0 |
| Contractor (other) | 0 | 2 |
| Worker on duty (volunteer) | 0 | 1 |
| Volunteer (other) | 0 | 1 |
| Nontrespasser (off railroad property) | 0 | 2 |

Figure 2-4: Railroad Trespasser Deaths and Injuries in lowa (Excludes highway-rail crossing)


NOTE FOR DATA ON THIS PAGE: As defined by the U.S. Department of Transportation, Federal Railroad Administration, a trespasser is any person on a part of railroad property used in railroad operations whose presence is prohibited, forbidden, or unlawful. Employees who are trespassing on railroad property are reported as trespassers.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Railroad Administration, Railroad Safety Statistics Annual Report 2000, Washington, DC: 2001, available at http://safetydata.fra.dot.gov/officeofsafety/ as of Oct. 22, 2001.

Table 2-14: Iowa Transit Safety Data: 2000

|  | Collision |  |  | Noncollision |  |  | Total property damage (\$ thousands) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of incidents | Fatalities | Injuries | Number of incidents | Fatalities | Injuries |  |
| Automated guideway | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cable car | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Commuter rail | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand responsive | 5 | 0 | 0 | 3 | 0 | 2 | 28 |
| Ferry boat | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heavy rail | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Light rail | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Motor bus | 38 | 0 | 13 | 14 | 0 | 24 | 80 |
| Trolley bus | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Van pool | 4 | 0 | 2 | 0 | 0 | 0 | 5 |

Table 2-15: U.S. Transit Safety Data: 2000

|  | Collision |  |  | Noncollision |  |  | Total properiy damage (\$ thousands) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of incidents | Fatalities | Injuries | Number of incidents | Fatalities | Injuries |  |
| Automated guideway | 1 | 0 | 0 | 16 | 0 | 15 | 34 |
| Cable car | 10 | 0 | 15 | 10 | 0 | 11 | 10 |
| Commuter rail | 267 | 104 | 95 | 1,981 | 2 | 1,865 | 8,047 |
| Demand responsive | 3,055 | 6 | 1,603 | 1,510 | 11 | 1,494 | 6,910 |
| Ferry boat | 7 | 0 | 6 | 719 | 0 | 730 | 106 |
| Heavy rail | 389 | 55 | 316 | 12,388 | 22 | 10,530 | 5,034 |
| Light rail | 343 | 30 | 361 | 979 | 0 | 978 | 3,062 |
| Motor bus | 23,184 | 93 | 20,800 | 19,847 | 8 | 20,967 | 43,717 |
| Trolley bus | 122 | 0 | 103 | 257 | 0 | 265 | 103 |
| Van pool | 186 | 1 | 65 | 5 | 0 | 5 | 563 |

NOTES FOR DATA ON THIS PAGE: Collision includes at-grade crossings and suicides. Noncollision includes:

1) derailments/buses going off road; 2) personal casualties in parking facilities, inside vehicles, on right of way, boarding/alighting, and in station/bus stops; and 3) nonarson fires.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Transit Administration, 2000 National Transit Database, available at http://www.ntdprogram.com as of Dec. 5, 2001.

Table 2-16: Recreational Boating Accidents: 2000

|  | lowa | United States |
| :--- | ---: | :---: |
| Number of accidents |  |  |
| $\quad$ Total | 67 | 7,740 |
| $\quad$ Fatal | 5 | 616 |
| $\quad$ Nonfatal injury | 30 | 3,292 |
| $\quad$ Property damage | 32 | 3,832 |
| Number of persons |  |  |
| $\quad$ Killed | 5 | 701 |
| Injured | 34 | 4,355 |

NOTE: Guam, Puerto Rico, and the Virgin Islands are included in the U.S. total.

Figure 2-5: lowa Recreational Boating Accidents


NOTES FOR DATA ON THIS PAGE: An accident is listed under one category only, with fatal being the highest priority, followed by nonfatal injury, followed by property damage. For example, if two vessels are in an accident resulting in a fatality and a nonfatal injury, the accident is counted as a fatal accident involving two vessels.
These data do not include: 1) accidents involving only slight injury not requiring medical treatment beyond first-aid; 2) accidents involving property damage of $\$ 500$ or less; 3 ) accidents not caused or contributed to by a vessel, its equipment, or its appendages; and 4) accidents in which the boat was used solely as a platform for other activities, such as swimming or skin diving. Such cases are not included because the victims freely left the safety of a boat. However, the data do include accidents involving people in the water who are struck by their boat or another boat.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, U.S. Coast Guard, Boating Statistics, 2000, Washington, DC: 2001, available at http://www.uscgboating.org/Saf/pdf/Boating_Statistics_2000.pdf as of Nov. 14, 2001.

Table 2-17: Alcohol Involvement in Recreational Boating Accidents

|  | 1999 |  | 2000 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | lowa | United States | lowa | United States |
| Number of accidents |  |  |  |  |
| Total | 13 | 633 | 11 | 696 |
| Number of persons |  |  |  |  |
| Killed | 5 | 191 | 3 | 215 |
| Injured | 11 | 476 | 5 | 542 |

Figure 2-6: lowa Recreational Boating Accidents Involving Alcohol


NOTE FOR DATA ON THIS PAGE: Alcohol involvement in a boating accident includes any accident in which alcoholic beverages are consumed in the boat and the investigating official has determined that the operator was impaired or affected while operating the boat.

SOURCES FOR DATA ON THIS PAGE: U.S. Department of Transportation, U.S. Coast Guard, Boating Statistics 2000, Washington, DC: 2001; U.S. Department of Transportation, U.S. Coast Guard, Boating Statistics 1999, Washington, DC: 2000, available at http://www.uscgboating.org/Saf/pdf/Boating_Statistics_2000.pdf and http://www.uscgboating.org/Saf/pdf/Boating_Statistics_1999.pdf as of Nov. 14, 2001.

Table 2-18: Hazardous Materials Incidents: 2000 (Not including pipelines)

|  |  |  | Injuries |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Incidents | Deaths | Total | Major | Minor | (\$ thousands) |
| lowa | 118 | 0 | 0 | 0 | 0 | 589 |
| United States | 17,514 | 13 | 246 | 18 | 228 | 72,728 |

NOTES: U.S. total includes U.S. territories or foreign locations.
Hazardous material incident locations are often listed as the terminals or sorting centers where they are discovered. Therefore, states with this type of a facility may show a disproportionate number of incidents.
Hazardous materials transportation incidents required to be reported are defined in the Code of Federal Regulations (CFR), 49 CFR Part 171.15, 171.16 (Form F 5800.1). Hazardous materials deaths and injuries are caused by the hazardous material in commerce.

Figure 2-7: lowa Hazardous Materials Incidents (Not including pipelines)


NOTE FOR DATA ON THIS PAGE: Hazardous materials incident data are subject to revision and correction by the Office of Hazardous Materials Safety.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, Hazmat Summary by State for Calendar Year 2000, and earlier years, Washington, DC: 2002, available at http://hazmat.dot.gov as of Apr. 24, 2002.

Table 2-19: Iowa Hazardous Materials Incidents by Mode: 2000 (Not including pipelines)

|  |  |  | Injuries |  |  | Damages <br> Mode |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total incidents | Deaths | Major | Minor |  |  |
| (\$ thousands) |  |  |  |  |  |  |

'Includes only packaged shipments (i.e., nonbulk shipments).

Figure 2-8: lowa Hazardous Materials Incidents by Mode (Not including pipelines)


NOTE FOR DATA ON THIS PAGE: Hazardous materials incident data are subject to revision and correction by the Office of Hazardous Materials Safety.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, Hazmat Summary by State for Calendar Year 2000, and earlier years, Washington, DC: 2002, available at http://hazmat.dot.gov/ as of Apr. 24, 2002.

Table 2-20: Natural Gas Distribution Pipeline Incidents

|  | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| lowa |  |  |  |  |  | 0 |
| Number of incidents | 0 | 3 | 4 | 1 | 0 | 0 |
| Number of fatalities | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of injuries | 0 | 711 | 200 | 200 | 0 | 1,000 |
| Property damage (\$ thousands) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| United States, total | 16 | 110 | 102 | 137 | 119 | 154 |
| Number of incidents | $47^{1}$ | 9 | 17 | 19 | 22 |  |
| Number of fatalities | 43 | $109^{1}$ | 67 | 65 | 85 | 59 |
| Number of injuries | 10,951 | $16,253^{1}$ | 12,493 | 19,055 | 25,914 | 23,399 |

${ }^{1}$ Includes 33 fatalities, 42 injuries, and $\$ 5,000,000$ property damage associated with an incident in San Juan, Puerto Rico that was attributed to natural gas at the time. The cause of the incident is currently in dispute and subject to litigation.

NOTE: Incidents are reported on Form RSPA F 7100.1.

Table 2-21: Natural Gas Transmission Pipeline Incidents

|  | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| lowa |  |  |  |  |  | 1 | 0 |
| Number of incidents | 1 | 0 | 0 | 2 | 1 | 0 |  |
| Number of fatalities | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Number of injuries | 0 | 0 | 0 | 0 | 0 |  |  |
| Property damage (\$ thousands) | 75 | 0 | 0 | 110 |  |  |  |
|  |  |  |  |  |  |  |  |
| United States, total |  |  |  |  |  |  |  |
| Number of incidents | 24 | 77 | 73 | 99 | 54 | 80 |  |
| Number of fatalities | 1 | 1 | 1 | 1 | 2 | 15 |  |
| Number of injuries | 10 | 5 | 5 | 11 | 8 | 18 |  |
| Property damage (\$ thousands) | 9,958 | 13,078 | 12,078 | 29,749 | 17,696 | 17,868 |  |

NOTE: Incidents are reported on Form RSPA F 7100.2.
NOTES FOR DATA ON THIS PAGE: Incident means any of the following events:
I. An event that involves a release of gas from a pipeline or of liquefied natural gas (LNG) facility and
a) a death or personal injury necessitating in-patient hospitalization or b) estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more. II. An event that results in an emergency shutdown of an LNG facility.
III. An event that is significant, in the judgment of the operator, even though it did not meet the criteria of I or II.
Historical totals may change as the Office of Pipeline Safety receives supplemental information on incidents.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Research and Special
Programs Administration, Office of Pipeline Safety, available at http://ops.dot.gov as of Jan. 7, 2002.

Table 2-22: Hazardous Liquid Pipeline Incidents

|  | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| lowa |  |  |  |  |  |  |
| Number of incidents | 4 | 3 | 3 | 2 | 9 | 2 |
| Number of fatalities | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of injuries | 1 | 1 | 0 | 0 | 1 | 0 |
| Property damage (\$ thousands) | 108 | 73 | 580 | 1 | 2,340 | 401 |
|  |  |  |  |  |  |  |
| United States, total | 188 | 193 | 171 | 153 | 168 | 147 |
| Number of incidents | 3 | 5 | 0 | 2 | 4 | 1 |
| Number of fatalities | 11 | 13 | 5 | 6 | 20 | 4 |
| Number of injuries |  |  |  |  |  |  |
| Property damage (\$ thousands) | 32,519 | 81,083 | 42,811 | 62,865 | 43,109 | 115,704 |

NOTES: Historical totals may change as the Office of Pipeline Safety receives supplemental information on incidents. Incidents are reported on Form RSPA F 7100.1. An accident report is required for each failure in a pipeline system in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:

1. Explosion or fire not intentionally set by the operator;
2. Loss of 50 or more barrels ( 8 or more cubic meters) of hazardous liquid or carbon dioxide;
3. Escape to the atmosphere of more than 5 barrels ( 0.8 cubic meters) a day of highly volatile liquids;
4. Death of any person;
5. Bodily harm to any person resulting in: $a$. loss of consciousness; or $b$. necessity to carry the person from the scene; or c . necessity for medical treatment; or d. disability which prevents the discharge of normal duties or the pursuit of normal activities beyond the day of the accident;
6. Estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding $\$ 50,000$.

SOURCE: U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety, available at http://ops.dot.gov as of Jan. 7, 2002.


## C Freight Transportation

Table 3-1: Domestic Shipments to lowa by State: 1997 (Descending order by weight)

| State of origin | Rank | Value (\$ millions) | Weight (thousand short tons) | State of origin | Rank | Value (\$ millions) | Weight (thousand short tons) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| lowa | 1 | 39,700 | 145,820 | Mississippi | 27 | 200 | 196 |
| Wyoming | 2 | 171 | 16,382 | South Carolina | 28 | 420 | 162 |
| Minnesota | 3 | 5,360 | 8,954 | Oregon | 29 | 383 | 160 |
| Illinois | 4 | 6,875 | 8,778 | Virginia | 30 | 503 | 138 |
| Nebraska | 5 | 4,299 | 4,803 | Maine | 31 | 155 | 119 |
| Wisconsin | 6 | 3,367 | 2,724 | Idaho | 32 | 84 | 103 |
| North Carolina | 7 | 1,187 | 2,451 | Massachusetts | 33 | 451 | 62 |
| Indiana | 8 | 2,436 | 2,333 | New Mexico | 33 | 14 | 62 |
| Missouri | 9 | 2,892 | 2,065 | New Hampshire | 34 | 70 | 47 |
| Kansas | 10 | 1,402 | 1,588 | West Virginia | 35 | S | 46 |
| Texas | 11 | 2,438 | 1,533 | Arizona | 36 | 262 | 45 |
| South Dakota | 12 | 876 | 1,500 | Utah | 37 | 77 | 29 |
| Ohio | 13 | 3,701 | 1,124 | Delaware | 38 | 21 | 9 |
| Arkansas | 14 | 610 | 801 | Vermont | 39 | 36 | 7 |
| Michigan | 15 | 1,622 | 771 | Alaska | 40 | S | S |
| Colorado | 16 | 587 | 725 | Connecticut | 40 | 176 | S |
| Pennsylvania | 17 | 1,428 | 541 | District of Columbia | 40 | S | S |
| North Dakota | 18 | 287 | 453 | Florida | 40 | 484 | S |
| Oklahoma | 19 | 389 | 379 | Hawaii | 40 | S | S |
| Alabama | 20 | 413 | 376 | Louisiana | 40 | 1,085 | S |
| New York | 21 | 960 | 373 | Maryland | 40 | 235 | S |
| Kentucky | 22 | 770 | 353 | Montana | 40 | 80 | S |
| Tennessee | 23 | 1,012 | 329 | Nevada | 40 | 32 | S |
| Georgia | 24 | 658 | 256 | New Jersey | 40 | 893 | S |
| California | 25 | 1,581 | 245 | Rhode Island | 40 | 15 | S |
| Washington | 26 | 485 | 238 | From all states |  | 91,335 | 212,460 |

KEY: S = data do not meet publication standards because of high sampling variability or other reasons.
NOTES: The Commodity Flow Survey covers business establishments in mining, manufacturing, wholesale trade, and selected retail industries. The survey also covers selected auxiliary establishments (e.g., warehouses) of in-scope multiunit and retail companies. The survey excludes establishments classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most establishments in retail. Due to industry-wide reporting problems, shipments by oil and gas extraction establishments are also excluded. "From all states" total includes all domestic shipments to the destination state, including intrastate shipments.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, 1997 Commodity Flow Survey, Washington, DC: 1999, available at http://www.bts.gov/ntda/ cfs/cfs97od.html as of Nov. 2, 2001.

Table 3-2: Domestic Shipments from lowa by State: 1997 (Descending order by weight)

| State of destination | Rank | Value (\$ millions) | Weight (thousand short tons) | State of destination | Rank | Value (\$ millions) | Weight (thousand short tons) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| lowa | 1 | 39,700 | 145,820 | Florida | 17 | 1,433 | 469 |
| Illinois | 2 | 10,402 | 15,187 | North Dakota | 18 | 847 | 425 |
| Louisiana | 2 | 1,575 | 7,439 | Massachusetts | 19 | 604 | 371 |
| Minnesóta | 3 | 3,985 | 6,614 | Kentucky | 20 | 886 | 363 |
| Missouri | 3 | 3,901 | 5,505 | Maryland | 21 | 1,134 | 361 |
| Nebraska | 4 | 3,401 | 5,074 | Alabama | 22 | 521 | 307 |
| California | 4 | 4,579 | 4,814 | Oregon | 23 | 543 | 279 |
| Wisconsin | 5 | 3,448 | 3,742 | Mississippi | 24 | 506 | 275 |
| Texas | 5 | 3,583 | 2,420 | Utah | 25 | 459 | 176 |
| Ohio | 6 | 3,073 | 1,999 | Idaho | 26 | 219 | 159 |
| Michigan | 6 | 3,206 | 1,800 | Montana | 27 | 397 | 140 |
| South Dakota | 7 | 1,153 | 1,624 | South Carolina | 28 | 326 | 135 |
| Indiana | 7 | 2,464 | 1,400 | Connecticut | 29 | 446 | 131 |
| Pennsylvania | 8 | 2,120 | 1,294 | New Hampshire | 30 | 130 | 93 |
| Kansas | 8 | 1,840 | 1,253 | Maine | 31 | 151 | 74 |
| Georgia | 9 | 1,848 | 1,134 | New Mexico | 32 | 127 | 18 |
| Arkansas | 9 | 901 | 1,106 | Nevada | 33 | 223 | S |
| New York | 10 | 1,247 | 981 | West Virginia | 34 | 133 | S |
| Oklahoma | 10 | 1,209 | 959 | Wyoming | 35 | 53 | S |
| Washington | 11 | 1,079 | 845 | Rhode Island | 36 | 44 | S |
| Tennessee | 11 | 1,365 | 695 | Alaska | 37 | 11 | S |
| Colorado | 12 | 995 | 693 | Hawaii | 38 | 8 | S |
| Virginia | 13 | 982 | 656 | District of Columbia | 39 | S | S |
| Arizona | 14 | 612 | 633 | Delaware | 40 | S | S |
| North Carolina | 15 | 1,205 | 517 | Vermont | 41 | S | S |
| New Jersey | 16 | 771 | 475 | To all states |  | 110,175 | 218,894 |

KEY: $\mathrm{S}=$ data do not meet publication standards because of high sampling variability or other reasons.
NOTES: The Commodity Flow Survey covers business establishments in mining, manufacturing, wholesale trade, and selected retail industries. The survey also covers selected auxiliary establishments (e.g., warehouses) of in-scope multiunit and retail companies. The survey excludes establishments classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most establishments in retail. Due to industry-wide reporting problems, shipments by oil and gas extraction establishments are also excluded. "To all states" total includes all domestic shipments from the state of origin, including intrastate shipments.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, 1997 Commodity Flow Survey, Washington, DC: 1999, available at http://www.bts.gov/ntda/ cfs/cfs97od.html as of Nov. 2, 2001.

Table 3-3: Shipments Originating in lowa by Mode of Transportation: 1997

|  | Value |  | Short tons |  | Ton-miles |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number (\$ millions) | Percent | Number (thousands) | Percent | Number (millions) | Percent |
| All modes | 110,175 | 100.0 | 218,894 | 100.0 | 56,847 | 100.0 |
| Single modes | 100,070 | 90.8 | 215,048 | 98.2 | 53,561 | 94.2 |
| Truck | 91,338 | 82.9 | 178,277 | 81.4 | 22,966 | 40.4 |
| For-hire | 53,590 | 48.6 | 65,591 | 30.0 | 15,652 | 27.5 |
| Private truck | 37,017 | 33.6 | 112,100 | 51.2 | 7,134 | 12.5 |
| Rail | 7,224 | 6.6 | 30,467 | 13.9 | 22,570 | 39.7 |
| Water | 975 | Z | 6,064 | 2.8 | 7,968 | 14.0 |
| Shallow draft | 975 | Z | 6,064 | 2.8 | 7,968 | 14.0 |
| Great Lakes | Z | Z | Z | Z | Z | Z |
| Deep draft | Z | Z | Z | z | Z | z |
| Air (including truck and air) | 480 | Z | 21 | Z | 21 | Z |
| Pipeline | S | S | S | S | S | S |
| Multiple modes | 7,321 | 6.6 | 2,052 | z | S | S |
| Parcel, U.S. Postal Service, or courier | 6,484 | 5.9 | 301 | Z | 177 | Z |
| Truck and rail intermodal combination | 691 | 0.6 | 700 | Z | 802 | 1.4 |
| Truck and water | S | S | S | S | S | S |
| Rail and water | S | S | S | S | S | S |
| Other multiple modes | S | s | S | S | s | S |
| Other and unknown modes | 2,785 | 2.5 | 1,795 | z | 803 | 1.4 |

KEY: $S=$ data do not meet publication standards because of high sampling variability or other reasons; $Z=$ zero or less than 1 unit of measure.

NOTE: The Commodity Flow Survey covers business establishments in mining, manufacturing, wholesale trade, and selected retail industries. The survey also covers selected auxiliary establishments (e.g., warehouses) of in-scope multiunit and retail companies. The survey excludes establishments classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most establishments in retail. Due to industry-wide reporting problems, shipments by oil and gas extraction establishments are also excluded.

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, 1997 Commodity Flow Survey: Washington, DC: 1999, available at http://www.bts.gov/ntda/ cfs/cfs 97 od. html as of Nov. 2, 2001.

Table 3-4: Domestic Shipments from lowa
by Truck: 1997 (Descending order by weight)

| State of destination | Value <br> $(\$$ millions) | Weight <br> (thousand <br> short tons) |
| :--- | :---: | ---: |
| Iowa | 36,746 | 139,062 |
| Illinois | 8,131 | 7,632 |
| Minnesota | 3,482 | 4,970 |
| Nebraska | 2,889 | 4,275 |
| Missouri | 3,216 | 3,792 |
| Wisconsin | 2,927 | 3,290 |
| South Dakota | 1,013 | 1,361 |
| Ohio | 2,608 | 1,263 |
| Michigan | 2,788 | 1,242 |
| Indiana | 2,220 | 1,205 |
| All other states | 25,318 | 10,185 |
| Total, all states | 91,338 | 178,277 |

Table 3-5: Domestic Shipments to lowa by Truck: 1997 (Descending order by weight)

|  | Value <br> (\$ millions) | Weight <br> (thousand <br> short tons) |
| :--- | :---: | ---: |
| State of origin | 36,746 | $\mathbf{1 3 9 , 0 6 2}$ |
| lowa | 5,892 | 7,760 |
| Illinois | 3,810 | 5,067 |
| Minnesota | 3,821 | 3,946 |
| Nebraska | 3,008 | 2,446 |
| Wisconsin | 1,034 | 2,363 |
| North Carolina | 2,045 | 1,824 |
| Indiana | 2,092 | 1,687 |
| Missouri | 668 | 1,288 |
| South Dakota | 1,267 | 1,091 |
| Kansas | 14,979 | 6,853 |
| All other states | 75,362 | 173,387 |
| Total, all states |  |  |

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, 1997 Commodity Flow Survey, Washington, DC: 2000, data from CD-ROM, CD-EC97-CFS.

Map 3-1: Iowa Network Truck Flows: 1998


SOURCE: U.S. Department of Transportation, Federal Highway Administration, Operations Core Business Unit, Office of Freight Management and Operations

Table 3-6: Truck Shipments from lowa by Commodity: 1997 (Descending order by weight)

|  | Value <br> (\$ millions) | Weight <br> (thousand <br> short tons) |
| :--- | ---: | ---: |
| Commodity (2-digit commodity code) | 207 | 37,481 |
| Gravel and crushed stone (12) | 6,916 | 20,805 |
| Animal feed and products of animal origin, n.e.c. (04) | 1,774 | 18,892 |
| Cereal and grains (02) | 1,441 | 16,317 |
| Nonmetallic mineral products (31) | S | 14,382 |
| Other agricultural products (03) | 39 | 11,162 |
| Natural sands (11) | 5,309 | 8,638 |
| Other prepared foodstuffs and fats and oils (07) | 1,833 | 7,687 |
| Gasoline and aviation turbine fuel (17) | S | 4,662 |
| Nonmetallic minerals, n.e.c. (13) | 4,516 | 4,430 |
| Milled grain products and preparations, and bakery products (06) | 8,781 | 4,151 |
| Meat, fish, seafood and their preparations (05) | 755 | 3,284 |
| Fertilizers (22) | 3,489 | 2,958 |
| Base metal in primary or semifinished forms and in finished basic shapes (32 | 654 | 2,871 |
| Coal and petroleum products, n.e.c. (19) | 580 | 2,528 |
| Fuel oils (18) | 9,618 | 1,790 |
| Motorized and other vehicles (including parts) (36) | 8,728 | 1,374 |
| Machinery (34) | 3,306 | 1,302 |
| Plastics and rubber (24) | 2,324 | 1,216 |
| Articles of base metal (33) | 805 | 1,100 |
| Alcoholic beverages (08) | $\mathbf{S}$ | 11,247 |
| All other commodities | 91,338 | 178,277 |
| Total, all commodities |  |  |

KEY: n.e.c. $=$ not elsewhere classified; $S=$ data do not meet publication standards because high sampling variability or other reasons.

NOTE: There are 41 two-digit Standard Classification of Transported Goods (SCTG) commodity codes.
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics and U.S. Department of Commerce, U.S. Census Bureau, 1997 Commodity Flow Survey, Washington, DC: 2000, data from CDROM, CD-EC97-CFS.

Table 3-7: Rail Shipments Terminating in lowa (Short tons)

| Commodity | Percent of <br> total |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Coal | $24,445,206$ | 58 | 2000 | Percent of <br> total |
| Farm products | $6,398,831$ | 15 | $5,506,663$ | 56 |
| Chemicals | $3,271,176$ | 8 | $3,431,781$ | 14 |
| Food products | $2,416,828$ | 6 | $2,292,764$ | 9 |
| Nonmetallic minerals | $1,519,262$ | 4 | $1,514,286$ | 4 |
| All other commodities | $3,991,277$ | 9 | $4,464,238$ | 11 |
| lowa, total | $42,042,580$ | 100 | $38,842,283$ | 100 |

Table 3-8: Rail Shipments Originating in lowa (Short tons)

| Commodity | Percent of |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| total | 2000 | Percent of <br> total |  |  |
| Farm products | $18,049,295$ | 44 | $16,695,794$ | 42 |
| Food products | $14,567,999$ | 35 | $14,615,852$ | 37 |
| Chemicals | $2,328,380$ | 6 | $2,322,196$ | 6 |
| Glass and stone products | $1,629,056$ | 4 | $1,548,364$ | 4 |
| Coal | $1,431,061$ | 3 | 988,048 | 2 |
| All other commodities | $3,038,974$ | 7 | $3,604,613$ | 9 |
| lowa, total | $41,044,765$ | 100 | $39,774,867$ | 100 |

NOTE FOR DATA ON THIS PAGE: Includes the five largest commodities (by tonnage terminated or originated) of the 38 two-digit Standard Transportation Commodity Code groupings plus all others for state total. Includes intrastate shipments.

SOURCES FOR DATA ON THIS PAGE: Association of American Railroads, Railroads and States-2000, Washington, DC: January 2002, available at http://www.aar.org/aboutheindustry/stateinformation.asp as of Mar. 18, 2002; and Railroads and States -1999, Washington, DC: January 2002, available at http://www.aar.org/aboutheindustry/stateinformation.asp as of Mar. 18, 2002.

Map 3-2: Iowa Total Rail Flows: 1999


SOURCE: U.S. Department of Transportation, Federal Railroad Administration, Office of Policy

Table 3-9: Foreign and Domestic Waterborne Shipments Originating in lowa by Destination: 2000

|  | Short tons | Percent of <br> total |
| :--- | ---: | ---: |
| Destination | $11,219,851$ | 100.0 |
| Total originating in lowa | $8,618,181$ | 76.8 |
| Louisiana | 683,677 | 6.1 |
| lowa (intrastate) | 573,267 | 5.1 |
| Illinois | 495,151 | 4.4 |
| Wisconsin | 283,259 | 2.5 |
| Minnesota | 260,659 | 2.3 |
| Alabama | 138,296 | 1.2 |
| Tennessee | 72,953 | 0.7 |
| Missouri | 42,339 | 0.4 |
| Texas | 18,449 | 0.2 |
| Kentucky | 12,604 | 0.1 |
| Ohio | 9,182 | $<0.1$ |
| Pennsylvania | 5,806 | $<0.1$ |
| Indiana | 3,019 | $<0.1$ |
| Arkansas | 3,009 | $<0.1$ |
| Mississippi |  |  |

Table 3-10: Foreign and Domestic Waterborne Shipments to lowa by Origin: 2000

| Origin | Short tons | Percent of <br> total |
| :--- | ---: | ---: |
| Total shipped to lowa | $5,054,878$ | 100.0 |
| Illinois | $1,660,617$ | 32.9 |
| Louisiana | $1,125,577$ | 22.3 |
| lowa (intrastate) | $\mathbf{6 8 3}, 677$ | 13.5 |
| Kentucky | 339,601 | 6.7 |
| Missouri | 296,354 | 5.9 |
| Minnesota | 233,455 | 4.6 |
| West Virginia | 162,572 | 3.2 |
| Tennessee | 156,341 | 3.1 |
| Alabama | 114,636 | 2.3 |
| Ohio | 64,384 | 1.3 |
| Mississippi | 63,328 | 1.3 |
| Oklahoma | 59,915 | 1.2 |
| Pennsylvania | 53,062 | 1.0 |
| Texas | 41,359 | 0.8 |

SOURCE FOR DATA ON THIS PAGE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, Origin and Destination of Waterborne Commerce of the United States, 2000, available at http://www.wrsc.usace.army.mil as of Feb. 12, 2002.

Table 3-11: Foreign and Domestic Waterborne Shipments Originating in lowa by Commodity: 2000 ${ }^{1}$

| Commodity | Short tons | Percent of total |
| :--- | ---: | :---: |
| Total | $11,219,851$ | 100.0 |
| $\quad$ Food and food products | $9,102,159$ | 81.1 |
| Chemical fertilizers | 29,052 | 0.3 |
| Unknown and not elsewhere classified products ${ }^{2}$ | $2,088,640$ | 18.6 |

Table 3-12: Domestic Waterborne Shipments Originating in lowa by Commodity: $2000^{1}$

| Commodity | Short tons | Percent of total |
| :--- | ---: | :---: |
| Total | $11,219,851$ | 100.0 |
| $\quad$ Food and food products | $9,102,159$ | 81.1 |
| Chemical fertilizers | 29,052 | 0.3 |
| Unknown and not elsewhere classified products ${ }^{2}$ | $2,088,640$ | 18.6 |

1 "Domestic" includes intrastate shipments.
${ }^{2}$ To protect confidentiality, if three or more vessel operating companies do not carry a particular commodity from a state of origin to a state of destination, then that commodity is reclassified to "unknown and not elsewhere classified products."

SOURCE FOR DATA ON THIS PAGE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, State to State and Region to Region Commodity Tonnages, Public Domain database, available at http://www.wrsc.usace.army.mil/ ndc/datapdom.htm as of Oct. 30, 2001.

Table 3-13: Foreign and Domestic Waterborne Shipments to lowa by Commodity: $2000^{1}$

|  | Short tons | Percent of <br> total |
| :--- | ---: | :---: |
| Commodity | $5,054,878$ | 100.0 |
| Total | $1,807,154$ | 35.8 |
| Coal, lignite, and coal coke | 818,389 | 16.2 |
| Sand, gravel, shells, clay, salt, and slag | 538,909 | 10.7 |
| Chemical fertilizers | 210,660 | 4.2 |
| Petroleum products | 123,155 | 2.4 |
| Chemicals excluding fertilizers | 69,820 | 1.4 |
| Primary metal products | 52,950 | 1.0 |
| Non-ferrous ores and scrap | 13,152 | 0.3 |
| Food and food products | $1,420,689$ | 28.1 |

Table 3-14: Domestic Waterborne Shipments to lowa by Commodity: $2000^{1}$

| Commodity | Short tons | Percent of <br> total |
| :--- | ---: | ---: |
| Total | $5,054,878$ | 100.0 |
| $\quad$ Coal, lignite, and coal coke | $1,807,154$ | 35.8 |
| Sand, gravel, shells, clay, salt, and slag | 818,389 | 16.2 |
| Chemical fertilizers | 538,909 | 10.7 |
| Petroleum products | 210,660 | 4.2 |
| Chemicals excluding fertilizers | 123,155 | 2.4 |
| Primary metal products | 69,820 | 1.4 |
| Non-ferrous ores and scrap | 52,950 | 1.0 |
| Food and food products | 13,152 | 0.3 |
| Unknown and not elsewhere classified products ${ }^{2}$ | $1,420,689$ | 28.1 |

1"Domestic" includes intrastate shipments.
${ }^{2}$ To protect confidentiality, if three or more vessel operating companies do not carry a particular commodity from a state of origin to a state of destination, then that commodity is reclassified to "unknown and not elsewhere classified products."

SOURCE FOR DATA ON THIS PAGE: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, State to State and Region to Region Commodity Tonnages, Public Domain database, available at http://www.wrsc.usace.army.mil/ndc/ datapdom.htm as of Oct. 30, 2001.

Table 3-15: Scheduled and Nonscheduled Air Freight and Mail Enplaned: 2000 (Short tons)

| State | Freight |  | Mail |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Schaduled | Nonscheduled | Scheduled | Nonscheduled |
| Alabama | 17,233 | 139,250 | 6,796 | 25 |
| Alaska | 467,057 | 141,482 | 52,354 | 10,232 |
| Arizona | 70,430 | 66,143 | 36,115 | 27,465 |
| Arkansas | 1,886 | 12,578 | 6,534 | 2,955 |
| California | 1,176,476 | 504,757 | 237,537 | 87,278 |
| Colorado | 106,816 | 61,503 | 55,370 | 31,711 |
| Connecticut | 14,802 | 54,627 | 10,260 | 1,575 |
| Delaware | 0 | 3,251 | 0 | 0 |
| District of Columbia | 92,526 | 6,208 | 46,511 | 6,615 |
| Florida | 461,831 | 334,177 | 85,818 | 14,182 |
| Georgia | 204,986 | 66,293 | 116,174 | 3,961 |
| Hawaii | 208,048 | 52,473 | 33,768 | 476 |
| Idaho | 11,231 | 5,064 | 3,065 | 1,307 |
| Illinois | 318,957 | 202,867 | 112,959 | 9,111 |
| Indiana | 408,262 | 85,326 | 24,814 | 134,145 |
| lowa | 15,346 | 53,766 | 7,429 | 3,984 |
| Kansas | 6,200 | 20,199 | 2,597 | 18 |
| Kentucky | 16,427 | 823,924 | 5,093 | 0 |
| Lovisiana | 29,577 | 21,753 | 11,399 | 1,758 |
| Maine | 8,428 | 11,368 | 185 | 91 |
| Maryland | 25,723 | 24,781 | 19,850 | 3,573 |
| Massachusetts | 114,243 | 422,158 | 31,133 | 9,384 |
| Michigan | 87,127 | 68,108 | 41,678 | 4,848 |
| Minnesota | 85,691 | 51,285 | 59,550 | 9,192 |
| Mississippi | 398 | 11,338 | 2,198 | 0 |
| Missouri | 71,317 | 67,157 | 67,876 | 4,120 |
| Montana | 16,261 | 7,917 | 1,987 | 3,341 |
| Nebraska | 12,188 | 26,366 | 10,825 | 6,546 |
| Nevada | 45,636 | 12,641 | 30,407 | 1,373 |
| New Hampshire | 17,995 | 30,439 | 740 | 11 |
| New Jersey | 352,556 | 115,712 | 54,837 | 4,550 |
| New Mexico | 12,845 | 29,355 | 9,327 | 3,379 |
| New York | 317,258 | 167,388 | 113,892 | 5,622 |
| North Carolina | 85,996 | 85,765 | 35,985 | 3,498 |
| North Dakota | 5,424 | 383 | 222 | 2,820 |
| Ohio | 283,292 | 292,529 | 48,750 | 6,442 |
| Oklahoma | 25,773 | 16,804 | 9,022 | 9 |
| Oregon | 73,035 | 59,101 | 12,655 | 22,729 |
| Pennsylvania | 156,043 | 312,359 | 45,377 | 9,035 |
| Puerto Rico | 78,117 | 44,530 | 4,319 | 3,312 |
| Rhode Island | 3,883 | 2,753 | 2,543 | 0 |
| South Carolina | 17,237 | 76,688 | 3,234 | 6 |
| South Dakota | 8,114 | 12,298 | 1,040 | 4,583 |
| Tennessee | 1,324,829 | 60,779 | 31,342 | 6,417 |
| Texas | 440,864 | 482,724 | 138,548 | 47,644 |
| Utah | 66,549 | 133,609 | 30,908 | 25,073 |
| Vermont | 3,257 | 19 | 122 | 0 |
| Virginia | 20,961 | 35,881 | 5,189 | 3,492 |
| Washington | 152,299 | 84,367 | 34,449 | 55,975 |
| West Virginia | 4,306 | 128 | 4 | 0 |
| Wisconsin | 30,060 | 19,618 | 11,558 | 1,088 |
| Wyoming | 6,786 | 11 | 5 | 0 |
| United States, total | 7,582,577 | 5,422,002 | 1,714,348 | 584,950 |

SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 2000, Washington, DC: 2001, available at www.bts.gov/publications/airactstats2000/ as of Oct. 29, 2001.

Table 3-16: Surface Merchandise Trade with Canada and Mexico: 2000 (Millions of current dollars)

|  | Exports to |  |  | Imports from |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Canada | Mexico |  | Canada | Mexico |
| lowa | 1,513 | 336 |  | 1,749 | 205 |
| United States, total | 154,847 | 97,159 |  | 210,270 | 113,437 |

Figure 3-1: lowa Surface Merchandise Trade with Canada and Mexico (Millions of current dollars)


SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data, available at http://www.bts.gov/ntda/tbscd/reports.html as of August 2002.

Figure 3-2: Truck and Rail Imports from Mexico to lowa by Weight


Figure 3-3: Truck and Rail Imports from Canada to lowa by Weight


NOTES FOR DATA ON THIS PAGE: Data do not include transshipment activity. Transshipments are shipments that enter or exit the United States by way of a U.S. Customs port on the northern or southern border, but whose origin or destination is a country other than Canada or Mexico. All figures are based on the declared gross shipment weight and include packaging. Shipping weight for imports may be underestimated because U.S. Customs Service does not require weight to be reported at the individual commodity level for surface trade.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data, available at http://www.bts.gov/ntda/tbscd/reports.html as of August 2002.

## D Passenger Travel

Table 4-1: Commuting to Work: 2000

| Mode | lowa |  | United States |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent |
| Total | 1,424,934 | 100.0 | 127,448,586 | 100.0 |
| Car, truck, or van -- drove alone | 1,133,972 | 79.6 | 97,243,457 | 76.3 |
| Car, truck, or van -- carpooled | 154,404 | 10.8 | 14,299,090 | 11.2 |
| Public transportation (including taxi) | 11,333 | 0.8 | 6,592,685 | 5.2 |
| Walked | 49,516 | 3.5 | 3,417,546 | 2.7 |
| Other means | 14,673 | 1.0 | 1,820,578 | 1.4 |
| Worked at home | 61,036 | 4.3 | 4,075,230 | 3.2 |
| Mean travel time to work (minutes) | 17.6 |  | 24.3 |  |

NOTE: Data are for workers 16 years and over.
SOURCE: U.S. Department of Commerce, U.S. Census Bureau, Census 2000 Supplementary Survey, Profile of Selected Economic Characteristics, available at http://www.census.gov/c2ss/www/ as of Oct. 16, 2001.

Table 4-2: Licensed Drivers: 2000

| Licensed drivers | lowa |  | United States |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number | Percent | Number | Percent |
| Total | 1,952,508 | 100.0 | 190,625,023 | 100.0 |
| Male | 961,867 | 49.3 | 95,796,069 | 50.3 |
| Female | 990,641 | 50.7 | 94,828,953 | 49.7 |

Figure 4-1: Licensed Drivers in lowa by Age and Sex: 2000


SOURCE FOR TABLE 4-2 and FIGURE 4-1: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000, Washington, DC: 2001.

Table 4-3: Urban Transit Agencies in lowa: 2000

| Transit agencies | Modes provided | Urbanized area | Annual unlinked passenger trips (thousands) | Average weekday unlinked trips (thousands) | Operating funds expended (\$ millions) | Capital funds expended (\$ millions) | Vehicles available for maximum service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Des Moines Metropolitan Transit Authority | Bus, demand responsive, vanpool | Des Moines | 4,733 | 16 | 10 | 3 | 194 |
| University of lowa (CAMBUS) | Bus, demand responsive | Jowa City | 3,369 | 13 | 2 | $<1$ | 27 |
| Five Seasons Transportation | Bus, demand responsive | Cedar Rapids | 1,367 | 5 | 5 | 2 | 76 |
| lowa City Transit | Bus, demand responsive | Jowa City | 1,304 | 5 | 3 | $<1$ | 31 |
| Davenport Public Transit | Bus, demand responsive | Davenport-Rock IslandMoline, IA-IL | 1,244 | 4 | 3 | $<1$ | 27 |
| Metropolitan Transit Authority of Black Hawk County | Bus, demand responsive | Waterloo-Cedar Falls, IA | 523 | 2 | 3 | $<1$ | 48 |
| City of Dubuque (Key Line) | Bus, demand responsive | Dubuque, IA-IL. | 504 | 2 | 1 | $<1$ | 18 |
| Bettendorf Transit System | Bus, demand responsive | Davenport-Rock IslandMoline, IA-IL | 144 | $<1$ | $<1$ | $<1$ | 12 |

[^0] http://www.ntdprogram.com/NTD/Profiles.nsf/ProfileInformation? OpenForm\&2000\&All as of Dec. 6, 2001.

Figure 4-2: Overseas Visitors to lowa ${ }^{1}$

${ }^{1}$ International travelers to the United States from Canada and Mexico are not included.
KEY: $\mathrm{U}=$ data are unavailable.

SOURCES: U.S. Department of Commerce, International Trade Administration, Office of Tourism Industries, Overseas Visitors to Select U.S. States and Territories 2000-1999 (Ranked by 2000 Market Share), Washington, DC: 2001, available at http://tinet.ita.doc.gov/ as of Oct. 19, 2001; U.S. Department of Commerce, International Trade Administration, Office of Tourism Industries, Overseas Visitors to Select U.S. States and Territories 1996-1995, Washington, DC: 2001, available at http://tinet.ita.doc.gov/ as of Nov. 13, 2001.

# E Registered Vehicles and Vehicle-Miles Traveled 

Table 5-1: lowa and U.S. Motor-Vehicle Registrations: 2000

|  | Private and <br> commercial | Publicly <br> owned | lowa <br> total | United States <br> total |
| :--- | ---: | ---: | ---: | ---: |
| Motor vehicle type | $3,184,479$ | 48,415 | $3,232,894$ | $225,821,241$ |
| All motor vehicles | $1,742,231$ | 9,459 | $1,751,690$ | $133,621,420$ |
| Automobiles | 1,452 | 6,771 | 8,223 | 746,125 |
| Buses | $1,314,375$ | 31,935 | $1,346,310$ | $87,107,628$ |
| Trucks | $1,126,370$ | U | $1,126,370$ | $77,796,827$ |
| Light trucks $_{\text {Farm trucks }}^{\text {Truck tractors }}$ | 24,150 | U | 24,150 | $1,885,170$ |
| Motorcycles | 62,957 | U | 62,957 | $1,587,611$ |

${ }^{1}$ Includes light trucks (pickups, vans, sport utility vehicles, and other light trucks) as well as medium and large trucks.

KEY: $\mathrm{U}=$ data are unavailable.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000, Washington, DC: 2001, tables MV-1 and MV-9.

Table 5-2: Iowa and U.S. Trailer and Semi-Trailer Registrations: $2000^{1}$

| Type | lowa | United States |
| :--- | ---: | ---: |
| Total | 503,383 | $21,541,490$ |
| Private and commercial | 497,416 | $21,283,681$ |
| $\quad$ Commercial trailers $^{2}$ | 127,764 | $4,685,606$ |
| Light farm trailers, car trailers, etc. $^{3}$ | 299,446 | $14,113,392$ |
| House trailers | 70,206 | $2,484,683$ |
|  |  |  |
| Publicly owned | 5,967 | 257,809 |
| Federal government | 21 | 4,277 |
| State, county, municipal government | 5,946 | 253,532 |

'The completeness of data on trailer registrations varies greatly among states. Data are reported to the extent available and, in some cases, are supplemented by estimates of the Federal Highway Administration.
${ }^{2}$ This row includes all commercial type vehicles and semi-trailers that are in private or for-hire use.
${ }^{3}$ Several states do not require the registration of light farm or automobile trailers.

NOTE: Mobile homes and house trailers are shown for states that require registration and are able to segregate them from other trailers. In states where this classification is not available, house trailers are included with light car trailers.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000, Washington, DC: 2001, table MV-11.

## Vehicles

Table 5-3: lowa Truck Characteristics and Use: 1997 (Percent unless otherwise specified)

| Vehicular and operational characteristics | All trucks | Trucks, excluding pickups, panels, vans, sport utilities, and station wagons | Vehicular and operational characteristics | All trucks | Trucks, excluding pickups, panels, vans, sport utilities, and station wagons |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total, number (thousands) | 979.3 | 124.3 |  |  |  |
| Major use | 100.0 | 100.0 | Year model | 100.0 | 100.0 |
| Agriculture | 14.7 | 26.8 | 1 to 2 years old | 8.8 | 10.6 |
| Forestry and lumbering | 0.4 | 0.3 | 3 to 4 years old | 13.6 | 13.6 |
| Mining and quarrying | 0.1 | 0.7 | Over 4 years old | 77.6 | 75.9 |
| Construction | 7.3 | 16.5 |  |  |  |
| Manufacturing | 0.9 | 4.0 | Vehicle acquisition | 100.0 | 100.0 |
| Wholesale and retail trade | 4.3 | 10.1 | Purchased new | 34.7 | 35.4 |
| For-hire transportation | 3.2 | 23.9 | Purchased used | 62.9 | 52.4 |
| Utilities and service | 5.4 | 8.0 | Leased from someone or | 2.4 | 12.2 |
| Personal transportation | 60.7 | 2.4 | not reported |  |  |
| Other and not reported | 3.0 | 7.2 |  |  |  |
|  |  |  | Truck type | 100.0 | 100.0 |
| Body type | 100.0 | 100.0 | Single-unit trucks | 92.7 | 57.5 |
| Pickup, panel, minivan, and sport utility | 87.3 | NA | 2 axles <br> 3 axles or more | 91.1 1.6 | 44.7 12.8 |
| Platform and cattlerack | 3.4 | 26.8 | Combination | 7.3 | 42.5 |
| Van | 3.2 | 25.2 | 3 axles | 0.7 | 1.7 |
| Public utility | 0.3 | 2.6 | 4 axles | 2.1 | 6.6 |
| Multistop or stepvans | 0.6 | 4.4 | 5 axles or more | 4.5 | 34.2 |
| Dump | 1.1 | 8.9 | Trailer not specified | V | $\checkmark$ |
| Tank for liquids or dry bulk | 0.9 | 7.0 |  |  |  |
| Other or not reported | 3.2 | 25.0 | Range of operation | 100.0 | 100.0 |
|  |  |  | Local | 72.7 | 50.1 |
| Vehicle size | 100.0 | 100.0 | Short-range | 14.4 | 17.2 |
| Light | 88.6 | 13.3 | Long-range | 6.7 | 24.3 |
| Medium | 2.6 | 17.2 | Off-the-road or not | 6.2 | 8.4 |
| Light-heavy | 1.6 | 12.4 | reported |  |  |
| Heavy-heavy | 7.2 | 57.1 |  |  |  |
|  |  |  | Fuel type | 100.0 | 100.0 |
| Annual miles driven | 100.0 | 100.0 | Gasoline | 89.8 | 40.9 |
| Less than 5,000 | 25.5 | 34.2 | Diesel, liquefied gas, | 9.9 | 57.3 |
| 5,000 to 9,999 | 19.8 | 13.3 | and other |  |  |
| 10,000 to 19,999 | 35.9 | 11.6 | Not reported | 0.3 | 1.8 |
| 20,000 to 29,999 | 11.3 | 7.3 |  |  |  |
| 30,000 or more | 7.5 | 33.6 |  |  |  |

KEY: $\mathrm{NA}=$ not applicable; $\mathrm{V}=$ less than 0.05 percent.
SOURCE: U.S. Department of Commerce, U.S. Census Bureau, Vehicle Inventory and Use Survey, state-specific report, Washington, DC: 1999, available at http://www.census.gov/econ/www/viusmain.html as of Dec. 27, 2001.

Table 5-4: Highway Vehicle-Miles Traveled (VMT): 2000

| State | Total VMT (millions) | VMT per capita | State | Total VMT (millions) | VMT per capita |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | 56,534 | 12,716 | Montana | 9,882 | 10,812 |
| Alaska | 4,613 | 7,501 | Nebraska | 18,081 | 10,568 |
| Arizona | 49,768 | 11,428 | Nevada | 17,639 | 9,504 |
| Arkansas | 29,167 | 11,107 | New Hampshire | 12,021 | 9,687 |
| California | 306,649 | 9,053 | New Jersey | 67,446 | 8,015 |
| Colorado | 41,771 | 9,712 | New Mexico | 22,760 | 13,580 |
| Connecticut | 30,756 | 9,057 | New York | 129,057 | 6,801 |
| Delaware | 8,240 | 10,510 | North Carolina | 89,504 | 11,120 |
| Dist. of Columbia | 3,498 | 6,115 | North Dakota | 7,217 | 11,241 |
| Florida | 152,136 | 9,609 | Ohio | 105,898 | 9,328 |
| Georgia | 105,010 | 12,969 | Oklahoma | 43,355 | 12,563 |
| Hawaii | 8,543 | 7,014 | Oregon | 35,010 | 11,175 |
| Idaho | 13,534 | 10,467 | Pennsylvania | 102,337 | 8,316 |
| Illinois | 102,866 | 8,225 | Rhode Island | 8,359 | 8,326 |
| Indiana | 70,862 | 12,779 | South Carolina | 45,538 | 7,971 |
| lowa | 29,433 | 10,059 | South Dakota | 8,432 | 11,168 |
| Kansas | 28,130 | 10,599 | Tennessee | 65,732 | 11,698 |
| Kentucky | 46,803 | 11,579 | Texas | 220,064 | 10,613 |
| Louisiana | 40,849 | 9,430 | Utah | 22,597 | 11,226 |
| Maine | 14,190 | 11,129 | Vermont | 6,811 | 11,184 |
| Maryland | 50,174 | 9,809 | Virginia | 74,801 | 10,564 |
| Massachusetts | 52,796 | 8,513 | Washington | 53,330 | 9,251 |
| Michigan | 97,792 | 9,839 | West Virginia | 19,242 | 10,684 |
| Minnesota | 52,601 | 10,693 | Wisconsin | 57,266 | 10,261 |
| Mississippi | 35,536 | 12,187 | Wyoming | 8,090 | 16,410 |
| Missouri | 67,083 | 11,990 | United States | 2,749,803 | 9,811 |

Figure 5-1: Highway Vehicle-Miles Traveled, United States and lowa


SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, annual editions, available at http://www.fhwa.dot.gov/ ohim/ohimstat.htm as of Dec. 6, 2001.

Table 5-5: Highway, Demographic, and Geographic Characteristics of Urbanized Areas in lowa: 2000

| Federal-aid urbanized area ${ }^{1}$ | Total roadway miles | Total DVMT (thousands) | Estimated population (thousands) | Net land area (square miles) | Persons per square mile | Miles of roadway per thousand persons | Total DVMT per capita | Total estimated freeway lane miles ${ }^{2}$ | Average daily traffic per freeway lane mile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Des Moines | 1,749 | 8,085 | 394 | 176 | 2,239 | 4.4 | 20.5 | 230 | 12,093 |
| Cedar Rapids | 893 | 3,013 | 154 | 135 | 1,141 | 5.8 | 19.6 | 81 | 9,185 |
| Waterloo-Cedar Falls | 785 | 2,168 | 112 | 114 | 982 | 7.0 | 19.4 | 27 | 5,022 |
| Sioux City | 599 | 1,662 | 104 | 77 | 1,351 | 5.8 | 16.0 | 57 | 6,139 |
| Iowa City | 284 | 1,199 | 78 | 32 | 2,438 | 3.6 | 15.4 | 35 | 9,764 |
| Dubuque | 352 | 1,069 | 64 | 51 | 1,255 | 5.5 | 16.7 | U | U |

'A "federal-aid urbanized area" is an area with 50,000 or more persons that, at a minimum, encompasses the land area delineated as the urbanized area by the U.S. Census Bureau. Areas are ranked by population. ${ }^{2}$ Lane miles estimated by the Federal Highway Administration (FHWA).

KEY: DVMT = daily vehicle-miles of travel; $\mathrm{U}=$ data are unavailable.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics, 2000, Washington, DC: 2001, available at http://www.fhwa.dot.gov/ohim/ohimstat.htm as of Dec. 6, 2001.

Table 5-6: lowa and U.S. Recreational Boat Registrations by Propulsion Type

|  | lowa |  | United States |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1999 | 2000 | 1999 | 2000 |
| Total | 203,081 | 223,573 | 12,738,271 | 12,782,143 |
| Powered | 169,651 | 186,337 | 11,811,562 | 11,648,769 |
| Nonpowered | 27,232 | 29,908 | 481,191 | 547,271 |
| Other | 6,198 | 7,348 | 445,518 | 590,103 |

NOTE: Data are derived from reports of states and other jurisdictions with varying registration categories. "Other" includes boats not elsewhere classified by the reporting jurisdiction.

Figure 5-2: Iowa Recreational Boat Registrations


NOTES FOR DATA ON THIS PAGE: U.S. totals include Guam, Puerto Rico, the Virgin Islands, American Samoa, and the Northern Mariana Islands. lowa statistics include all watercraft except inflatables under 7 feet in length and canoes/kayaks under 13 feet in length. U.S. total does not include sailboards, which are numbered in some states.

SOURCES FOR DATA ON THIS PAGE: U.S. Department of Transportation, U.S. Coast Guard, Boating Statistics, 2000 and Boating Statistics, 1999, Washington, DC: 2001, available at http://www.uscgboating.org/Saf/pdf/Boating_Statistics_2000.pdf and 1999.pdf as of Nov. 14, 2001.

Table 5-7: General Aviation and Air Taxi Aircraft and Hours Flown: 2000 (Excludes commuter aircraft)

| State | Active aircraft | Hours flown (thousands) |
| :---: | :---: | :---: |
| Alabama | 3,480 | 462 |
| Alaska | 5,925 | 692 |
| Arizona | 6,062 | 824 |
| Arkansas | 2,660 | 442 |
| California | 23,454 | 3,183 |
| Colorado | 5,246 | 651 |
| Connecticut | 1,793 | 241 |
| Delaware | 2,068 | 303 |
| District of Columbia | 152 | 13 |
| Florida | 14,096 | 2,299 |
| Georgia | 4,809 | 702 |
| Hawaii | 435 | 184 |
| Idaho | 2,328 | 336 |
| Illinois | 7,478 | 998 |
| Indiana | 3,964 | 503 |
| lowa | 2,772 | 331 |
| Kansas | 3,611 | 494 |
| Kentucky | 2,033 | 244 |
| Louisiana | 3,012 | 677 |
| Maine | 1,086 | 114 |
| Maryland | 3,436 | 487 |
| Massachusetts | 2,717 | 329 |
| Michigan | 7,236 | 935 |
| Minnesota | 5,141 | 707 |
| Mississippi | 2,038 | 256 |
| Missouri | 3,777 | 545 |
| Montana | 2,374 | 271 |
| Nebraska | 2,013 | 275 |
| Nevada | 2,715 | 774 |
| New Hampshire | 1,485 | 203 |
| New Jersey | 3,791 | 583 |
| New Mexico | 2,990 | 430 |
| New York | 6,082 | 816 |
| North Carolina | 5,620 | 769 |
| North Dakota | 1,585 | 419 |
| Ohio | 6,486 | 840 |
| Oklahoma | 4,080 | 648 |
| Oregon | 4,687 | 564 |
| Pennsylvania | 5,648 | 724 |
| Rhode Island | 393 | 45 |
| South Carolina | 2,689 | 387 |
| South Dakota | 1,376 | 157 |
| Tennessee | 4,228 | 638 |
| Texas | 18,869 | 2,980 |
| Utah | 1,673 | 234 |
| Vermont | 600 | 57 |
| Virginia | 3,354 | 414 |
| Washington | 7,166 | 912 |
| West Virginia | 1,075 | 136 |
| Wisconsin | 4,649 | 590 |
| Wyoming | 778 | 98 |
| United States, total | 217,215 | 30,916 |

NOTE: These data are derived from a sample survey of general aviation and air taxi aircraft. The data are estimates subject to sampling as well as nonsampling error.
SOURCE: U.S. Department of Transportation, Federal Aviation Administration, General Aviation and Air Taxi Activity Survey: 2000, Washington, DC: 2002, available at http://www.api.faa.gov/GASurvey/index.htm as of July 22, 2002.

Table 5-8: Active Aviation Pilots and Flight Instructors: $2000{ }^{1}$

| State | Total | Students | Airplane pilots ${ }^{2}$ |  |  | Misc. ${ }^{3}$ | Flight instructor ${ }^{4}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Private | Commercial | Airline transport |  |  |
| Alabama | 7,262 | 1,170 | 3,065 | 1,649 | 1,084 | 294 | 920 |
| Alaska | 8,638 | 833 | 3,686 | 2,130 | 1,906 | 83 | 1,118 |
| Arizona | 17,429 | 2,329 | 6,508 | 3,345 | 4,654 | 593 | 2,617 |
| Arkansas | 4,988 | 776 | 2,153 | 1,206 | 788 | 65 | 634 |
| California | 71,053 | 10,173 | 31,571 | 13,448 | 12,786 | 3,075 | 8,984 |
| Colorado | 17,539 | 2,320 | 6,256 | 3,144 | 5,138 | 681 | 2,549 |
| Connecticut | 6,523 | 944 | 2,714 | 989 | 1,648 | 228 | 837 |
| Delaware | 1,462 | 245 | 532 | 236 | 413 | 36 | 233 |
| District of Columbia | 476 | 86 | 191 | 99 | 69 | 31 | 45 |
| Florida | 47,191 | 6,672 | 16,324 | 10,059 | 13,267 | 869 | 6,890 |
| Georgia | 18,087 | 2,441 | 6,053 | 2,845 | 6,448 | 300 | 2,107 |
| Hawaii | 2,927 | 471 | 611 | 587 | 1,031 | 227 | 0 |
| Idaho | 4,480 | 581 | 2,148 | 950 | 711 | 90 | 535 |
| Illinois | 21,521 | 3,497 | 9,168 | 3,832 | 4,606 | 418 | 3,054 |
| Indiana | 11,715 | 1,874 | 5,728 | 2,091 | 1,867 | 155 | 1,488 |
| lowa | 6,135 | 912 | 3,372 | 1,130 | 667 | 54 | 771 |
| Kansas | 8,412 | 1,169 | 4,136 | 1,729 | 1,268 | 110 | 1,184 |
| Kentucky | 6,720 | 988 | 2,397 | 1,155 | 2,104 | 76 | 919 |
| Lovisiana | 5,894 | 911 | 2,224 | 1,474 | 1,035 | 250 | 701 |
| Maine | 3,105 | 444 | 1,494 | 608 | 522 | 37 | 384 |
| Maryland | 8,383 | 1,217 | 3,499 | 1,535 | 1,869 | 263 | 1,194 |
| Massachusetts | 9,692 | 1,583 | 4,535 | 1,711 | 1,480 | 383 | 1,242 |
| Michigan | 17,755 | 3,008 | 8,517 | 3,008 | 2,852 | 370 | 2,388 |
| Minnesota | 15,530 | 2,244 | 6,728 | 2,949 | 3,417 | 192 | 2,025 |
| Mississippi | 4,111 | 594 | 1,595 | 1,086 | 750 | 86 | 490 |
| Missouri | 11,070 | 1,549 | 5,008 | 2,045 | 2,312 | 156 | 1,548 |
| Montana | 3,613 | 481 | 1,718 | 878 | 469 | 67 | 431 |
| Nebraska | 4,141 | 654 | 2,054 | 884 | 524 | 25 | 432 |
| Nevada | 6,270 | 691 | 2,131 | 1,141 | 2,095 | 212 | 864 |
| New Hampshire | 4,242 | 499 | 1,544 | 676 | 1,417 | 106 | 613 |
| New Jersey | 11,403 | 1,826 | 4,909 | 1,833 | 2,417 | 418 | 1,517 |
| New Mexico | 4,406 | 787 | 1,788 | 916 | 772 | 143 | 549 |
| New York | 18,649 | 3,628 | 8,020 | 3,305 | 2,819 | 877 | 2,516 |
| North Carolina | 14,769 | 2,148 | 6,144 | 2,600 | 3,615 | 262 | 1,732 |
| North Dakota | 2,458 | 401 | 1,153 | 688 | 199 | 17 | 292 |
| Ohio | 19,301 | 3,065 | 8,602 | 3,338 | 3,857 | 439 | 2,839 |
| Oklahoma | 8,654 | 1,392 | 3,839 | 1,893 | 1,453 | 77 | 1,180 |
| Oregon | 9,942 | 1,625 | 4,972 | 1,910 | 1,175 | 260 | 1,123 |
| Pennsylvania | 18,022 | 2,683 | 7,604 | 3,075 | 4,124 | 536 | 2,575 |
| Rhode Island | 1,216 | 184 | 569 | 210 | 223 | 30 | 136 |
| South Carolina | 6,363 | 933 | 2,708 | 1,343 | 1,244 | 135 | 714 |
| South Dakota | 2,230 | 328 | 1,034 | 549 | 302 | 17 | 263 |
| Tennessee | 12,132 | 1,675 | 4,351 | 2,024 | 3,826 | 256 | 1,600 |
| Texas | 48,396 | 6,613 | 16,857 | 9,044 | 14,839 | 1,043 | 6,487 |
| Utah | 6,591 | 1,205 | 2,678 | 1,116 | 1,468 | 124 | 768 |
| Vermont | 1,487 | 220 | 681 | 261 | 264 | 61 | 162 |
| Virginia | 14,640 | 1,987 | 5,114 | 2,835 | 4,299 | 405 | 2,055 |
| Washington | 21,116 | 2,929 | 8,170 | 3,896 | 5,535 | 586 | 2,658 |
| West Virginia | 1,992 | 312 | 953 | 399 | 293 | 35 | 274 |
| Wisconsin | 11,275 | 1,768 | 5,682 | 1,884 | 1,830 | 111 | 1,455 |
| Wyoming | 1,812 | 254 | 901 | 354 | 273 | 30 | 195 |
| United States, total | 593,218 | 87,319 | 244,389 | 112,092 | 134,024 | 15,394 | 78,287 |

'An active pilot is a person who holds a pilot certificate and a valid medical certificate issued within the last 25 months.
${ }^{2}$ Includes pilots with an airplane only certificate and those with an airplane and a helicopter and/or glider certificate.
${ }^{3}$ Includes helicopter, glider, and recreational pilots. Does not include pilots holding an airplane certificate. A
recreational pilot may fly no more than one passenger in a light, single engine aircraft with no more than four seats during good weather and daylight hours and, unless authorized, no more than 50 miles from the home airport.
${ }^{4}$ Not included in total. A flight instructor must hold a flight instructor certificate in addition to a pilot certificate.
NOTE: Excludes U.S. military personnel holding civilian certificates who are stationed in a foreign country and pilots in U.S. territories.

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, U.S. Civil Airmen Statistics 2000, Washington, DC: 2002, available at http://www.api.faa.gov/CivilAir/index.htm as of July 22, 2002.

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Table 6-1: Transportation and Warehousing Establishments and Employment in lowa: 1999

| Business type | Establishments ${ }^{7}$ <br> (number) | Number of <br> employees | Annual payroll <br> (\$ thousands) |
| :--- | :---: | ---: | ---: |
| Total transportation and warehousing | 3,198 | 39,701 | 1,104 |
| Air transportation | 50 | 1,019 | 27 |
| Water transportation | 6 | $100-249$ | D |
| Truck transportation | 2,492 | 26,352 | 759 |
| Transit and ground passenger transportation | 120 | 1,874 | 20 |
| Pipeline transportation | 57 | $250-499$ | D |
| Scenic and sightseeing transportation | 6 | $20-99$ | D |
| Support activities for transportation | 233 | 2,160 | 64 |
| Couriers and messengers | 141 | 5,404 | 144 |
| Warehousing and storage | 93 | 2,272 | 58 |

KEY: $D=$ withheld to avoid disclosing data for individual companies.

Table 6-2: Transportation and Warehousing Establishments and Employment in the United States: 1999

| Business type | Establishments ${ }^{7}$ <br> (number) | Number of <br> employees | Annual payroll <br> (\$ thousands) |
| :--- | ---: | ---: | ---: |
| Total transportation and warehousing | 187,339 | $3,627,057$ | $116,682,214$ |
| Air transportation | 5,285 | 582,838 | $24,414,357$ |
| Water transportation | 1,950 | 71,844 | $3,039,510$ |
| Truck transportation | 108,749 | $1,384,178$ | $43,626,168$ |
| Transit and ground passenger transportation | 16,254 | 370,022 | $6,729,332$ |
| Pipeline transportation | 2,550 | 48,149 | $3,032,689$ |
| Scenic and sightseeing transportation | 2,267 | 22,877 | 540,702 |
| Support activities for transportation | 31,392 | 440,175 | $14,915,625$ |
| Couriers and messengers | 11,938 | 578,368 | $16,725,960$ |
| Warehousing and storage | 6,954 | 128,606 | $3,657,871$ |

${ }^{1}$ The transportation and warehousing sector (North American Industrial Classification System [NAICS] 48 and 49) includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation comprise air, rail, water, road, and pipeline.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Commerce, U.S. Census Bureau, 1999 County Business Patterns, Washington, DC: May 2001, available at http://www.census.gov/epcd/cbp/ map/99data/06/999.txt as of Oct. 25, 2001.

## Economy and Finance

Table 6-3: Transportation Revenues Collected by State and Local Governments in lowa (\$ millions)

| Mode | 1995 |  | 1996 |  | 1997 |  | 1998 |  | 1999 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State | Local | State | Local | State | Local | State | Local | State | Local |
| Total (current \$) | 640 | 60 | 657 | 66 | 662 | 69 | 632 | 74 | 669 | 71 |
| Highway | 640 | 29 | 657 | 29 | 662 | 29 | 632 | 30 | 669 | 28 |
| Transit | Z | 8 | Z | 9 | Z | 10 | Z | 10 | Z | 11 |
| Air | Z | 23 | Z | 28 | Z | 29 | Z | 34 | Z | 33 |
| Water | Z | Z | Z | Z | Z | Z | Z | Z | Z | Z |
| Total (chained 1996 \$) | 655 | 62 | 657 | 66 | 646 | 67 | 606 | 71 | 625 | 67 |
| Highway | 655 | 30 | 657 | 29 | 646 | 29 | 606 | 29 | 625 | 26 |
| Transit | Z | 8 | Z | 9 | Z | 10 | Z | 10 | Z | 10 |
| Air | Z | 24 | Z | 28 | Z | 29 | Z | 32 | Z | 30 |
| Water | Z | Z | Z | Z | Z | Z | Z | Z | Z | Z |

Table 6-4: Transportation Expenditures by State and Local Governments in Iowa ${ }^{1}$ (\$ millions)

| Mode | 1995 |  | 1996 |  | 1997 |  | 1998 |  | 1999 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State | Local | State | Local | State | Local | State | Local | State | Local |
| Total (current \$) | 699 | 802 | 727 | 792 | 763 | 807 | 740 | 875 | 830 | 918 |
| Highway | 681 | 707 | 709 | 690 | 745 | 693 | 717 | 757 | 811 | 813 |
| Transit | 18 | 45 | 18 | 48 | 18 | 53 | 22 | 55 | 20 | 56 |
| Air | Z | 49 | Z | 55 | Z | 61 | Z | 62 | Z | 50 |
| Water | Z | Z | Z | Z | Z | Z | Z | 1 | Z | Z |
| Total (chained 1996 \$) | 715 | 820 | 727 | 792 | 744 | 787 | 709 | 839 | 776 | 858 |
| Highway | 696 | 723 | 709 | 690 | 726 | 676 | 688 | 726 | 757 | 759 |
| Transit | 19 | 46 | 18 | 48 | 18 | 52 | 21 | 53 | 18 | 52 |
| Air | Z | 50 | Z | 55 | Z | 60 | Z | 59 | Z | 47 |
| Water | Z | Z | Z | Z | Z | Z | Z | 1 | Z | Z |

${ }^{1}$ Includes federal grants.
KEY FOR DATA ON THIS PAGE: $Z=$ zero or less than 1 unit of measure.
NOTE FOR DATA ON THIS PAGE: Dollars are converted using a chain-type price index from U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts Tables, Washington, DC: 2001, table 7.1, available at http://www.bea.doc.gov/bea/dn/nipaweb/ as of Dec. 12, 2001.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Commerce, U.S. Census Bureau, State and Local Government Finance Estimates, available at ftp://ftp.census.gov/pub/outgoing/govs/as of October 2001.

Table 6-5: State Motor-Fuel Tax Rates: 2000 (Cents per gallon)

\left.|  |  |  | Liquified |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
| petroleum |  |  |  |  |  |$\right]$

${ }^{1}$ Tax rates for gasoline blended with 10 percent ethanol.
NOTE: Tax rates in effect as of Jan. 1, 2000.
SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000, Washington, DC: 2001, table MF-121T.

## $=$ <br> G Energy and Environment

Table 7-1: Transportation Energy Consumption: 1999 (Trillion Btu)

| State | Petroleum |  |  |  |  |  |  |  |  | Net energyElectrical <br> system <br> energy <br> losses $^{5}$ |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Natural gas ${ }^{\prime}$ | Distillate fuel (diesel) | Jet fuel | Motor gasoline ${ }^{2}$ | Residual fuel | Other ${ }^{3}$ | Total | Ethanol ${ }^{4}$ | Electricity |  |  |  |
| Alabama | 22.9 | 118.4 | 11.1 | 298.0 | 6.5 | 3.7 | 437.8 | 5 | 0.0 | 460.7 | 0.0 | 460.7 |
| Alaska | 4.5 | 21.5 | 134.1 | 32.9 | 1.7 | 3.3 | 193.5 | 0.4 | 0.0 | 198.0 | 0.0 | 198.0 |
| Arizona | 19.0 | 92.0 | 54.6 | 283.9 | 0.0 | 3.1 | 433.5 | 1.3 | 0.0 | 452.5 | 0.0 | 452.5 |
| Arkansas | 9.1 | 84.5 | 25.9 | 172.6 | 0.0 | 5.1 | 288.0 | 0.0 | 0.0 | 297.2 | 0.0 | 297.2 |
| California | 12.9 | 373.3 | 559.5 | 1,749.0 | 175.3 | 23.6 | 2,880.6 | 4.9 | 1.8 | 2,895.3 | 3.6 | 2,898.9 |
| Colorado | 8.4 | 67.8 | 44.2 | 241.5 | 0.0 | 3.9 | 357.4 | 4.5 | S | 365.8 | S | 365.9 |
| Connecticut | 0.8 | 34.4 | 13.9 | 183.9 | 0.1 | 1.9 | 234.2 | 0.3 | 0.0 | 234.9 | 0.0 | 234.9 |
| Delaware | 0.1 | 8.6 | 0.6 | 47.7 | 13.2 | 0.5 | 70.6 | 0.0 | 0.0 | 70.6 | 0.0 | 70.6 |
| Dist. of Columbia | 0.3 | 3.6 | 0.0 | 20.5 | 0.0 | 0.3 | 24.5 | 0.0 | 0.6 | 25.3 | 1.2 | 26.5 |
| Florida | 7.2 | 210.3 | 164.3 | 897.5 | 57.4 | 8.7 | 1,338.1 | 0.1 | 0.2 | 1,345.4 | 0.4 | 1,345.8 |
| Georgia | 9.1 | 196.7 | 86.8 | 566.9 | 5.7 | 5.2 | 861.3 | 0.0 | 0.3 | 870.8 | 0.7 | 871.4 |
| Hawaii | 0.0 | 9.1 | 53.7 | 45.8 | 12.9 | 0.8 | 122.3 | 0.0 | 0.0 | 122.3 | 0.0 | 122.3 |
| Idaho | 4.7 | 34.0 | 4.9 | 80.8 | 0.0 | 1.2 | 121.0 | 0.0 | 0.0 | 125.7 | 0.0 | 125.7 |
| Illinois | 55.3 | 202.6 | 103.4 | 612.7 | 0.2 | 11.8 | 930.8 | 20.3 | 1.5 | 987.5 | 2.9 | 990.5 |
| Indiana | 14.6 | 186.4 | 63.5 | 373.7 | 1.9 | 5.1 | 630.6 | 9.0 | 0.1 | 645.3 | 0.1 | 645.4 |
| lowa | 7.9 | 74.9 | 5.0 | 185.9 | 0.0 | 3.8 | 269.6 | 6.7 | S | 277.5 | S | 277.5 |
| Kansas | 31.6 | 60.5 | 19.7 | 170.7 | 0.1 | 5.2 | 256.2 | 0.5 | 0.0 | 287.8 | 0.0 | 287.8 |
| Kentucky | 17.2 | 122.9 | 39.5 | 261.0 | 0.0 | 3.6 | 427.0 | 0.3 | 0.0 | 444.2 | 0.0 | 444.2 |
| Louisiana | 50.0 | 147.4 | 192.9 | 255.9 | 153.5 | 5.1 | 754.9 | 0.1 | S | 804.9 | S | 804.9 |
| Maine | 0.0 | 22.2 | 4.9 | 83.7 | 1.4 | 1.0 | 113.2 | 0.0 | S | 113.2 | S | 113.2 |
| Maryland | 3.4 | 73.3 | 22.3 | 295.0 | 7.4 | 2.2 | 400.3 | 0.2 | 0.5 | 404.1 | 1.0 | 405.1 |
| Massachusetts | 2.8 | 57.0 | 45.8 | 328.7 | 0.2 | 4.1 | 435.7 | 0.0 | 0.8 | 439.2 | 1.6 | 440.8 |
| Michigan | 23.3 | 132.7 | 51.7 | 624.5 | 0.3 | 12.2 | 821.4 | 3.4 | 5 | 844.7 | S | 844.8 |
| Minnesota | 22.5 | 93.4 | 71.4 | 306.5 | S | 5.8 | 477.1 | 19.5 | 0.0 | 499.6 | 0.0 | 499.6 |
| Mississippi | 66.1 | 81.2 | 54.8 | 196.2 | 6.9 | 3.6 | 342.7 | 0.0 | 0.0 | 408.9 | 0.0 | 408.9 |
| Missouri | 6.8 | 172.0 | 72.3 | 364.6 | S | 6.6 | 615.6 | 1.4 | 0.1 | 622.5 | 0.1 | 622.6 |
| Montana | 6.1 | 34.7 | 4.7 | 59.1 | 0.0 | 1.9 | 100.4 | 5 | 0.0 | 106.5 | 0.0 | 106.5 |
| Nebraska | 2.9 | 76.9 | 8.9 | 103.1 | 0.0 | 2.7 | 191.5 | 2.1 | 0.0 | 194.4 | 0.0 | 194.4 |
| Nevada | 0.9 | 36.9 | 47.4 | 111.7 | 0.0 | 0.9 | 196.9 | 2.3 | 0.0 | 197.8 | 0.0 | 197.8 |
| New Hampshire | S | 14.5 | 4.6 | 80.8 | S | 0.5 | 100.5 | 0.0 | 0.0 | 100.5 | 0.0 | 100.5 |
| New Jersey | 4.3 | 120.9 | 206.1 | 476.6 | 48.9 | 5.1 | 857.6 | 0.7 | 0.5 | 862.4 | 0.9 | 863.3 |
| New Mexico | 47.4 | 55.5 | 15.4 | 113.7 | 0.0 | 1.9 | 186.5 | 2.0 | 0.0 | 233.9 | 0.0 | 233.9 |
| New York | 8.6 | 147.5 | 51.7 | 690.6 | 47.1 | 7.3 | 944.2 | 1.2 | 9.1 | 961.9 | 17.7 | 979.6 |
| North Carolina | 10.9 | 132.6 | 38.6 | 502.6 | 1.0 | 5.3 | 680.0 | 3.0 | 0.0 | 690.9 | 0.0 | 690.9 |
| North Dakota | 9.9 | 26.0 | 2.3 | 43.0 | 0.0 | 1.2 | 72.5 | 0.4 | 0.0 | 82.4 | 0.0 | 82.4 |
| Ohio | 18.5 | 222.5 | 93.3 | 623.2 | 0.1 | 11.1 | 950.2 | 19.6 | 0.2 | 968.9 | 0.3 | 969.2 |
| Oklahoma | 24.5 | 111.7 | 37.3 | 223.3 | 0.0 | 5.7 | 378.0 | 0.0 | 0.0 | 402.5 | 0.0 | 402.5 |
| Oregon | 10.9 | 70.2 | 36.5 | 188.0 | 18.0 | 4.3 | 317.0 | 1.1 | 0.1 | 328.0 | 0.2 | 328.2 |
| Pennsylvania | 37.3 | 197.6 | 90.4 | 607.0 | 37.8 | 9.7 | 942.6 | 1.0 | 1.3 | 981.3 | 2.6 | 983.9 |
| Rhode Island | 0.3 | 9.3 | 6.0 | 49.8 | S | 0.5 | 65.6 | 0.0 | 0.0 | 65.9 | 0.0 | 65.9 |
| South Carolina | 3.7 | 85.8 | 8.7 | 273.0 | 2.8 | 2.3 | 372.7 | 0.0 | 0.0 | 376.4 | 0.0 | 376.4 |
| South Dakota | 6.1 | 21.1 | 4.4 | 51.5 | 0.0 | 1.3 | 78.2 | 1.8 | 0.0 | 84.3 | 0.0 | 84.3 |
| Tennessee | 25.9 | 131.7 | 67.0 | 360.3 | 0.0 | 5.1 | 564.2 | 0.0 | S | 590.1 | S | 590.1 |
| Texas | 73.0 | 479.2 | 594.8 | 1,252.3 | 131.9 | 17.6 | 2,475.8 | 4.8 | 0.1 | 2,548.8 | 0.1 | 2,549.0 |
| Utah | 2.8 | 45.1 | 42.2 | 119.2 | 0.0 | 1.7 | 208.2 | 0.9 | S | 211.1 | S | 211.1 |
| Vermont | S | 12.3 | 0.8 | 39.7 | 0.0 | 0.4 | 53.2 | 0.0 | 0.0 | 53.2 | 0.0 | 53.2 |
| Virginia | 8.3 | 142.3 | 52.8 | 438.1 | 9.2 | 3.9 | 646.5 | 2.8 | 0.3 | 655.1 | 0.6 | 655.7 |
| Washington | 8.2 | 95.9 | 125.6 | 325.2 | 57.4 | 4.6 | 608.9 | 2.5 | 0.1 | 617.1 | 0.1 | 617.3 |
| West Virginia | 31.5 | 46.9 | 1.0 | 100.5 | 0.0 | 1.7 | 150.1 | S | 0.0 | 181.6 | 0.0 | 181.6 |
| Wisconsin | 4.2 | 101.0 | 19.3 | 303.0 | 5 | 4.3 | 427.6 | 2.5 | S | 431.8 | S | 431.8 |
| Wyoming | 14.5 | 62.4 | 1.0 | 39.8 | 0.0 | 2.2 | 105.3 | 0.0 | 0.0 | 119.8 | 0.0 | 119.8 |
| United States | 761.1 | 5,160.9 | 3,461.8 | 15,855.4 | 798.9 | 234.8 | 25,511.8 | 121.6 | 17.5 | 26,290.3 | 34.3 | 26,324.6 |

${ }^{1}$ Inciudes supplemental gaseous fuels. Transportation use of natural gas is consumed in the operation of pipelines, primarily in compressors, or consumed as vehicle fuel.
${ }^{2}$ Includes ethanol blended into motor gasoline.
${ }^{3}$ "Other" is the sum of aviation gasoline, liquefied petroleum gas (LPG), and lubricants.
${ }^{4}$ Ethanol blended into motor gasoline is included in motor gasoline, but is also shown separately to display the use of renewable energy by the transportation sector. It is counted only once in the total.
${ }^{5}$ Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.
$\mathbf{K E Y}: \mathrm{Btu}=\mathrm{British}$ thermal unit; $\mathrm{S}=$ less than 0.05 trillion Btu.
NOTE: Totals may not equal sum of components due to rounding.
SOURCE: U.S. Department of Energy, Energy Information Administration, State Energy Data Report 1999, Washington, DC: May 2001, table 7, available at http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf as of Feb. 21, 2002.

Table 7-2: Energy Consumption by End-Use Sector: 1999
(Trillion Btu)

| State | Total energy consumed ${ }^{1}$ | End-use sectors ${ }^{2}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Transportation |  | Residential |  | Commercial |  | Industrial |  |
|  |  | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Alabama | 2,004.8 | 460.7 | 23.0 | 341.0 | 17.0 | 226.3 | 11.3 | 976.7 | 48.7 |
| Alaska | 694.7 | 198.0 | 28.5 | 47.7 | 6.9 | 63.1 | 9.1 | 385.9 | 55.5 |
| Arizona | 1,219.8 | 452.5 | 37.1 | 279.0 | 22.9 | 266.7 | 21.9 | 221.6 | 18.2 |
| Arkansas | 1,203.7 | 297.2 | 24.7 | 193.3 | 16.1 | 123.8 | 10.3 | 589.4 | 49.0 |
| California | 8,375.4 | 2,898.9 | 34.6 | 1,416.2 | 16.9 | 1,236.5 | 14.8 | 2,823.7 | 33.7 |
| Colorado | 1,155.5 | 365.9 | 31.7 | 261.4 | 22.6 | 255.1 | 22.1 | 273.1 | 23.6 |
| Connecticut | 839.3 | 234.9 | 28.0 | 245.2 | 29.2 | 196.8 | 23.4 | 162.4 | 19.3 |
| Delaware | 278.8 | 70.6 | 25.3 | 56.0 | 20.1 | 44.8 | 16.1 | 107.4 | 38.5 |
| District of Columbia | 169.8 | 26.5 | 15.6 | 33.5 | 19.7 | 106.2 | 62.5 | 3.7 | 2.2 |
| Florida | 3,852.9 | 1,345.8 | 34.9 | 1,017.8 | 26.4 | 809.5 | 21.0 | 679.8 | 17.6 |
| Georgia | 2,798.1 | 871.4 | 31.1 | 553.1 | 19.8 | 416.3 | 14.9 | 957.3 | 34.2 |
| Hawaii | 241.4 | 122.3 | 50.7 | 23.0 | 9.5 | 24.8 | 10.3 | 71.3 | 29.5 |
| Idaho | 518.3 | 125.7 | 24.3 | 95.9 | 18.5 | 86.9 | 16.8 | 209.8 | 40.5 |
| Illinois | 3,882.6 | 990.5 | 25.5 | 897.4 | 23.1 | 722.0 | 18.6 | 1,272.6 | 32.8 |
| Indiana | 2,735.8 | 645.4 | 23.6 | 483.6 | 17.7 | 300.7 | 11.0 | 1,306.2 | 47.7 |
| lowa | 1,121.7 | 277.5 | 24.7 | 222.5 | 19.8 | 158.5 | 14.1 | 463.3 | 41.3 |
| Kansas | 1,050.0 | 287.8 | 27.4 | 200.9 | 19.1 | 169.2 | 16.1 | 392.2 | 37.4 |
| Kentucky | 1,830.2 | 444.2 | 24.3 | 315.9 | 17.3 | 219.0 | 12.0 | 851.1 | 46.5 |
| Louisiana | 3,615.4 | 804.9 | 22.3 | 325.0 | 9.0 | 236.5 | 6.5 | 2,249.0 | 62.2 |
| Maine | 528.6 | 113.2 | 21.4 | 97.6 | 18.5 | 57.6 | 10.9 | 260.2 | 49.2 |
| Maryland | 1,378.2 | 405.1 | 29.4 | 358.6 | 26.0 | 337.1 | 24.5 | 277.4 | 20.1 |
| Massachusetts | 1,569.1 | 440.8 | 28.1 | 411.7 | 26.2 | 325.2 | 20.7 | 391.4 | 24.9 |
| Michigan | 3,239.6 | 844.8 | 26.1 | 744.3 | 23.0 | 568.1 | 17.5 | 1,082.5 | 33.4 |
| Minnesota | 1,675.3 | 499.6 | 29.8 | 340.2 | 20.3 | 217.9 | 13.0 | 617.7 | 36.9 |
| Mississippi | 1,208.5 | 408.9 | 33.8 | 202.6 | 16.8 | 145.6 | 12.0 | 451.4 | 37.4 |
| Missouri | 1,768.0 | 622.6 | 35.2 | 431.7 | 24.4 | 334.1 | 18.9 | 379.6 | 21.5 |
| Montana | 412.4 | 106.5 | 25.8 | 61.8 | 15.0 | 48.0 | 11.6 | 196.1 | 47.6 |
| Nebraska | 602.0 | 194.4 | 32.3 | 130.0 | 21.6 | 111.3 | 18.5 | 166.2 | 27.6 |
| Nevada | 615.3 | 197.8 | 32.1 | 122.4 | 19.9 | 97.1 | 15.8 | 198.0 | 32.2 |
| New Hampshire | 335.4 | 100.5 | 30.0 | 81.9 | 24.4 | 56.2 | 16.8 | 96.9 | 28.9 |
| New Jersey | 2,588.7 | 863.3 | 33.3 | 539.9 | 20.9 | 540.8 | 20.9 | 644.7 | 24.9 |
| New Mexico | 635.0 | 233.9 | 36.8 | 93.2 | 14.7 | 105.6 | 16.6 | 202.4 | 31.9 |
| New York | 4,283.0 | 979.6 | 22.9 | 1,092.3 | 25.5 | 1,216.1 | 28.4 | 994.9 | 23.2 |
| North Carolina | 2,446.9 | 690.9 | 28.2 | 562.7 | 23.0 | 439.5 | 18.0 | 753.7 | 30.8 |
| North Dakota | 365.7 | 82.4 | 22.5 | 54.2 | 14.8 | 42.6 | 11.6 | 186.4 | 51.0 |
| Ohio | 4,323.4 | 969.2 | 22.4 | 866.7 | 20.0 | 632.1 | 14.6 | 1,855.3 | 42.9 |
| Oklahoma | 1,377.5 | 402.5 | 29.2 | 259.1 | 18.8 | 197.7 | 14.4 | 518.2 | 37.6 |
| Oregon | 1,109.2 | 328.2 | 29.6 | 238.4 | 21.5 | 190.5 | 17.2 | 352.1 | 31.7 |
| Pennsylvania | 3,715.5 | 983.9 | 26.5 | 858.6 | 23.1 | 582.6 | 15.7 | 1,290.4 | 34.7 |
| Rhode Island | 261.1 | 65.9 | 25.2 | 66.0 | 25.3 | 52.2 | 20.0 | 77.0 | 29.5 |
| South Carolina | 1,493.0 | 376.4 | 25.2 | 288.1 | 19.3 | 210.3 | 14.1 | 618.2 | 41.4 |
| South Dakota | 239.0 | 84.3 | 35.3 | 53.3 | 22.3 | 39.2 | 16.4 | 62.2 | 26.0 |
| Tennessee | 2,070.5 | 590.1 | 28.5 | 441.5 | 21.3 | 328.1 | 15.8 | 710.8 | 34.3 |
| Texas | 11,501.0 | 2,549.0 | 22.2 | 1,323.3 | 11.5 | 1,147.2 | 10.0 | 6,481.5 | 56.4 |
| Utah | 693.9 | 211.1 | 30.4 | 127.5 | 18.4 | 120.2 | 17.3 | 235.1 | 33.9 |
| Vermont | 165.0 | 53.2 | 32.2 | 42.6 | 25.8 | 29.4 | 17.8 | 39.9 | 24.2 |
| Virginia | 2,227.3 | 655.7 | 29.4 | 494.4 | 22.2 | 462.8 | 20.8 | 614.4 | 27.6 |
| Washington | 2,240.8 | 617.3 | 27.5 | 435.7 | 19.4 | 332.0 | 14.8 | 855.9 | 38.2 |
| West Virginia | 735.4 | 181.6 | 24.7 | 141.9 | 19.3 | 101.0 | 13.7 | 310.8 | 42.3 |
| Wisconsin | 1,810.5 | 431.8 | 23.8 | 375.8 | 20.8 | 285.4 | 15.8 | 717.4 | 39.6 |
| Wyoming | 421.8 | 119.8 | 28.4 | 35.9 | 8.5 | 42.1 | 10.0 | 224.0 | 53.1 |
| United States | 95,682.4 | 26,324.6 | 27.5 | 18,382.3 | 19.2 | 15,058.5 | 15.7 | 35,917.1 | 37.5 |

${ }^{1}$ U.S. total energy and U.S. industrial sector include 57.7 trillion Btu of net imports of coal coke that is not allocated to the states. State and U.S. totals include 92.6 trillion Btu of net imports of electricity generated from nonrenewable energy sources.
${ }^{2}$ End-use sector data include electricity sales and associated electrical system energy losses.
KEY: $\mathrm{Btu}=\mathrm{British}$ thermal unit; Number $=$ trillion Btu .
SOURCE: U.S. Department of Energy, Energy Information Administration, State Energy Data Report 1999, Washington, DC: May 2001, available at http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf as of Feb. 21, 2002.

Figure 7-1: Energy Consumption by End-Use Sector: 1999


SOURCE: U.S. Department of Energy, Energy Information Administration, State Energy Data Report 1999, Washington, DC: May 2001, table 9, available at http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf as of Feb. 21, 2002.

## Energy and Environment

Figure 7-2: Iowa Transportation Energy Consumption


KEY: Btu = British thermal unit.
SOURCE: U.S. Department of Energy, Energy Information Administration, State Energy Data Report 1999, Washington, DC: May 2001, table 45, available at
http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf as of Feb. 21, 2002.

Table 7-3: Transportation Energy Consumption per Capita: 1999

| State | Population (thousands) | Petroleum |  | All energy sources |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total (trillion Btu) | Per capita ${ }^{1}$ (million Btu) | Total (trillion Btu) | Per capita ${ }^{1}$ (million Btu) |
| Alabama | 4,370 | 437.8 | 100.2 | 460.7 | 105.4 |
| Alaska | 620 | 193.5 | 312.1 | 198.0 | 319.4 |
| Arizona | 4,778 | 433.5 | 90.7 | 452.5 | 94.7 |
| Arkansas | 2,551 | 288.0 | 112.9 | 297.2 | 116.5 |
| California | 33,145 | 2,880.6 | 86.9 | 2,898.9 | 87.5 |
| Colorado | 4,056 | 357.4 | 88.1 | 365.9 | 90.2 |
| Connecticut | 3,282 | 234.2 | 71.4 | 234.9 | 71.6 |
| Delaware | 754 | 70.6 | 93.6 | 70.6 | 93.6 |
| District of Columbia | 519 | 24.5 | 47.2 | 26.5 | 51.1 |
| Florida | 15,111 | 1,338.1 | 88.6 | 1,345.8 | 89.1 |
| Georgia | 7,788 | 861.3 | 110.6 | 871.4 | 111.9 |
| Hawaii | 1,185 | 122.3 | 103.2 | 122.3 | 103.2 |
| Idaho | 1,252 | 121.0 | 96.6 | 125.7 | 100.4 |
| Illinois | 12,128 | 930.8 | 76.7 | 990.5 | 81.7 |
| Indiana | 5,943 | 630.6 | 106.1 | 645.4 | 108.6 |
| lowa | 2,869 | 269.6 | 94.0 | 277.5 | 96.7 |
| Kansas | 2,654 | 256.2 | 96.5 | 287.8 | 108.4 |
| Kentucky | 3,961 | 427.0 | 107.8 | 444.2 | 112.1 |
| Louisiana | 4,372 | 754.9 | 172.7 | 804.9 | 184.1 |
| Maine | 1,253 | 113.2 | 90.3 | 113.2 | 90.3 |
| Maryland | 5,172 | 400.3 | 77.4 | 405.1 | 78.3 |
| Massachusetts | 6,175 | 435.7 | 70.6 | 440.8 | 71.4 |
| Michigan | 9,864 | 821.4 | 83.3 | 844.8 | 85.6 |
| Minnesota | 4,776 | 477.1 | 99.9 | 499.6 | 104.6 |
| Mississippi | 2,768 | 342.7 | 123.8 | 408.9 | 147.7 |
| Missouri | 5,468 | 615.6 | 112.6 | 622.6 | 113.9 |
| Montana | 883 | 100.4 | 113.7 | 106.5 | 120.6 |
| Nebraska | 1,666 | 191.5 | 114.9 | 194.4 | 116.7 |
| Nevada | 1,809 | 196.9 | 108.8 | 197.8 | 109.3 |
| New Hampshire | 1,201 | 100.5 | 83.7 | 100.5 | 83.7 |
| New Jersey | 8,143 | 857.6 | 105.3 | 863.3 | 106.0 |
| New Mexico | 1,740 | 186.5 | 107.2 | 233.9 | 134.4 |
| New York | 18,197 | 944.2 | 51.9 | 979.6 | 53.8 |
| North Carolina | 7,651 | 680.0 | 88.9 | 690.9 | 90.3 |
| North Dakota | 634 | 72.5 | 114.4 | 82.4 | 130.0 |
| Ohio | 11,257 | 950.2 | 84.4 | 969.2 | 86.1 |
| Oklahoma | 3,358 | 378.0 | 112.6 | 402.5 | 119.9 |
| Oregon | 3,316 | 317.0 | 95.6 | 328.2 | 99.0 |
| Pennsylvania | 11,994 | 942.6 | 78.6 | 983.9 | 82.0 |
| Rhode Island | 991 | 65.6 | 66.2 | 65.9 | 66.5 |
| South Carolina | 3,886 | 372.7 | 95.9 | 376.4 | 96.9 |
| South Dakota | 733 | 78.2 | 106.7 | 84.3 | 115.0 |
| Tennessee | 5,484 | 564.2 | 102.9 | 590.1 | 107.6 |
| Texas | 20,044 | 2,475.8 | 123.5 | 2,549.0 | 127.2 |
| Utah | 2,130 | 208.2 | 97.7 | 211.1 | 99.1 |
| Vermont | 594 | 53.2 | 89.6 | 53.2 | 89.6 |
| Virginia | 6,873 | 646.5 | 94.1 | 655.7 | 95.4 |
| Washington | 5,756 | 608.9 | 105.8 | 617.3 | 107.2 |
| West Virginia | 1,807 | 150.1 | 83.1 | 181.6 | 100.5 |
| Wisconsin | 5,250 | 427.6 | 81.4 | 431.8 | 82.2 |
| Wyoming | 480 | 105.3 | 219.4 | 119.8 | 249.6 |
| United States | 272,691 | 25,511.8 | 93.6 | 26,324.6 | 96.5 |

${ }^{1}$ Calculated by the Bureau of Transportation Statistics.
KEY: $\mathrm{B}+\mathrm{u}=\mathrm{British}$ thermal unit.
SOURCE: U.S. Department of Energy, Energy Information Administration, State Energy Data Report 1999, Washington, DC: May 2001, available at http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf as of Feb. 21, 2002.

Table 7-4: lowa and U.S. Motor-Fuel Use: $200{ }^{1}$ (Millions of gallons)

| Vehicle ownership | Gasoline |  |  |  | Special fuel (mainly diesel) |  | Total use |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Highway use |  | Nonhighway use |  |  |  |  |  |
|  | lowa | United States | lowa | United States | lowa | United States | lowa | United States |
| Private and commercial | 1,465 | 126,735 | 67 | 2,876 | 499 | 33,377 | 2,031 | 162,988 |
| Public use | 29 | 2,149 | 1 | 96 | N | N | 30 | 2,245 |
| Total | 1,494 | 128,884 | 68 | 2,972 | 499 | 33,377 | 2,062 | 165,232 |

${ }^{1}$ Based on reports from state motor-fuel tax agencies. Gasohol is included with gasoline. Public use and nonhighway use were estimated by the Federal Highway Administration.

KEY: $\mathrm{N}=$ data do not exist.
NOTE: The term "motor fuel" applies to gasoline and all other fuels, including special fuels, coming under the purview of the state motor-fuel tax laws. "Special fuels" include diesel fuel and, to the extent they can be quantified, liquefied petroleum gases such as propane. Gasohol, a blend of gasoline and fuel alcohol, is included with gasoline.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2000 , Washington, DC: October 2001, available at http://www.fhwa.dot.gov/ohim/hs00/pdf/mf21 .pdf as of Apr. 20, 2002.

Table 7-5: Highway Noise Barriers: 1999

| State | Total length (meters) | Barrier cost (\$ 1998) |
| :---: | :---: | :---: |
| Alabama | 0 | 0 |
| Alaska | 9,338 | 2,742,486 |
| Arizona | 48,593 | 15,130,670 |
| Arkansas | 1,989 | 653,497 |
| California | 777,160 | 487,177,331 |
| Colorado | 104,377 | 45,351,408 |
| Connecticut | 46,049 | 28,335,802 |
| Delaware | 1,262 | 242,013 |
| District of Columbia | 0 | 0 |
| Florida | 70,991 | 62,276,735 |
| Georgia | 33,530 | 20,247,589 |
| Hawaii | 3,103 | 1,743,452 |
| Idaho | 200 | 583,002 |
| Illinois | 97,803 | 70,985,221 |
| Indiana | 18,568 | 20,297,106 |
| lowa | 7,857 | 3,215,640 |
| Kansas | 2,103 | 2,082,034 |
| Kentucky | 8,249 | 5,306,199 |
| Louisiana | 12,077 | 5,974,212 |
| Maine | 561 | 292,861 |
| Maryland | 99,587 | 153,227,923 |
| Massachusetts | 10,250 | 5,259,055 |
| Michigan | 67,071 | 60,139,968 |
| Minnesota | 101,811 | 62,694,176 |
| Mississippi | 0 | 0 |
| Missouri | 6,113 | 4,179,360 |
| Montana | 0 | 0 |
| Nebraska | 5,060 | 4,026,138 |
| Nevada | 17,847 | 10,855,220 |
| New Hampshire | 6,392 | 5,785,519 |
| New Jersey | 142,055 | 210,429,029 |
| New Mexico | 21,196 | 9,306,885 |
| New York | 110,698 | 116,448,616 |
| North Carolina | 45,977 | 24,702,615 |
| North Dakota | $0$ | $0$ |
| Ohio | 138,197 | 68,064,386 |
| Oklahoma | 13,186 | 4,229,909 |
| Oregon | 72,552 | 30,075,899 |
| Pennsylvania | 83,526 | 88,259,488 |
| Rhode Island | 0 | - 0 |
| South Carolina | 2,665 | 1,713,629 |
| South Dakota | 0 | 0 |
| Tennessee | 28,846 | 20,574,450 |
| Texas | 55,310 | 39,635,228 |
| Utah | 70,260 | 24,841,367 |
| Vermont | 1,004 | 356,344 |
| Virginia ${ }^{1}$ | 153,313 | 143,003,313 |
| Washington | 74,812 | 32,296,683 |
| West Virginia | 408 | 170,529 |
| Wisconsin | 29,730 | 28,768,150 |
| Wyoming | 293 | 100,271 |
| United States | 2,611,953 | 1,931,107,534 |

${ }^{1}$ Includes 4,061 meters of federal barriers on the Dulles Access Highway.
SOURCE: U.S. Department of Transportation, Federal Highway
Administration, Office of Planning, Environment, and Real Estate, available at http://www.fhwa.dot.gov/environment/ab_noise.htm as of Feb. 20, 2002.

## H Information on Data Sources


#### Abstract

Airline freight and passenger data The U.S. Department of Transportation's (USDOT) Bureau of Transportation Statistics (BTS) collects and compiles data on the volume of revenue passengers, freight, and mail traffic handled and reported by the nation's large certificated air carriers. These carriers hold Certificates of Public Convenience and Necessity (CPN) issued by the USDOT authorizing the performance of air transportation. Large certificated air carriers operate aircraft with seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds or conduct international operations. Data for commuters, intrastate, nonscheduled air taxi operators, and foreign flag air carriers are not included in this BTS data.


## Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Airline Information
Print source: USDOT, Bureau of Transportation Statistics, Office of Airline Information. Airport Activity Statistics. Washington, DC: Annual issues.

Internet: http://www.bts.gov

## Commodity Flow Survey

The Commodity Flow Survey (CFS) provides data on the movement of freight by type of commodity shipped and by mode of transport. In 1997, 100,000 domestic establishments were randomly selected from a universe of approximately 800,000 engaged in mining, manufacturing, wholesale, warehouses of multi-establishment companies, and some selected activities in retail and service. The survey excluded establishments classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most
establishments in retail. For the 1997 CFS, each selected establishment reported a sample of about 25 outbound shipments for a one-week period in each of four calendar quarters in 1997. This produced a total sample of over 5 million shipments. Due to industry-wide reporting problems, shipments by oil and gas extraction establishments were excluded from data tabulations.

For each sampled 1997 CFS shipment, zip code of origin and destination, 5 -digit Standard Classification of Transported Goods (SCTG) code, weight, value, and modes of transport were provided. Information on whether the shipment was containerized, a hazardous material, or an export was also obtained. Route-distance for each mode, for each shipment, is imputed from a ModeDistance Table developed by Oak Ridge National Laboratory. Distance was used to compute ton-mileage by mode of transport. The CFS provides nationwide geographic coverage in 89 National Transportation Analysis Regions, stratified by state and, for the 1997 CFS, metropolitan area.

## Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Statistical Programs

Print source: USDOT, Bureau of Transportation Statistics and U.S.
Department of Commerce, Bureau of the Census, [state]: 1997 Commodity Flow Survey. EC97TCF-[state], Washington, DC: 1999.

Internet: http://www.bts.gov/ntda/cfs/

## Commuting data

Commuting data are derived from the Census 2000 Supplementary Survey (C2SS). The C2SS used the questionnaire and methods developed for the American Community

## Data Sources

Survey to collect demographic, social, economic, and housing data from a national sample of 700,000 households. Group quarters were not included in the sample. The C2SS was conducted in 1,203 counties with monthly samples of about 58,000 housing units. Economic, demographic, and housing characteristics from the Census 2000 Supplementary Survey are reported for the United States as a whole, the 50 states, and the District of Columbia.

The Census 2000 Supplementary Survey is not directly comparable with the 1990 Census for several reasons, one being that the former did not include group quarters. This may understate some categories such as walking.

## Additional information:

Contact: USDOC, U.S. Census Bureau, Demographic Surveys Division

Internet: http://www.census.gov

## Gas and hazardous liquid pipeline data

U.S. fatality and injury data for natural gas pipelines and hazardous liquid pipelines are based on reports filed with the U.S. Department of Transportation, Office of Pipeline Safety (OPS) under 49 CFR 191. Accidents must be reported as soon as possible, but no later than 30 days after discovery. Undetected releases are a possible source of error; even if subsequently detected and reported, it may not be possible to accurately reconstruct the accident. Property damage figures are estimates.

Gas pipeline incidents involve: 1) releases of gas from a pipeline or liquefied natural gas (LNG) or gas from an LNG facility that results in a) death or personal injury necessitating in-patient hospitalization, or b) estimated property damage, including cost of
gas lost, of the operator or others, or both, of $\$ 50,000$ or more; 2) an event that results in an emergency shutdown of an LNG facility; or 3) an event that is significant, in the judgment of the operator, even though it did not meet the criteria of 1) or 2).

For hazardous liquids pipelines, an accident report is required for each failure in a pipeline system in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following: 1) explosion or fire not intentionally set by the operator; 2) loss of 50 or more barrels (8 or more cubic meters) of hazardous liquid or carbon dioxide; 3) escape to the atmosphere of more than 5 barrels ( 0.8 cubic meters) a day of highly volatile liquids; 4) death of any person; 5) bodily harm to any person resulting in one or more of the following: a) loss of consciousness, b) an individual being carried from the scene, c) medical treatment, or d) disability which prevents the discharge of normal duties or the pursuit of normal activities beyond the day of the accident; or 6) estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.

## Additional information:

Contact: USDOT, Research and Special Programs Administration, Office of Pipeline Safety
Internet: http://ops.dot.gov

## Government transportation revenue and expenditure data

The U.S. Department of Commerce (USDOC), U.S. Census Bureau conducts an Annual Survey of Government Finances. Alternatively, every five years, in years ending in a ' 2 ' or ' 7 ', a Census of Governments,
including a finance portion, is conducted. The survey coverage includes all state and local governments in the United States. For both the Census and annual survey, the finance detail data is equivalent, encompassing the entire range of government finance activities-revenue, expenditure, debt, and assets.

The data collection for the annual survey uses two methods: mail canvas and central collection from state sources. Data for local governments includes county, municipal, township, special district, and school district data. Data for state governments are compiled from state government audits, budgets, and other financial reports into the classification categories used for reporting by the Census Bureau.

Reporting of government finances by the Census Bureau involves presentation of data in terms of uniform categories. While often similar to, or identical to, the classification used by the state or local government, there could be instances in which a significant difference exists between the name of a state or local financial item and the final category to which it is assigned by the Census Bureau.

Like financial transactions are combined. The financial categories for revenue involve grouping of items by source. Revenue items of the same kind are merged. Financial transactions for expenditures are classified both by function and by object category. Debt items are classified by term (short- and longterm), as well as by type of debt and, to a limited extent, by purpose. Assets also are put into uniform categories, grouped by type of holding, with holdings for insurance trust systems grouped separately from general government.

The share of government sector financial totals contributed by a state government or by local governments differs materially from one state to another. Users can review the Government Finance and Employment Classification Manual for additional information regarding the financial categories. The financial amounts in the tables and files are statistical in nature and do not represent accounting statements or conditions.
The local government statistics are developed from a sample survey. Therefore, the local totals, as well as state and local aggregates, are considered estimated amounts subject to sampling error. State government finance data are not subject to sampling. Consequently, state-local aggregates for individual states are more reliable (on a relative standard error basis) than the local government estimates they include.

## Additional information:

Contact: USDOC, U.S. Census Bureau, Finance Branch

Print Sources: USDOC, U.S. Census Bureau, Federal Aid to States: 2000

Internet: http://www.census.gov

## Hazardous materials incidents data

Incidents resulting in certain unintentional releases of hazardous materials must be reported under 49 CFR 171.16. Each carrier must submit a report to the USDOT, Research and Special Programs Administration (RSPA) within 30 days of the incident, including information on the mode of transportation involved, results of the incident, and a narrative description of the accident. These reports are generally made available on RSPA's incident database within 90 days of receipt.

Fatalities and injuries are counted only if directly caused by a hazardous material. For example, a truck operator killed by impact forces during a motor vehicle crash would not be counted as a hazardous-material fatality. RSPA contacts the submitting carrier by telephone to verify all reported fatalities.

Although RSPA acknowledges that there is some level of underreporting, it believes that the underreporting is mostly limited to small, nonserious incidents. The reporting requirements were extended to intrastate highway carriers on October 1, 1998, and the response rate from this new group is expected to increase over time. Property damage figures are estimates determined by the carrier prior to the 30-day reporting deadline, and are generally not subsequently updated. Property damage figures, therefore, may underestimate actual damages.

## Additional information:

Contact: USDOT, Research and Special Programs Administration, Office of Hazardous Materials Planning and Analysis
Print source: USDOT, Research and Special
Programs Administration, Office of Hazardous Materials Safety, Hazmat
Summary by State for Calendar Year 2000.
Washington, DC: 2001
Internet: http://hazmat.dot.gov
Highway mileage, condition, and use, driver licenses, and highway vehicle registrations data
Data on roadway mileage, condition, and use are extracted from the Highway Performance Monitoring System (HPMS), which uses a stratified simple random sample of highway links (small sections of roadway) selected from state inventory files. The HPMS sample was designed as a fixed sample to minimize
data collection costs, but adjustments to maintain representativeness are carried out periodically. The HPMS also consists of universe reporting (a complete census) for the Interstate and the National Highway System, and tabular summary reporting of limited information.

Data are collected independently by the 50 states, Metropolitan Planning Organizations (MPOs), and lower jurisdictions. Many of the geometric data items rarely change, such as number of lanes; others change frequently, such as traffic. The U.S. Department of Transportation, Federal Highway Administration (FHWA) provides guidelines for data collection in the HPMS Field Manual, which the states follow to varying extents depending on matters such as staff, resources, state perspective, uses of the data, and state/MPO/local needs for the data. State Departments of Transportation (DOTs) report HPMS data annually to the FHWA.
HPMS data are subject to sampling and nonsampling error. Nonsampling error is the major concern with these data. For some of the most variable and important data items, such as traffic, guidelines for measurement and data collection have been produced. States have the option of using the guidelines or using their own procedures. Many data items are difficult and costly to collect and are reported as estimates not based on direct measurement. The data are collected and reported by many entities and individuals within the responsible organizations. Most do a reasonably good job, but staff turnover, cost, equipment issues, etc., can create difficulties.

States provide vehicle registration data to the FHWA. Vehicle registration data are shown on a calendar-year basis. Efforts are made to exclude transfers, re-registrations, and any other factors that could result in duplication
in the vehicle counts. Registration practices for commercial vehicles differ greatly among the states. Some states register a tractorsemitrailer combination as a single unit; others register the tractor and the semitrailer separately. Some states register buses with trucks or automobiles, while many states do not report house and light utility trailers separately from commercial trailers or semitrailers. Some states do not require registration of car or light utility trailers. In some instances, FHWA has supplemented the data supplied by the states with information obtained from other sources. States also provide driver licensing data to the FHWA. Although efforts are made to minimize license duplication, drivers who move from one state to another are sometimes counted in both states until the license from the previous state of residence expires. Problems with the data also arise from the fact that: 1) some individuals obtain their drivers licenses in states other than those of legal residence; 2) some individuals fraudulently obtain multiple licenses; 3) not all individuals who drive are licensed; and 4) the purging of expired licenses or licenses from deceased individuals is not performed on a continual basis.

## Additional information:

Contact: USDOT, Federal Highway Administration, Office of Highway Policy Information

Print source: USDOT, Federal Highway Administration, Highway Statistics. Washington, DC: Annual issues. Internet: http://www.fhwa.dot.gov/ohim/ index.html

## Highway safety data

Fatalities: Highway fatality data are extracted from the Fatality Analysis Reporting System (FARS), which is compiled by the U.S. Department of Transportation (USDOT), National Highway Traffic Safety Administration (NHTSA). Data are gathered from a census of police accident reports (PARs), state vehicle registration files, state drivers licensing files, state highway department data, vital statistics, death certificates, coroner/medical examiner reports, hospital medical reports, and emergency medical service reports. A separate form is completed for each fatal crash. Blood alcohol concentration (BAC) is estimated when not known. Statistical procedures used for unknown data in FARS can be found in the NHTSA report, $A$ Method for Estimating Posterior BAC Distributions for Persons Involved in Fatal Traffic Accidents, DOT HS 807094 (Washington, DC: July 1986).
Data are collected from relevant state agencies and electronically submitted for inclusion in the FARs database on a continuous basis. Cross-verification of PARs with death certificates helps prevent undercounting. Moreover, when data are entered, they are checked automatically for acceptable range values and consistency, enabling quick corrections when necessary. Several programs continually monitor the data for completeness and accuracy. Periodically, sample cases are analyzed for accuracy and consistency.
FARS data do not include motor vehicle fatalities on nonpublic roads. These are thought to account for about 2 percent or fewer of the total motor vehicle fatalities per year.

Injuries and crashes: NHTSA's General Estimates System (GES) data are a nationally representative sample of police-reported crashes that contributed to an injury or fatality or resulted in property damage and involved at least one motor vehicle traveling on a trafficway. GES data collectors randomly sample PARs and forward copies to a central contractor for coding into a standard GES system format. Documents such as police diagrams or supporting text provided by the officers might be further reviewed to complete a data entry. A NHTSA study of injuries from motor vehicle crashes estimated the total count of nonfatal injuries at over 5 million compared with the GES's estimate of 3.2 million in 1998.

## Additional information:

Contact: USDOT, National Highway Traffic Safety Administration, National Center for Statistics and Analysis
Print source: USDOT, National Highway Traffic Safety Administration, Traffic Safety Facts. Washington, DC: Annual issues.
Internet: http://www.nhtsa.dot.gov

## International visitors data

Data on international visitors to the United States are based on international arrivals by air to the United States (excluding those from Canada and Mexico). Information is derived from the Immigration and Naturalization Service's (INS) Visitor Arrivals Program (I-94) and the U.S. Department of Commerce, Tourism Industries Office's Survey of International Air Travelers. The survey obtains data on overseas travel patterns, characteristics, and spending patterns of international travelers to and from the United States. Between 69,000 and 95,000 travelers are surveyed each year. The survey results are
weighted so they represent the international travel populations of U.S. residents and nonresidents based upon Immigration and Naturalization Service data.

## Additional information:

Contact: U.S. Department of Commerce (USDOC), International Trade Administration, Tourism Industries Office Print source: USDOC, International Trade Administration, Tourism Industries Office, Overseas Visitors to Select U.S. States and Territories. Washington, DC: Annual issues; and USDOC, International Trade Administration, Tourism Industries Office, Overseas Visitors to Select U.S. Cities/Hawaiian Islands. Washington, DC: Annual issues.

Internet: http://tinet.ita.doc.gov/

## Passenger border crossing data

U.S. Custom Service personnel collect passenger border-crossing entry data for all U.S. land, air, and maritime ports. These numbers reflect all entries, and it is not possible to divide these data into separate entries for same-day and overnight travel or by country of residence for the traveler. Additionally, for border-crossing figures, the total number of people is not the number of unique individuals, but rather indicates the number of border crossings. Multiple crossings by the same individual count as multiple border crossings.

## Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Transportation Analysis
Internet: http://www.bts.gov

## Railroad industry and shipments data

The Association of American Railroads (AAR) database aggregates data from several sources
concerning the freight railroad industry and movement of freight, both nationally and statewide. The state-specific data include commerce, employment, and financial contributions.

The primary source of data for Class I railroads is Schedule 700 of the R-1 Annual Report to the Surface Transportation Board (STB) by individual carriers ( 100 percent reporting) and the 2000 Carload Waybill Sample. The primary source of data for nonClass I railroads is AAR's Profiles of U.S. Railroads from statistics supplied annually by nearly all operating U.S. freight railroads. Some of the data are estimated based on more aggregated, national figures.

The STB defines Class I railroads as having operating revenues at or above a threshold indexed to a base of $\$ 250$ million (1991) and adjusted annually in concert with changes in the Railroad Freight Rate Index published by the Bureau of Labor Statistics.
Declassification from Class I status occurs when a railroad falls below the applicable threshold for three consecutive years. Although few in number, Class I railroads account for over 90 percent of the industry's revenue.
The AAR determines the number of nonClass I railroads through an annual survey sent to each U.S. freight railroad.
Historical reliability may vary due to changes in the railroad industry, including bankruptcies, mergers, and declassification by the STB. Small data errors may also have occurred because of independent rounding in this series by the AAR.

## Additional information:

Contact: Association of American Railroads, Policy and Economics Department

Internet: http://www.aar.org

## Railroad safety data

Railroads are required to file a report for each accident or incident to the Federal Railroad Administration (FRA). These include: 1) train accidents, reported on Form F 6180.54, comprised of collisions, derailments, and other events involving the operation of ontrack equipment and causing reportable damage above an established threshold ( $\$ 6,600$ in 1998); 2) highway-rail grade crossing incidents, reported on Form F 6180.57, involving impact between railroad on-track equipment and highway users at crossings; and 3) other incidents, reported on Form F 6180.55a, involving all other reportable incidents or exposures that cause a fatality or injury to any person or an occupational illness to a railroad employee.
Railroads are required by FRA regulations to use the current FRA Guide for Preparing Accident/Incident Reports when preparing reports.
The Systems Support Division of FRA maintains the Railroad Accident/Incident Reporting System (RAIRS), consisting of four databases: rail equipment, injury/illness, grade-crossing accidents, and railroad summary (freight and passenger). These databases include information on all railroad accidents, grade-crossing accidents, railroad employee casualties, and any other injuries on railroad property, and provide the basis for accident analyses and assessment as well as annual reports. The databases are updated monthly from information submitted by the railroads.

Additional information:<br>Contact: USDOT, Federal Railroad Administration, Office of Safety

Print publication: USDOT, Federal Railroad Administration, Railroad Safety Statistics. Washington, DC: Annual issues.
Internet: http://www.fra.dot.gov

## Recreational boating safety and vehicles data

The U.S. Coast Guard, of the U.S. Department of Transportation, collects data on recreational boating accidents from two sources: 1) Boating Accident Report (BAR) data forwarded to the Coast Guard by jurisdictions with an approved boat numbering and casualty reporting system, and 2) reports of Coast Guard investigations of fatal boating accidents that occurred on waters under federal jurisdiction.
Recreational Boating Accident Investigation data are used if submitted to the Coast Guard and are relied on as much as possible to provide accident statistics. In the absence of investigations, information is collected from reports filed by boat operators.
Boat operators are required to file a BAR if an accident results in 1) loss of life, 2) personal injury that requires medical treatment beyond first aid, 3) damage to the vessel and other property exceeding $\$ 500$, or 4 ) complete loss of the vessel.

Boat operators are required to report their accidents to authorities in the state where the accident occurred. States with approved boat numbering systems furnish the Coast Guard with BAR data. The minimum reporting requirements are set by federal regulation, but states are allowed to have stricter requirements. The Coast Guard reports recreational boating safety data in the report

Boating Statistics, which only covers accidents meeting the federal minimum reporting requirements.
The statistics in Boating Statistics cover boating accidents reported on waters of joint federal and state jurisdiction, and exclusive state jurisdiction.

The Coast Guard believes over 90 percent of fatal accidents are included in Boating Statistics. A smaller percentage of nonfatal accidents are reported because of reporting thresholds, ignorance of the law, and difficulties enforcing the law. Federal law does not require the reporting of accidents on private waters where states have no jurisdiction. Reports of accidents on such waters are included when received by the Coast Guard if they satisfy the other requirements of inclusion. Accidents excluded are those in which the boat was used as a platform for other activities (e.g., swimming), and those in which a person dies of natural causes aboard a boat. However, the data do include accidents involving people in the water who are struck by their boat or another boat.

## Additional information:

Contact: USDOT, U.S. Coast Guard, Office of Boating Safety
Print source: USDOT, U.S. Coast Guard, Office of Boating Safety, Boating Statistics, Washington, DC: Annual issues.
Internet: http://www.uscgboating.org

## Transborder surface freight data

The Transborder Surface Freight Dataset is extracted from the Census Foreign Trade Statistics Program and made available by the Bureau of Transportation Statistics. Import and export data are extracted from administrative records required by the

Departments of Commerce and Treasury. This dataset incorporates all shipments entering or exiting the United States by surface modes of transport (that is, other than air or maritime vessel) to and from Canada or Mexico. Prior to January 1997, this dataset also included transhipments in its detailed tables, that is, shipments entering or exiting the United States by way of U.S. Customs ports on the northern or southern borders, even when the actual origin or final destination of the goods was other than Canada or Mexico. Shipments that neither originate nor terminate in the United States (i.e., intransit shipments) are beyond the scope of this dataset because they are not considered U.S. international trade shipments.
Users should be aware that the trade data fields (such as value and commodity classification) are typically more rigorously reviewed than transportation data fields (i.e., mode of transportation and port of entry/exit). Users should also be aware that the use of foreign trade data to describe physical transportation flows might not be direct. For example, this dataset provides surface transportation information for individual Customs districts and ports on the northern and southern borders. However, because of filing procedures for trade documents, these ports may or may not reflect where goods physically crossed the border. This is because the filer of information may choose to file trade documents at one port, while shipments actually enter or exit at another port.
Import data are generally more accurate than export data. This is primarily due to the fact that Customs uses import documents for enforcement purposes, while it performs no similar function for exports.

## Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Transportation Analysis
Internet: http://www.bts.gov

## Transit operating, financial, and safety data

Transit data are from the National Transit Database (NTD) produced by the USDOT, Federal Transit Administration (FTA). Data are collected from transit agencies that receive Urbanized Area Formula Program funds. Transit operators that do not report to FTA are those that do not receive federal funding, typically private, small, and rural operators. FTA reviews and validates information submitted by individual transit agencies. Reliability may vary because some transit agencies cannot obtain accurate information or may interpret certain data definitions differently than intended.
In 2000, 592 agencies reported to the NTD. Of that total, 67 transit agencies received exemptions from detailed reporting because they operated 9 or fewer vehicles, and 7 were excluded because their data were incomplete. Thus, 518 individual reporters were included in the NTD accounting for 90 to 95 percent of transit passenger-miles.

Data are collected on a range of variables including capital and operating funding, transit service supplied and consumed, and transit safety and security. Transit operators must report fatalities, injuries, accidents, incidents, and property damage in excess of \$1,000.

Additional information:<br>Contact: USDOT, Federal Transit Administration<br>Print source: USDOT, Federal Transit Administration, Data Tables. Washington,

## I Clossary

British thermal unit (Btu): The amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit ( $F$ ) at or near 39.2 degrees $F$ and 1 atmosphere of pressure.

Certificated airport: An airport holding an operating certificate issued by the Federal Aviation Administration in accordance with Code of Federal Regulations (CFR) Title 14, Chapter 1, Part 139 allowing it to serve scheduled or unscheduled air carrier aircraft designed for more than 30 passengers.

Commuter rail: Urban passenger train service for short-distance travel between a central city and adjacent suburb. Does not include rapid rail transit or light rail transit service.

Container: A box-like device used to store, protect, and handle a number of packages or items as a unit of transit that can be interchanged between trucks, trains, and ships without rehandling the contents.

Controlled right-of-way: Lanes restricted for at least a portion of the day for use by transit vehicles and other high occupancy vehicles (HOVs).

Demand responsive: Transit service provided without a fixed route and without a fixed schedule that operates in response to calls from passengers or their agents to the transit operator or dispatcher. Service is usually provided using cars, vans, or buses with fewer than 25 seats.

Directional route-miles: The mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route-miles are a measure of the facility or roadway, not the service carried on the facility such as the
number of routes or vehicle-miles. Directional route-miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way.

Dry-bulk carrier (water): A ship with specialized holds for carrying dry cargo such as coal, grain, and iron ore in unpackaged bulk form.

Enplanements: The total number of revenue passengers boarding aircraft.

Exclusive right-of-way: Lanes reserved at all times for transit use and other high occupancy vehicles (HOVs).

Ferryboat (transit): Vessels that carry passengers and/or vehicles over a body of water. Generally steam or diesel-powered, ferryboats may also be hovercraft, hydrofoil, and other high-speed vessels. The vessel is limited in its use to the carriage of deck passengers or vehicles or both, operates on a short run on a frequent schedule between two points over the most direct water routes other than in ocean or coastwise service, and is offered as a public service of a type normally attributed to a bridge or tunnel.

Full container ship: Ships equipped with permanent container cells, with little or no space for other types of cargo.

Heavy rail: An electric railway with the capacity to transport a heavy volume of passenger traffic and characterized by exclusive rights-of-way, multi-car trains, high speed, rapid acceleration, sophisticated signaling, and high-platform loading. Also known as "subway," "elevated (railway)," or metropolitan railway (metro)."

Light rail: A streetcar-type vehicle operated on city streets, semi-exclusive
rights-of-way, or exclusive rights-of-way. Service may be provided by step-entry vehicles or by level boarding.

Major arterial highway: A major highway used primarily for through traffic.

Metric ton: 1,814 pounds ( 2,000 pounds multiplied by 0.907 ).

Minor arterial: In rural areas, roads linking cities and larger towns. In urban areas, roads distributing trips to small geographic area but not penetrating identifiable neighborhoods.

Minor collector highway: In rural areas, routes that serve intracounty rather than statewide travel. In urban areas, streets that provide direct access to neighborhoods and arterials.

Mixed right-of-way: Lanes used for general automobile traffic.

Motor bus: A rubber-tired, self-propelled, manually steered bus with fuel supply onboard the vehicle. Motor bus types include intercity, school, and transit.

Natural gas distribution pipeline:
Smaller than transmission pipelines and maintained by companies that distribute natural gas locally (intrastate). Distribution pipeline systems are analogous to networks of lesser roads and residential streets that people travel after getting off the freeway.

Natural gas transmission pipeline:
Analogous to a major freeway, it is the main interstate transportation route for moving large amounts of natural gas from the source of production to points of distribution. Transmission pipelines are designed to move large amounts of natural gas from areas where the gas is extracted
and stored to the local distribution companies that provide natural gas to homes and businesses.

Principal arterial highway: Major streets or highways, many of multilane or freeway design, serving high-volume traffic corridor movements that connect major generators of travel.

Short ton: 2,000 pounds.
Tanker: An oceangoing ship designed to haul liquid bulk cargo in world trade.

Ton-mile: The movement of one ton of cargo the distance of one statute mile.

Trackage rights: The authority of one railroad to use the tracks of another railroad for a fee.

Trolley bus: Rubber-tired, electric transit vehicle, manually steered and propelled by a motor drawing current, normally through overhead wires, from a central power source.

Unlinked passenger trips: The number of passengers who board public transportation vehicles. A passenger is counted each time he or she boards a vehicle even if on the same journey from origin to destination.

Vanpool: Public-sponsored commuter service operating under prearranged schedules for previously formed groups of riders in 8 - to 18 -seat vehicles. Drivers are also commuters who receive little or no compensation besides the free ride.

Vehicle-miles traveled (highway): Miles of travel by all types of motor vehicles as determined by the states on the basis of actual traffic counts and established estimating procedures.

Iowa: Major Transportation Facilities



[^0]:    SOURCE: U.S. Department of Transportation, Federal Transit Administration, National Transit Database, available at

