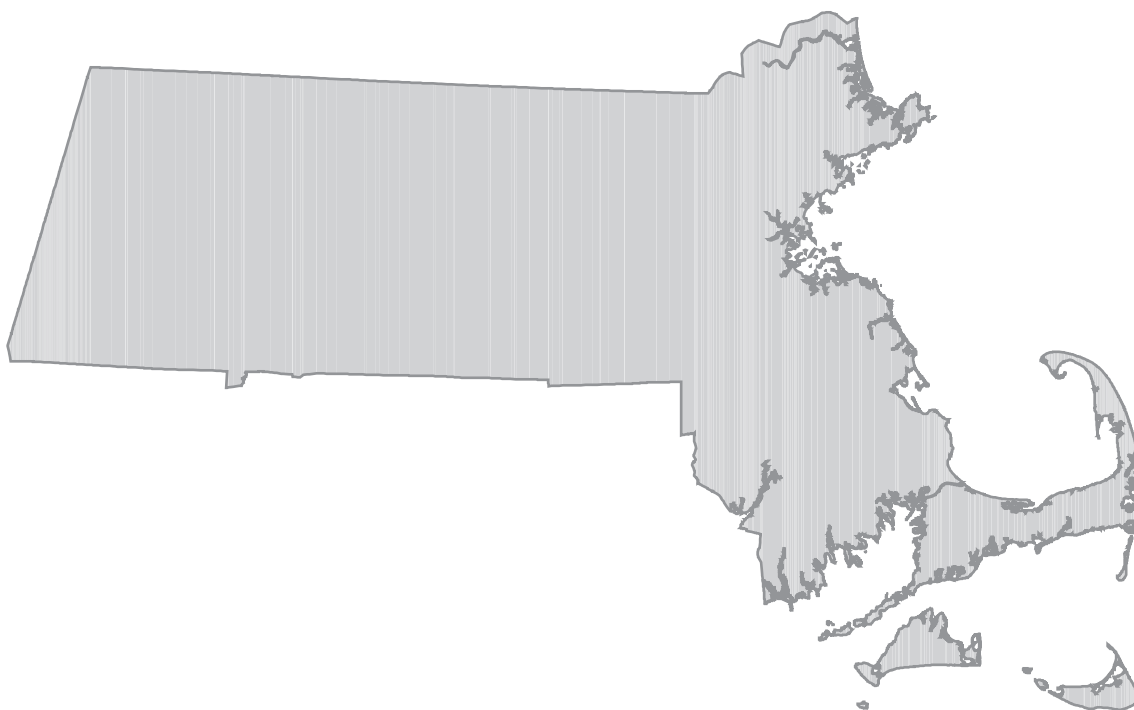


Massachusetts



Transportation Profile



U.S. Department of Transportation



Bureau of Transportation Statistics

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Massachusetts Fast Facts 2000

Transportation System Extent

All public roads: 35,311 miles
Interstate: 566 miles
Road bridges: 4,952
Class I railroad trackage: 455 miles
Inland waterways: 90 miles
Public use airports: 42 (8 certificated for air carrier operations)¹

Vehicles and Conveyances

Automobiles registered: 3.7 million
Light trucks registered: 1.5 million
Heavy trucks registered: 13,000
Buses registered: 12,000
Motorcycles registered: 107,000
Rail transit systems: 1 commuter rail,
1 heavy rail (subway), 1 light rail
Numbered boats: 139,000

Geographic

Land area: 7,840 sq. miles (rank: 45)
Percent of land area owned by federal government: 1.4² (rank: 42)
Persons per square mile: 809.8 (rank: 3)
Highest point: Mount Greylock (3,487 ft.)
Lowest point: Atlantic Ocean (0 ft.)

¹2002

²1999

³1997

⁴Apportionment based on 2000 census

⁵1990

Political Subdivisions

Counties: 14
Municipal governments: 44³
Congressional districts: 10⁴

Demographic

Population: 6,349,097 (rank: 13)
Percent urban population: 84⁵ (rank: 10)

Socioeconomic

Gross state product: \$263 billion² (rank: 11)
Civilian labor force: 3.2 million² (rank: 13)
Median household income: \$46,947
(rank: 12)

Commuting (percent of workers)

Car, truck, or van—drove alone: 73.4
Car, truck, or van—carpooled: 8.8
Public transportation (including taxi): 9.9
Walked: 4.0
Other means: 1.0
Worked at home: 2.9

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The Bureau of Transportation Statistics (BTS) presents a profile of transportation in Massachusetts—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: Massachusetts Public Road Length, Miles by Functional System

	1995	1996	1997	1998	1999	2000
Total rural and urban	30,751	34,725	35,024	35,254	35,265	35,311
Rural	10,904	12,050	12,118	12,193	12,202	12,210
Interstate	162	162	162	162	162	162
Other principal arterial	318	319	313	312	311	310
Minor arterial	664	665	671	671	671	671
Major arterial	1,793	1,796	1,796	1,796	1,796	1,797
Minor collector	1,147	1,159	1,156	1,157	1,157	1,159
Local	6,820	7,949	8,020	8,095	8,105	8,111
Urban	19,847	22,675	22,906	23,061	23,063	23,101
Interstate	403	403	404	404	404	404
Other freeways and expressways	197	205	204	205	199	199
Other principal arterial	1,557	1,551	1,554	1,556	1,554	1,552
Minor arterial	3,089	3,103	3,106	3,106	3,102	3,100
Collector	2,514	2,534	2,528	2,532	2,532	2,530
Local	12,087	14,879	15,110	15,258	15,272	15,316

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: Massachusetts Public Road Length, Miles by Ownership: 2000

	National Highway System	Other federal-aid highway	Nonfederal-aid highway	Total
Total	1,941	8,794	24,576	35,311
State highway agency	1,345	1,436	67	2,848
County	0	1	4	5
Town, township, municipal	408	7,254	23,941	31,603
Other jurisdiction ¹	187	94	463	744
Federal agency ²	1	9	101	111

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.

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: Massachusetts Toll Roads: 2001

Facility	Financing or operating authority	Location	Length in miles	Toll collection direction	Electronic collection system
Interstate					
Massachusetts Turnpike	Massachusetts Turnpike Authority	From New York State Line to Interstate 93, Boston	68.5	Both ways	Fast Lane

Table 1-4: Massachusetts Toll Bridges, Tunnels, and Ferries: 2001

Facility	Financing or operating authority	Location	Length in miles	Toll collection direction	Electronic collection system
Noninterstate					
Callahan and Sumner Tunnels	Massachusetts Turnpike Authority	From Cross Street, Boston to Port Street, East Boston	1.2	North	Fast Lane
Maurice J. Tobin Bridge	Massachusetts Port Authority	From J.F. Fitzgerald Expressway to Chelsea City Line	1.0	North	Fast Lane
Vehicular toll ferries					
Woods Hole	Woods Hole, Martha's Vineyard and Nantucket Steamship Authority	From Woods Hole, MA (across Vineyard Sound) to Martha's Vineyard Island, MA	U	Both ways	No
Hyannis	Woods Hole, Martha's Vineyard and Nantucket Steamship Authority	From Hyannis, MA (across Nantucket Sound) to Nantucket Island, MA	U	Both ways	No

KEY: U = data are unavailable.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Highway Administration, *Toll Facilities in the United States: Bridges-Roads-Tunnels-Ferries*, Washington, DC: June 2001, available at <http://www.fhwa.dot.gov/ohim/tollpage.htm> as of Feb. 18, 2002.

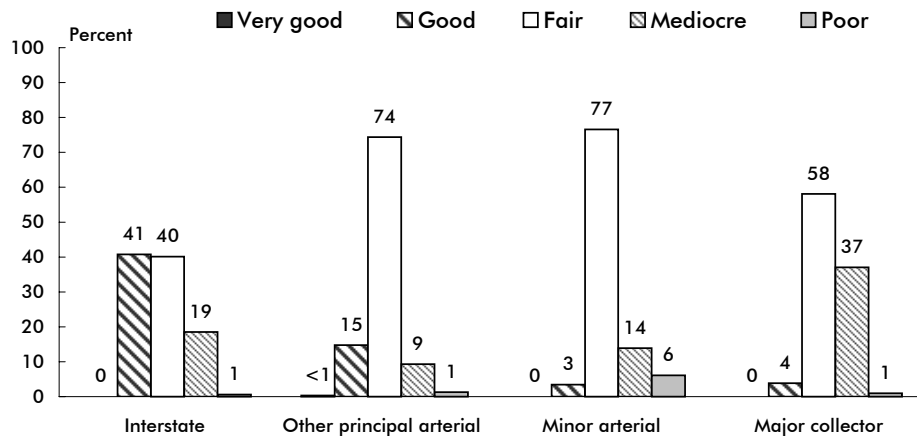
Table 1-5: Massachusetts Road Condition by Functional System -- Rural (Miles)

	1995	1996	1997	1998	1999	2000
Interstate (total reported)	162	162	161	161	162	162
Very good	0	0	5	3	0	0
Good	93	94	112	86	90	66
Fair	46	50	39	65	65	65
Mediocre	19	14	2	6	6	30
Poor	4	4	3	1	1	1
Not reported	0	0	0	0	0	0
Other principal arterial (total reported)	109	309	289	303	306	312
Very good	0	0	0	0	0	1
Good	18	71	101	97	56	46
Fair	78	205	165	184	224	232
Mediocre	12	25	18	20	23	29
Poor	1	8	5	2	3	4
Not reported	209	10	25	9	5	0
Minor arterial (total reported)	113	293	508	532	568	670
Very good	0	0	0	0	0	0
Good	5	15	78	77	21	23
Fair	94	164	384	412	485	513
Mediocre	6	82	29	28	29	93
Poor	8	32	17	15	33	41
Not reported	551	372	164	137	103	0
Major collector (total reported)	N	N	N	N	N	413
Very good	N	N	N	N	N	0
Good	N	N	N	N	N	16
Fair	N	N	N	N	N	240
Mediocre	N	N	N	N	N	153
Poor	N	N	N	N	N	4
Not reported	N	N	N	N	N	0

KEY: 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 Massachusetts: 2000



NOTE: Numbers may not add to 100 due to rounding.

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.

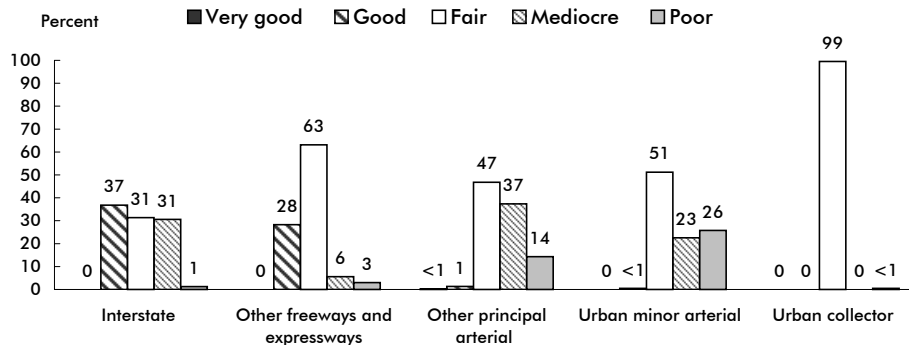
Table 1-6: Massachusetts Road Condition by Functional System -- Urban (Miles)

	1995	1996	1997	1998	1999	2000
Interstate (total reported)	403	403	402	402	402	405
Very good	4	6	3	0	0	0
Good	175	172	196	187	182	149
Fair	143	143	145	135	147	127
Mediocre	73	73	51	76	66	124
Poor	8	9	7	4	7	5
Not reported	0	0	3	0	2	0
Other freeways and expressways (total reported)	92	189	168	189	188	198
Very good	1	0	0	0	0	0
Good	19	67	61	69	74	56
Fair	66	110	102	115	106	125
Mediocre	4	8	2	1	2	11
Poor	2	4	3	4	6	6
Not reported	105	16	35	15	10	1
Other principal arterial (total reported)	327	874	848	904	1,085	1,547
Very good	2	0	0	0	3	3
Good	27	31	53	50	34	20
Fair	214	469	528	574	603	724
Mediocre	57	186	164	184	268	578
Poor	27	188	103	96	177	222
Not reported	1,230	677	705	651	469	4
Urban minor arterial (total reported)	N	N	N	N	N	1,043
Very good	N	N	N	N	N	0
Good	N	N	N	N	N	5
Fair	N	N	N	N	N	534
Mediocre	N	N	N	N	N	235
Poor	N	N	N	N	N	269
Not reported	N	N	N	N	N	0
Urban collector (total reported)	N	N	N	N	N	196
Very good	N	N	N	N	N	0
Good	N	N	N	N	N	0
Fair	N	N	N	N	N	195
Mediocre	N	N	N	N	N	0
Poor	N	N	N	N	N	1
Not reported	N	N	N	N	N	0

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 Massachusetts: 2000



NOTE: Numbers may not add to 100 due to rounding.

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.

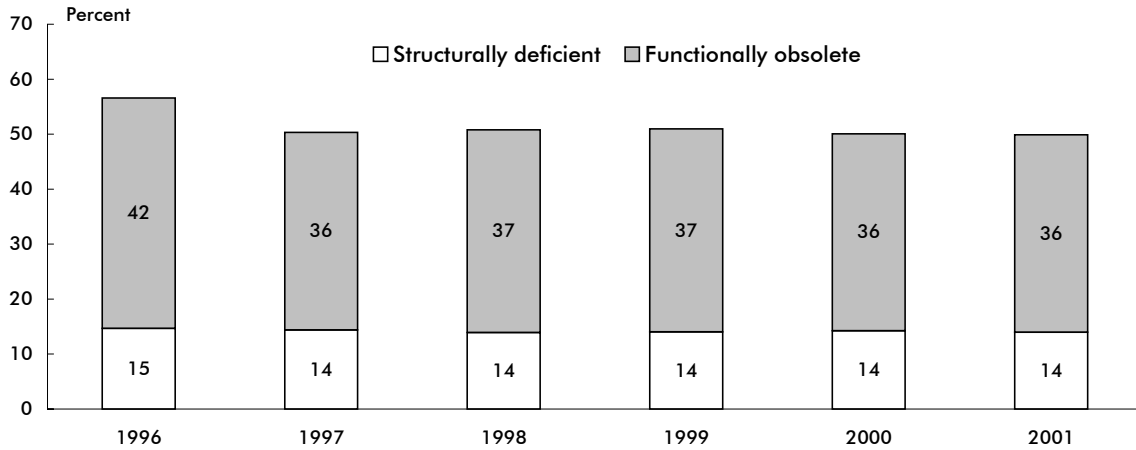
Table 1-7: Highway Bridge Condition: 2001

State	All bridges (number)	Structurally	Functionally	Total of both	
		deficient (number)	obsolete (number)	(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
Iowa	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

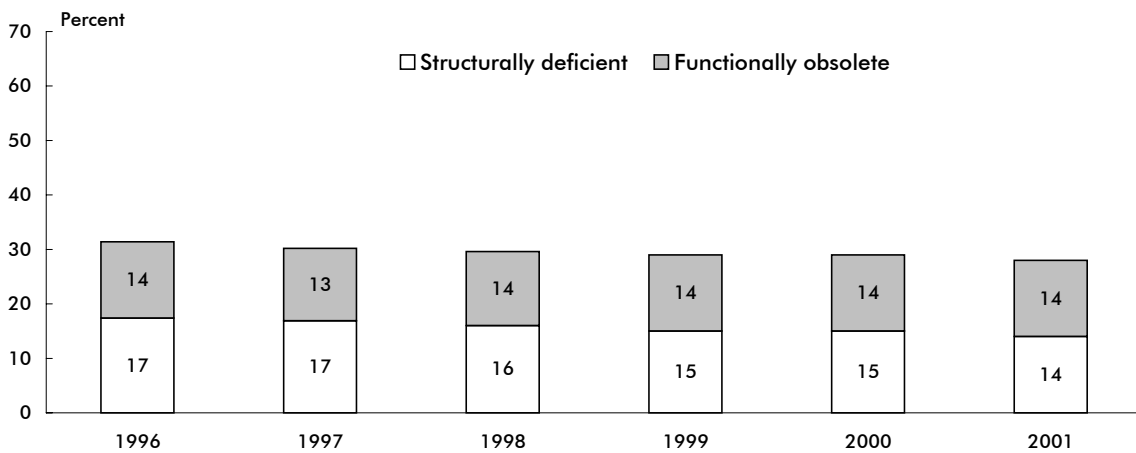
SOURCE: U.S. Department of Transportation, Federal Highway Administration, *National Bridge Inventory: Deficient Bridges by State and Highway System*, Washington, DC: 2001, available at <http://www.fhwa.dot.gov/bridge/britab.htm> as of Jan. 31, 2002.

Figure 1-3: Highway Bridge Condition

Massachusetts



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 1-8: Characteristics of Directly Operated Motor Bus and Trolley Bus Transit in Massachusetts: 2000

Transit agency	Directional route-miles		
	Exclusive right-of-way	Controlled right-of-way	Mixed right-of-way
Motor bus			
Lowell Regional Transit	0.0	0.0	216.8
Massachusetts Bay Transportation Authority	1.1	2.0	1,449.3
Transit Express	0.0	0.0	478.9
Worcester Regional Transit Authority	0.0	0.0	436.7
Total	1.1	2.0	2,581.7
Trolley bus			
Massachusetts Bay Transportation Authority	0.6	0.0	21.0

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 1-9: Characteristics of Rail Transit in Massachusetts: 2000

Transit agency	Directional route-miles	Miles of track	Number of crossings	Number of stations	Number of ADA accessible stations
Heavy rail					
Massachusetts Bay Transportation Authority (Boston)	76.3	107.7	0	53	37
Light rail					
Massachusetts Bay Transportation Authority (Boston)	51.0	77.5	56	95	12
Commuter rail					
Massachusetts Bay Transportation Authority (Boston)	710.2	583.8	0	120	74

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 1-10: Civil and Joint-Use Airports, Heliports, STOLports, and Seaplane Bases in Massachusetts: 2002¹

Ownership and usage	Airports	Heliports	STOLports	Seaplane bases	Total
Publicly owned	25	9	0	0	34
Open to public	25	0	0	0	25
Closed to public	0	9	0	0	9
Privately owned	51	120	1	19	191
Open to public	17	0	0	3	20
Closed to public	34	120	1	16	171
Total	76	129	1	19	225

¹Data 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.

**Table 1-11: Massachusetts Commercial Service Airport Enplanements: 2000
(For airports with scheduled service and 2,500 or more passengers enplaned)**

Airport	Large certificated air carriers	Commuter and small certificated air carriers	Air taxi commuter operators	Foreign air carriers	Total enplanements
General Edward Lawrence Logan International	11,525,398	737,311	688	1,350,110	13,613,507
Nantucket Memorial	6,891	193,549	96,011	0	296,451
Barnstable Municipal - Boardman/Polando Field	0	115,188	90,718	0	205,906
Laurence G. Hanscom Field	1,985	79,693	526	0	82,204
Martha's Vineyard	4,220	66,189	741	0	71,150
Worcester Regional	27,744	25,054	118	0	52,916
New Bedford Regional	0	22,831	51	0	22,882
Provincetown Municipal	0	15,651	43	0	15,694

NOTE: Rank order by total enplaned passengers on air carriers of all types, including foreign air carriers. Data differ from those in table 4-4, which include only enplanements on large certificated carriers.

SOURCE: U.S. Department of Transportation, Federal Aviation Administration, Office of the Associate Administrator for Airports, *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 1-12: Freight Railroads in Massachusetts and the United States: 2000

Type of railroad	Number of railroads		Miles operated ²			
	United States	Massachusetts	United States	Massachusetts		Percent of U.S. total
				Excluding trackage rights	Including trackage rights	
Total	562	10	172,101	1,074	1,233	0.7
Class I	8	1	120,597	305	455	0.4
Regional	35	2	20,978	510	511	2.4
Local	304	6	21,512	257	265	1.2
Switching and terminal	213	1	7,425	2	2	<0.1
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 1-13: Freight Railroads Operating in Massachusetts by Class: 2000

Railroad	Miles operated in Massachusetts¹
Class I railroads	455
CSX Transportation	455
Regional railroads	511
Guilford Rail System	408
Providence and Worcester Railroad Company	103
Local railroads	265
Bay Colony Railroad Corporation	124
Housatonic Railroad Company, Inc.	38
Massachusetts Central Railroad Corporation	28
New England Central Railroad, Inc.	54
Pioneer Valley Railroad	17
Quincy Bay Terminal Company	4
Switching and terminal railroads	2
Grafton & Upton Railroad	2

¹Miles 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/AboutTheIndustry/StateInformation.asp> as of Mar. 19, 2002.

Table 1-14: Massachusetts Water Ports Ranked in Top 150 U.S. Ports by Tonnage: 2000

Port	U.S. rank	Millions of short tons		
		Total	Foreign	Domestic
Boston	35	20.8	12.4	8.4
Fall River	100	3.4	0.7	2.7
Salem	146	1.2	0.9	0.3

SOURCE: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States, Calendar Year 2000, Part 5 National Summaries*, Alexandria, VA: 2001, available at <http://www.iwr.usace.army.mil/> as of Apr. 15, 2002.

Table 1-15: 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
Iowa	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 (thousands)	Vehicle-miles traveled (millions)	Fatality rate per		
					100,000 licensed drivers	100,000 registered vehicles	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
Iowa	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
Louisiana	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 killed	
	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
Iowa	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
Louisiana	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 than 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	7/18/92	Primary	\$25	Front	Designed for more than 10 passengers
Alaska	9/12/90	Secondary	\$15	All	School bus
Arizona	1/1/91	Secondary	\$10	Front	Designed for more than 10 passengers; model year before 1972
Arkansas	7/15/91	Secondary	\$25 ⁴	Front	School bus, church bus, public bus
California	1/1/86	Primary	\$20 ⁵	All	None
Colorado	7/1/87	Secondary	\$15	Front	Passenger bus, school bus
Connecticut	1/1/86	Primary	\$15	Front	Truck or bus over 15,000 lbs.
Delaware	1/1/92	Secondary	\$20	Front	None
District of Columbia	12/12/85	Primary	\$50 ⁶	All	Seating more than 8 people
Florida	7/1/86	Secondary	\$30	Front	School bus, public bus, truck over 5,000 lbs.
Georgia	9/1/88	Primary	\$15	Front	Designed for more than 10 passengers, pickup
Hawaii	2/16/85	Primary	\$45	Front	Bus or school bus over 10,000 lbs.
Idaho	7/1/86	Secondary	\$5	Front	Over 8,000 lbs.
Illinois	7/1/85	Secondary	\$25	Front	None
Indiana	7/1/87	Primary	\$25	Front	Truck, tractor, RV
Iowa	7/1/86	Primary	\$10	Front	None
Kansas	7/1/86	Secondary	\$10	Front	Designed for more than 10 people, truck over 12,000 lbs.
Kentucky	7/13/94	Secondary	\$25	All	Designed for more than 10 people
Louisiana	7/1/86	Primary	\$25 ⁷	Front	Manufactured before 1/1/81
Maine	12/27/95	Secondary	\$50	All	None
Maryland	7/1/86	Primary	\$25	Front	Historic vehicle
Massachusetts	2/1/94	Secondary	\$25	All	Truck over 18,000 lbs., bus, taxi
Michigan	7/1/85	Primary	\$25	Front	Bus
Minnesota	8/1/86	Secondary	\$25	Front	Farm pickup truck
Mississippi	3/20/90	Secondary	\$25	Front	Farm vehicle, bus
Missouri	9/28/85	Secondary	\$10	Front	Designed for more than 10 people, truck over 12,000 lbs.
Montana	10/1/87	Secondary	\$20	All	None
Nebraska	1/1/93	Secondary	\$25	Front	Manufactured before 1973
Nevada	7/1/87	Secondary	\$25	All	Taxi, bus, school bus
New Hampshire	None	NA	NA	NA	NA
New Jersey	3/1/85	Secondary	\$20	Front	None
New Mexico	1/1/86	Primary	\$25	Front	Vehicle over 10,000 lbs.
New York	12/1/84	Primary	\$50	Front	Bus, school bus, taxi
North Carolina	10/1/85	Primary	\$25	Front	Designed for more than 10 people
North Dakota	7/14/94	Secondary	\$20	Front	Designed for more than 10 people
Ohio	5/6/86	Secondary	\$25	Front	None
Oklahoma	2/1/87	Primary	\$20	Front	Farm vehicle, truck, truck tractor, RV
Oregon	12/7/90	Primary	\$75	All	None
Pennsylvania	11/23/87	Secondary	\$10	Front	Truck over 7,000 lbs.
Rhode Island	6/18/91	Secondary	\$50	All	None
South Carolina	7/1/89	Secondary	\$10	All	School bus, public bus
South Dakota	1/1/95	Secondary	\$20	Front	Bus, school bus
Tennessee	4/21/86	Secondary	\$50	Front	Vehicle over 8,500 lbs.
Texas	9/1/85	Primary	\$50	Front	Designed for more than 10 people, truck over 15,000 lbs.
Utah	4/28/86	Secondary	\$45	Front	Vehicle over 10,000 lbs., school/public bus, taxi
Vermont	1/1/94	Secondary	\$10	All	Bus, taxi
Virginia	1/1/88	Secondary	\$25	Front	Designed for more than 10 people, taxi
Washington	6/11/86	Secondary	\$35	All	Designed for more than 10 people
West Virginia	9/1/93	Secondary	\$25	Front	Designed for more than 10 people
Wisconsin	12/1/87	Secondary	\$10	All	Taxi, farm truck
Wyoming	6/8/89	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; RV = recreational vehicle.

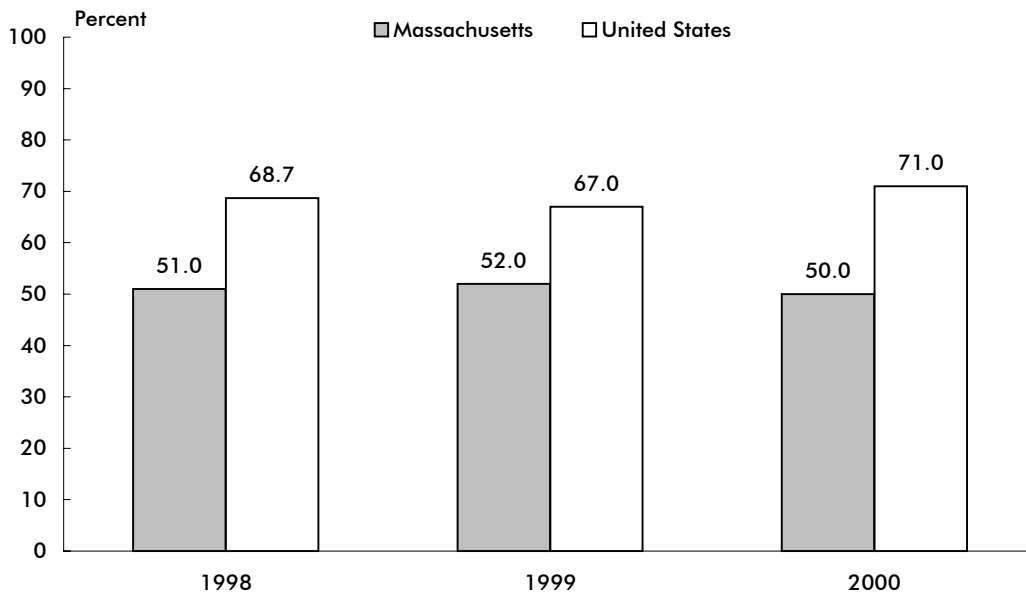
SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2000*, Washington, DC: 2001, available at <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2000.pdf> as of Jan. 4, 2002.

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
Iowa	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
Missouri	67.7		

KEY: 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
Iowa	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
Louisiana	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/nca/factshet.html> as of Dec. 5, 2001.

Table 2-6: Motor Vehicle Fatalities Involving High Blood Alcohol Concentration (BAC [≥] 0.10 grams per deciliter)

State	1995			2000		
	Total fatalities	Fatalities		Total fatalities	Fatalities	
		involving high blood alcohol	Percent		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
Iowa	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/factsheet.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	R-3 yrs
Alaska	Y-0.10	0.10	Y-0.00 (<21)	R-30 days	R-1 yr	R-10 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	Y-0.08	0.08	Y-0.01 (<21)	Nms	Nms	R-18 mos
Colorado	Y-0.10	0.10	Y-0.02 (<21)	Nms	R-1 yr	R-1 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	Y-0.05	0.08	Y-0.00 (<21)	R-6 mos	R-1 yr	R-2 yrs
Florida	Y-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	R-1 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	Y-0.10	0.10	Y-0.02 (<21)	S-30 days	S-1 yr	S-1 yr
Iowa	Y-0.10	0.10	Y-0.02 (<21)	R-30 days	R-1 yr	R-1 yr
Kansas	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	S-1 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	R-3 mos	R-3 mos
Nebraska	Y-0.10	0.10	Y-0.02 (<21)	R-60 days	R-1 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	R-3 yrs	R-3 yrs
New Jersey	N	0.10	Y-0.01 (<21)	R-6 mos	R-2 yrs	R-10 yrs
New Mexico	Y-0.08	0.08	Y-0.02 (<21)	Nms	R-30 days	R-30 days
New York	A	0.10	Y-0.02 (<21)	Nms	R-1 yr	R-1 yr
North Carolina	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	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)	S-1 mo	S-12 mos	S-12 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	R-1 yr	R-1 yr
Tennessee	N	0.10	Y-0.02 (<21)	Nms	R-2 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	R-1 yrs
Vermont	Y-0.08	0.08	Y-0.02 (<21)	S-90 days	S-18 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	R-1 yr	R-1 yr
Wisconsin	Y-0.10	0.10	Y-0.02 (<21)	Nms	R-60 days	R-90 days
Wyoming	Y-0.10	0.10	Y-0.02 (<21)	Nms	S-1 yr	R-3 yrs

KEY: BAC = blood alcohol concentration; DWI = driving while intoxicated; Y = yes; N = no; A = alternative; S = suspension; 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: NA = not applicable.

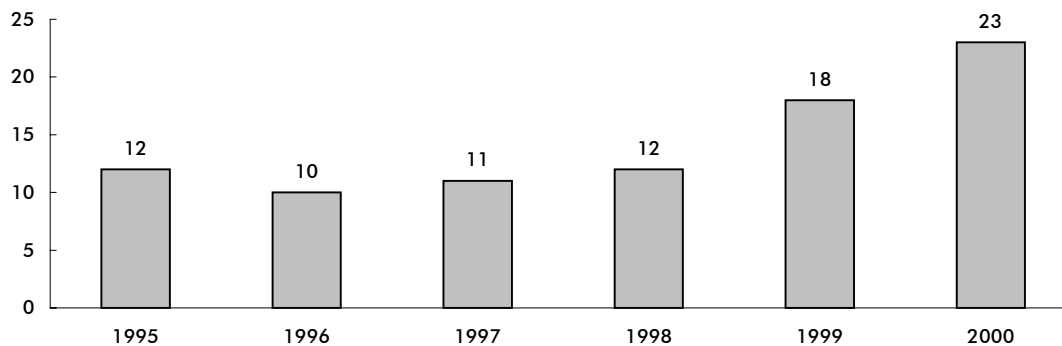
NOTE: Interstates are divided into urban and rural sections based primarily on population size and population density.

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
Iowa	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: Massachusetts Train Accidents
(Excludes highway-grade crossing incidents and other incidents)**



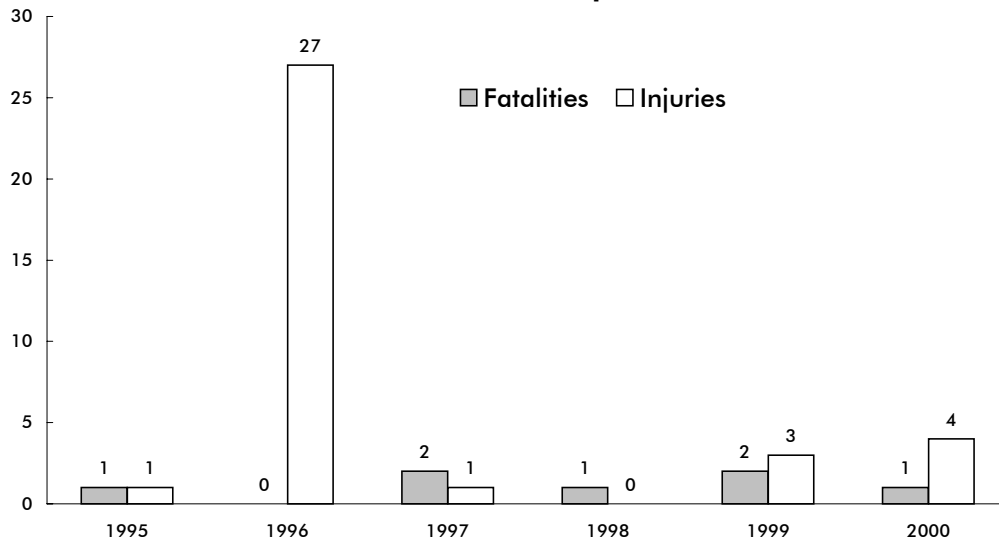
NOTE FOR DATA ON THIS PAGE: "Accidents/incidents" includes all events reportable to the U.S. Department of Transportation, Federal Railroad Administration under applicable regulations. These include: train accidents, reported on Form F 6180.54, comprised of collisions, derailments, and other events involving 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				State	Number of			
	grade crossings	Incidents	Fatalities	Injuries		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
Iowa	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
Louisiana	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: Massachusetts 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

	Massachusetts		United States	
	Number	Percent	Number	Percent
Total	1,679	100.0	256,241	100.0
Public, motor vehicle	1,158	69.0	155,370	60.6
Private, motor vehicle	503	30.0	98,918	38.6
Pedestrian	18	1.1	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

	Massachusetts		United States	
	Number	Percent	Number	Percent
Total	1,158	100.0	155,370	100.0
Cross bucks	226	19.5	71,468	46.0
Gates	192	16.6	34,296	22.1
Flashing lights	455	39.3	27,100	17.4
Stop signs	5	0.4	11,630	7.5
Unknown	48	4.1	5,253	3.4
Special warning	199	17.2	3,723	2.4
HWTS, WW, bells	30	2.6	1,417	0.9
Other	3	0.3	483	0.3

KEY: HWTS = highway traffic signals; 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 Massachusetts Train Accidents/Incidents: 2000 (Includes highway-rail crossing)

Type of person	Fatalities	Injuries
Worker on duty (railroad employee)	0	153
Employee not on duty	0	2
Passenger on train	0	13
Nontrespasser	0	7
Trespasser	17	7
Worker on duty (contractor)	0	1
Contractor (other)	0	0
Worker on duty (volunteer)	0	0
Volunteer (other)	0	0
Nontrespasser (off railroad property)	0	0

Figure 2-4: Railroad Trespasser Deaths and Injuries in Massachusetts (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: Massachusetts 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	16	6	3	195	0	192	14
Demand responsive	131	0	91	19	0	19	302
Ferry boat	1	0	0	0	0	0	40
Heavy rail	12	5	7	732	0	150	0
Light rail	18	0	13	219	0	172	20
Motor bus	262	0	289	230	0	266	424
Trolley bus	0	0	0	7	0	8	0
Van pool	0	0	0	0	0	0	0

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

	Collision			Noncollision			Total property 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

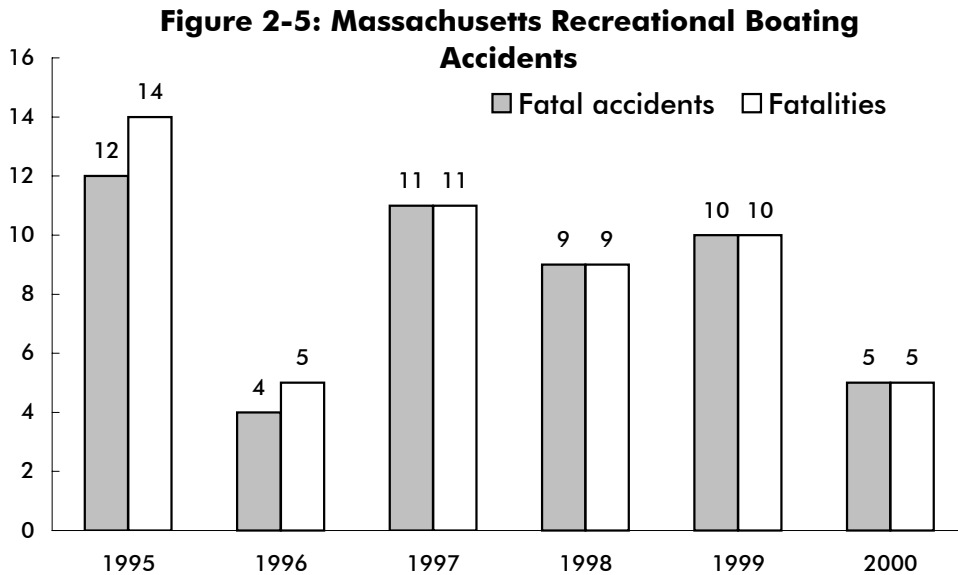
NOTES FOR DATA ON THIS PAGE: Collision includes at-grade crossings and suicides. Noncollision includes: 1) derailments/buses going off road; 2) personal casualties in parking facilities, inside vehicles, on right of way, boarding/alighting, and in station/bus stops; and 3) nonarson fires.

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

	Massachusetts	United States
Number of accidents		
Total	66	7,740
Fatal	5	616
Nonfatal injury	28	3,292
Property damage	33	3,832
Number of persons		
Killed	5	701
Injured	36	4,355

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



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	
	Massachusetts	United States	Massachusetts	United States
Number of accidents				
Total	4	633	8	696
Number of persons				
Killed	3	191	2	215
Injured	5	476	5	542

Figure 2-6: Massachusetts 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.

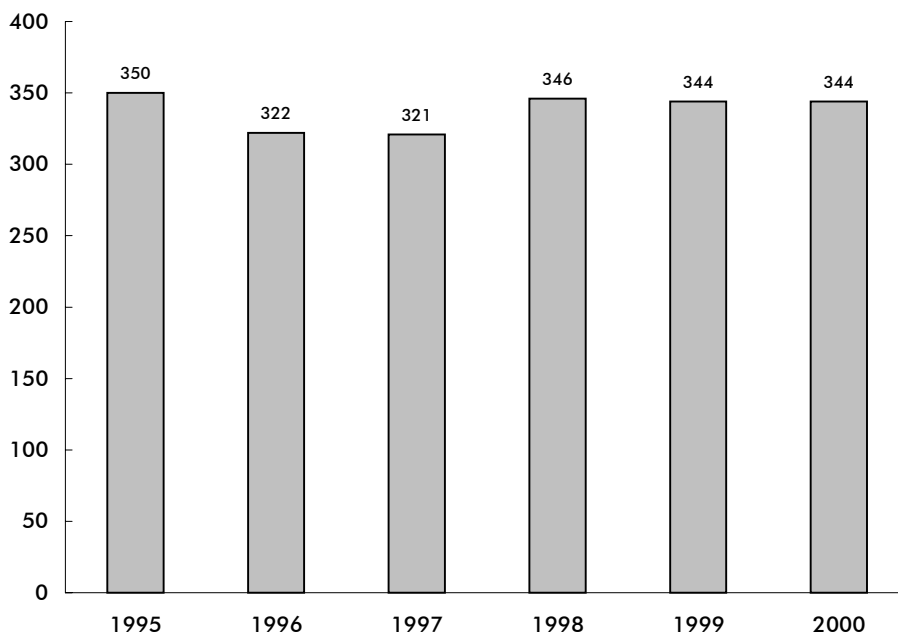
SOURCES FOR DATA ON THIS PAGE: U.S. Department of Transportation, U.S. Coast Guard, *Boating Statistics 2000*, Washington, DC: 2001; U.S. Department of Transportation, U.S. Coast Guard, *Boating Statistics 1999*, Washington, DC: 2000, available at http://www.uscgboating.org/Saf/pdf/Boating_Statistics_2000.pdf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

	Incidents	Deaths	Injuries		Damages (\$ thousands)	
			Total	Major		Minor
Massachusetts	344	0	2	0	2	717
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: Massachusetts 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.

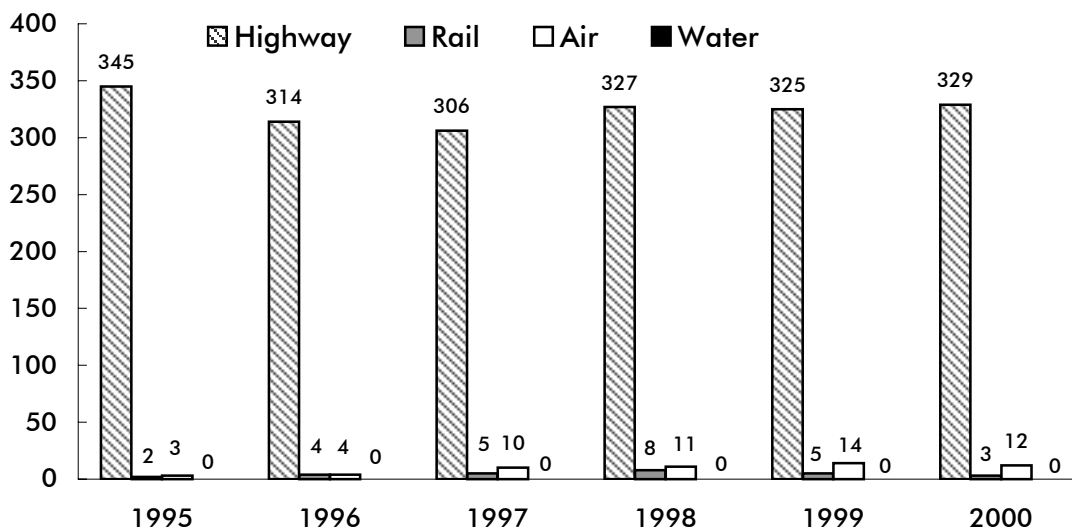
SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, *Hazmat Summary by State for Calendar Year 2000*, and earlier years, Washington, DC: 2002, available at <http://hazmat.dot.gov> as of Apr. 24, 2002.

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

Mode	Total incidents	Deaths	Injuries		Damages (\$ thousands)
			Major	Minor	
Highway	329	0	0	2	716
Rail	3	0	0	0	0
Air	12	0	0	0	1
Water ¹	0	0	0	0	0
Total	344	0	0	2	717

¹Includes only packaged shipments (i.e., nonbulk shipments).

**Figure 2-8: Massachusetts 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
Massachusetts						
Number of incidents	2	0	1	4	3	4
Number of fatalities	0	0	0	3	0	0
Number of injuries	0	0	1	6	1	0
Property damage (\$ thousands)	550	0	0	1,415	30	792
United States, total						
Number of incidents	97	110	102	137	119	154
Number of fatalities	16	47 ¹	9	17	19	22
Number of injuries	43	109 ¹	67	65	85	59
Property damage (\$ thousands)	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
Massachusetts						
Number of incidents	1	1	0	0	0	1
Number of fatalities	0	0	0	0	0	0
Number of injuries	0	0	0	0	0	0
Property damage (\$ thousands)	320	80	0	0	0	0
United States, total						
Number of incidents	64	77	73	99	54	80
Number of fatalities	2	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
Massachusetts						
Number of incidents	0	0	0	0	0	0
Number of fatalities	0	0	0	0	0	0
Number of injuries	0	0	0	0	0	0
Property damage (\$ thousands)	0	0	0	0	0	0
United States, total						
Number of incidents	188	193	171	153	168	147
Number of fatalities	3	5	0	2	4	1
Number of injuries	11	13	5	6	20	4
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 Massachusetts 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)
Massachusetts	1	51,836	66,125	Kentucky	27	995	254
New Hampshire	2	6,358	6,517	Alabama	28	512	247
New York	3	7,078	4,521	Minnesota	29	1,687	240
Rhode Island	4	2,921	3,473	Oregon	30	439	236
New Jersey	5	8,112	2,549	Washington	31	700	203
Pennsylvania	6	5,485	2,323	Idaho	32	403	159
Connecticut	7	4,826	2,289	Mississippi	33	226	148
Ohio	8	3,393	1,398	Arkansas	34	419	142
Maine	9	2,204	1,297	Delaware	35	464	138
Illinois	10	3,040	926	Kansas	36	384	117
Vermont	11	1,611	902	Nebraska	37	491	100
California	12	8,415	890	Oklahoma	38	472	91
North Carolina	13	3,566	859	North Dakota	39	27	41
Indiana	14	1,281	701	South Dakota	40	85	19
Wisconsin	15	2,022	629	Nevada	41	181	16
Georgia	16	2,087	609	Arizona	42	1,205	15
Virginia	17	1,560	606	Utah	43	453	10
Maryland	18	1,174	525	Alaska	44	S	S
Michigan	19	2,598	477	District of Columbia	44	S	S
Colorado	20	680	465	Hawaii	44	6	S
Florida	21	1,614	456	Montana	44	S	S
South Carolina	22	922	437	New Mexico	44	149	S
Missouri	23	967	393	Texas	44	3,007	S
Iowa	24	604	371	West Virginia	44	482	S
Tennessee	25	1,346	333	Wyoming	44	9	S
Louisiana	26	371	315	From all states		138,935	104,611

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 Massachusetts 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)
Massachusetts	1	51,836	66,125	Arkansas	27	629	65
Connecticut	2	5,474	4,583	Iowa	28	451	62
New Hampshire	3	3,918	4,172	Colorado	29	857	60
Rhode Island	4	2,992	2,279	Alabama	30	S	52
New York	5	14,136	2,144	Arizona	31	1,335	44
Pennsylvania	6	3,882	999	Oregon	32	661	39
New Jersey	7	4,301	897	Mississippi	33	430	38
Vermont	8	1,241	777	Kansas	34	361	26
Maine	9	2,428	775	Delaware	34	233	26
Virginia	10	2,556	759	Utah	36	260	22
Ohio	11	2,869	525	Louisiana	37	344	21
California	12	8,354	502	Nebraska	37	196	21
Illinois	13	3,552	416	Oklahoma	39	530	20
Texas	14	4,450	326	Nevada	40	251	19
Michigan	15	2,024	316	West Virginia	40	130	19
Maryland	16	1,656	292	Idaho	42	207	7
North Carolina	17	2,440	265	North Dakota	43	108	6
Georgia	18	2,435	231	Wyoming	44	59	5
Florida	19	3,226	204	New Mexico	45	106	4
Minnesota	20	956	147	Montana	46	49	3
Tennessee	21	1,731	135	Alaska	47	33	1
Wisconsin	22	1,101	119	District of Columbia	48	S	S
Missouri	23	935	103	Hawaii	48	121	S
South Carolina	24	900	98	Indiana	48	1,704	S
Washington	25	1,179	77	South Dakota	48	S	S
Kentucky	26	593	66	To all states		142,223	90,866

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. "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 Massachusetts by Mode of Transportation: 1997

	Value		Short tons		Ton-miles	
	Number (\$ millions)	Percent	Number (thousands)	Percent	Number (millions)	Percent
All modes	142,223	100.0	90,866	100.0	13,063	100.0
Single modes	101,239	71.2	89,226	98.2	11,900	91.1
Truck	91,802	64.5	83,113	91.5	8,269	63.3
For-hire	45,660	32.1	20,897	23.0	5,389	41.3
Private truck	45,080	31.7	57,875	63.7	2,690	20.6
Rail	260	0.2	S	S	S	S
Water	S	S	S	S	S	S
Shallow draft	S	S	S	S	S	S
Great Lakes	Z	Z	Z	Z	Z	Z
Deep draft	S	S	S	S	S	S
Air (including truck and air)	8,612	6.1	S	S	S	S
Pipeline	S	S	S	S	S	S
Multiple modes	36,764	25.8	858	0.9	858	6.6
Parcel, U.S. Postal Service, or courier service	36,127	25.4	686	0.8	568	4.3
Truck and rail intermodal combination	S	S	81	Z	216	1.7
Truck and water	165	0.1	91	0.1	74	0.6
Rail and water	Z	Z	Z	Z	Z	Z
Other multiple modes	Z	Z	Z	Z	Z	Z
Other and unknown modes	4,219	3.0	782	0.9	305	2.3

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/cfs97od.html> as of Nov. 2, 2001.

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

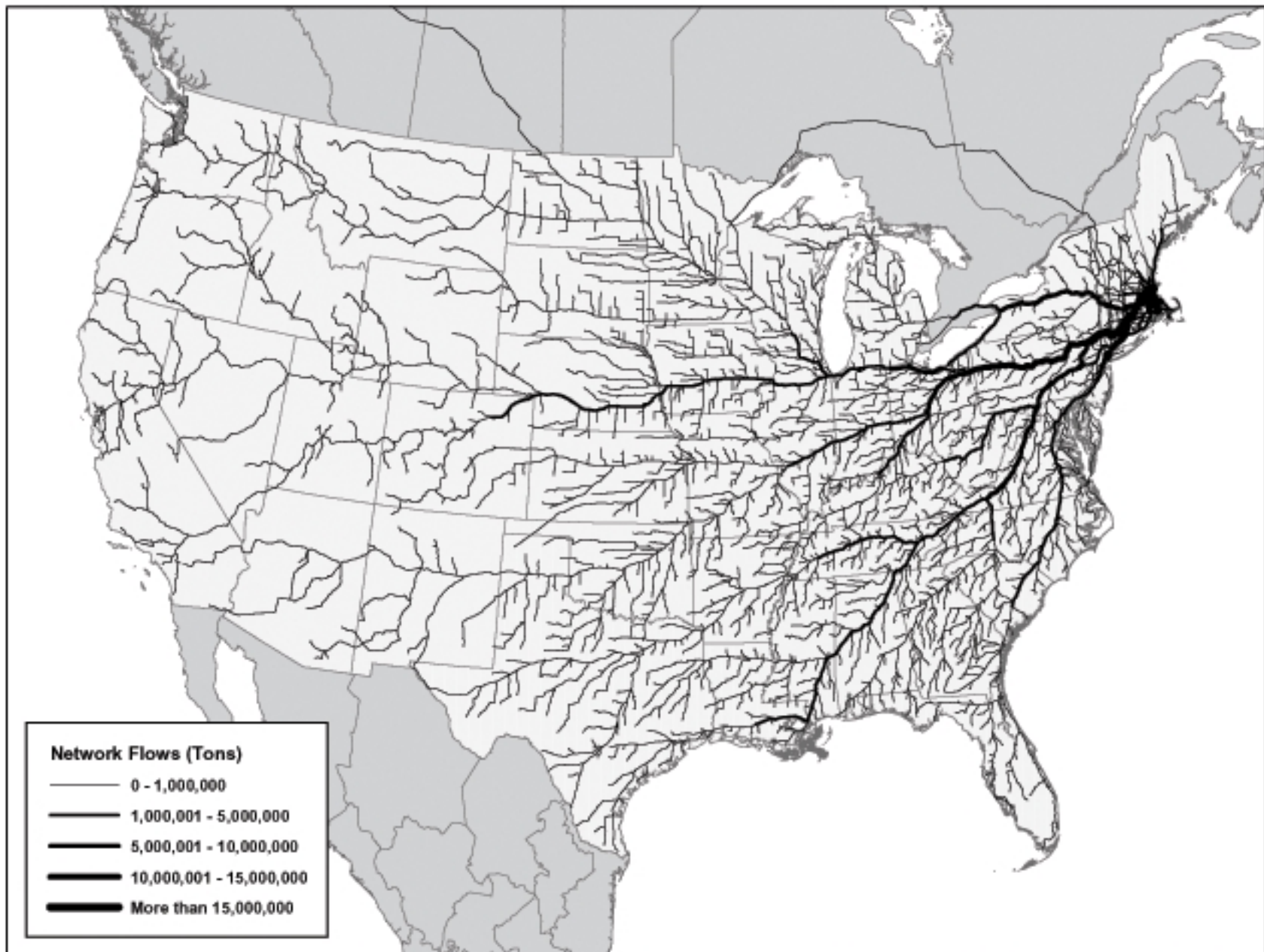
State of destination	Value (\$ millions)	Weight (thousand short tons)
Massachusetts	41,782	63,562
New Hampshire	2,837	4,133
Connecticut	3,901	3,495
Rhode Island	2,608	2,225
New York	9,438	2,004
Pennsylvania	2,694	918
New Jersey	2,728	770
Vermont	1,014	747
Virginia	1,487	737
Maine	1,557	733
All other states	21,756	3,789
Total, all states	91,802	83,113

Table 3-5: Domestic Shipments to Massachusetts by Truck: 1997

State of origin	Value (\$ millions)	Weight (thousand short tons)
Massachusetts	41,782	63,562
New Hampshire	4,769	6,391
New York	4,784	4,227
Rhode Island	2,582	3,382
New Jersey	6,609	2,213
Connecticut	3,911	2,190
Pennsylvania	3,885	2,113
Maine	1,815	1,201
Ohio	2,384	956
Vermont	1,394	889
All other states	24,752	7,404
Total, all states	98,667	94,528

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: Massachusetts Truck Flows: 1998



C-5

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 Massachusetts by Commodity: 1997
(Descending order by weight)**

Commodity (2-digit commodity code)	Value (\$ millions)	Weight (thousand short tons)
Gravel and crushed stone (12)	135	18,254
Nonmetallic mineral products (31)	1,112	12,295
Natural sands (11)	48	8,482
Coal and petroleum products, n.e.c. (19)	197	6,408
Gasoline and aviation turbine fuel (17)	1,532	5,255
Other prepared foodstuffs and fats and oils (07)	4,316	4,725
Base metal in primary or semifinished forms and in finished basic shapes (32)	2,711	2,118
Printed products (29)	4,013	1,842
Wood products (26)	1,809	1,778
Plastics and rubber (24)	5,364	1,686
Milled grain products and preparations, and bakery products (06)	2,128	1,525
Pulp, newsprint, paper, and paperboard (27)	2,755	1,509
Alcoholic beverages (08)	2,120	1,411
Meat, fish, seafood, and their preparations (05)	3,931	1,259
Chemical products and preparations, n.e.c. (23)	3,216	1,051
Paper or paperboard articles (28)	2,292	1,033
Miscellaneous manufactured products (40)	7,453	1,032
Mixed freight (43)	1,921	930
Electronic and other electrical equipment and components and office equipment (35)	14,619	662
Textiles, leather, and articles of textiles or leather (30)	5,185	510
All other commodities	24,945	9,348
Total, all commodities	91,802	83,113

KEY: n.e.c. = not elsewhere classified.

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 CD-ROM, CD-EC97-CFS.

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

Commodity	1999	Percent of total	2000	Percent of total
Mixed freight	1,441,720	13.8	1,508,500	14.3
Food products	1,361,436	13.0	1,404,764	13.4
Nonmetallic minerals	1,268,524	12.1	1,307,076	12.4
Pulp and paper products	1,082,700	10.3	1,108,820	10.5
Chemicals	1,317,212	12.6	1,043,720	9.9
All other commodities	3,999,225	38.2	4,145,371	39.4
Massachusetts, total	10,470,817	100.0	10,518,251	100.0

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

Commodity	1999	Percent of total	2000	Percent of total
Mixed freight	791,588	27.5	1,033,480	35.5
Waste and scrap material	877,052	30.5	647,740	22.3
Chemicals	289,580	10.1	225,840	7.8
Empty trailers and containers	189,216	6.6	166,000	5.7
Primary metal products	U	U	155,900	5.4
Food products	127,060	4.4	U	U
All other commodities	599,884	20.9	679,144	23.4
Massachusetts, total	2,874,380	100.0	2,908,104	100.0

KEY: U = data are unavailable.

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/abouttheindustry/stateinformation.asp> as of Mar. 18, 2002; and *Railroads and States -1999*, Washington, DC: January 2002, available at <http://www.aar.org/abouttheindustry/stateinformation.asp> as of Mar. 18, 2002.

Map 3-2: Massachusetts 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 Massachusetts by Destination: 2000

Destination	Short tons	Percent of total
Total originating in Massachusetts	3,020,154	100.0
Massachusetts (intrastate)	1,588,389	52.6
Foreign (excluding Canada)	573,240	19.0
Connecticut	450,600	14.9
South Carolina	131,600	4.4
Maine	123,398	4.1
New York	39,699	1.3
Canada	36,087	1.2
Rhode Island	35,629	1.2
New Jersey	19,059	0.6
New Hampshire	18,726	0.6
Other	3,727	0.1

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

Origin	Short tons	Percent of total
Total shipped to Massachusetts	25,541,673	100.0
Foreign (excluding Canada)	10,106,395	39.6
Canada	3,390,670	13.3
New York	2,751,568	10.8
Virginia	2,690,891	10.5
Virgin Islands	2,215,439	8.7
New Jersey	1,978,059	7.7
Massachusetts (intrastate)	1,588,389	6.2
Rhode Island	202,505	0.8
Texas	158,001	0.6
Pennsylvania	119,528	0.5
Louisiana	95,245	0.4
Maine	92,851	0.4
Maryland	60,638	0.2
Delaware	51,633	0.2
Connecticut	34,516	0.1
New Hampshire	5,345	< 0.1

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.iwr.usace.army.mil> as of Feb. 12, 2002.

Table 3-11: Foreign and Domestic Waterborne Shipments Originating in Massachusetts by Commodity: 2000¹

Commodity	Short tons	Percent of total
Total	3,020,154	100.0
Petroleum products	1,019,416	33.8
Iron ore, iron, and steel waste and scrap	284,895	9.4
Primary metal products	154,012	5.1
Lumber, logs, wood chips, and pulp	83,857	2.8
Food and food products	35,364	1.2
Manufactured goods	27,656	0.9
Chemicals excluding fertilizers	11,130	0.4
Primary nonmetal products	8,970	0.3
Non-ferrous ores and scrap	372	<0.1
Sand, gravel, shells, clay, salt, and slag	279	<0.1
Chemical fertilizers	59	<0.1
Unknown and not elsewhere classified products ²	1,394,144	46.2

Table 3-12: Domestic Waterborne Shipments Originating in Massachusetts by Commodity: 2000¹

Commodity	Short tons	Percent of total
Total	2,410,827	100.0
Petroleum products	1,018,946	42.3
Manufactured goods	2,998	0.1
Unknown and not elsewhere classified products ²	1,388,883	57.6

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.iwr.usace.army.mil/> as of Oct. 30, 2001.

Table 3-13: Foreign and Domestic Waterborne Shipments to Massachusetts by Commodity: 2000¹

Commodity	Short tons	Percent of total
Total	25,541,673	100.0
Petroleum products	15,358,766	60.1
Coal, lignite, and coal coke	1,464,073	5.7
Sand, gravel, shells, clay, salt, and slag	979,172	3.8
Primary nonmetal products	438,243	1.7
Food and food products	263,751	1.0
Manufactured goods	254,797	1.0
Chemicals excluding fertilizers	160,598	0.6
Primary metal products	67,920	0.3
Lumber, logs, wood chips, and pulp	15,963	<0.1
Non-ferrous ores and scrap	682	<0.1
Chemical fertilizers	172	<0.1
Iron ore, iron, and steel waste and scrap	2	<0.1
Unknown and not elsewhere classified products ²	6,537,534	25.6

Table 3-14: Domestic Waterborne Shipments to Massachusetts by Commodity: 2000¹

Commodity	Short tons	Percent of total
Total	12,044,608	100.0
Petroleum products	5,475,827	45.5
Chemicals excluding fertilizers	39,367	0.3
Manufactured goods	2,998	<0.1
Unknown and not elsewhere classified products ²	6,526,416	54.2

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.iwr.usace.army.mil/> as of Oct. 30, 2001.

**Table 3-15: U.S. Waterborne Imports by State and Vessel Type:
1999
(Thousands of metric tons)**

Cargo discharged in	Total	Vessel type			
		Tanker	Dry-bulk carrier	Full container	Other freighter ¹
Texas	215,154	177,950	31,448	3,442	2,314
Louisiana	140,682	98,723	37,092	1,101	3,766
California	75,162	31,143	10,345	29,169	4,505
New York	55,174	30,575	11,814	10,701	2,084
Pennsylvania	37,381	25,980	8,319	1,140	1,943
Florida	28,509	10,565	10,166	3,656	4,112
Virgin Islands	21,954	19,634	2,294	16	10
Maine	20,795	19,616	1,521	29	629
Mississippi	18,719	16,446	1,435	556	282
Washington	18,311	2,585	6,708	5,915	3,093
New Jersey	17,842	14,230	2,916	41	655
Alabama	14,211	5,620	8,046	53	492
Maryland	14,090	1,448	8,948	1,462	2,232
Puerto Rico	14,058	8,863	3,096	1,049	1,050
Massachusetts	12,588	9,538	2,347	501	202
Virginia	10,705	4,032	1,903	4,064	706
Georgia	9,614	2,353	3,845	2,403	1,013
South Carolina	8,755	384	3,455	4,257	659
Delaware	7,957	4,656	1,474	1,275	552
Michigan	6,771	173	6,302	81	215
Hawaii	5,955	4,832	957	82	84
Ohio	5,257	69	4,930	20	238
Illinois	4,883	231	4,489	25	138
Oregon	4,369	1,215	1,776	421	957
Rhode Island	3,650	2,662	919	23	46
North Carolina	3,256	1,575	1,077	320	284
New Hampshire	3,212	1,505	1,691	4	12
Connecticut	2,930	1,534	786	78	532
Wisconsin	1,383	Z	1,280	5	98
Alaska	1,241	967	224	19	31
Minnesota	629	23	399	4	203
District of Columbia	53	Z	48	Z	5
Indiana	Z	Z	Z	Z	Z
United States, total	785,243	498,124	182,050	71,914	33,155

¹ Roll-on/roll-off, breakbulk ships, partial containerships, refrigerated cargo ships, barge carriers, and specialized cargo ships.

KEY: Z = zero or less than 1 unit of measure.

SOURCE: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, Waterborne Databank 1999, May 2002.

**Table 3-16: U.S. Waterborne Exports by State and Vessel Type: 1999
(Thousands of metric tons)**

Cargo loaded in	Total	Vessel type			Other freighter ¹
		Tanker	Dry-bulk carrier	Full container	
Louisiana	97,093	9,842	77,773	3,669	5,809
Texas	50,331	23,279	18,917	4,769	3,366
California	34,585	4,778	11,074	17,011	1,722
Washington	30,810	2,459	19,189	6,897	2,265
Virginia	27,374	269	22,106	4,018	981
Florida	17,797	692	9,332	2,773	5,000
Ohio	12,936	74	12,505	130	227
Oregon	12,712	501	8,535	2,181	1,495
Alaska	10,122	5,794	3,300	319	709
New York	9,644	508	2,992	5,476	668
Michigan	8,392	190	7,673	348	181
Maryland	7,834	129	6,257	734	714
Alabama	7,724	126	4,656	366	2,576
Wisconsin	7,492	117	7,007	142	226
Georgia	6,291	173	1,323	3,246	1,549
South Carolina	5,929	39	222	5,157	511
Minnesota	3,994	45	3,721	125	103
North Carolina	2,614	305	1,212	323	774
Mississippi	2,456	421	1,095	329	611
Puerto Rico	1,054	593	33	238	190
Virgin Islands	772	699	35	14	24
Illinois	624	1	521	90	12
Pennsylvania	616	89	116	276	135
Massachusetts	576	19	226	297	34
Hawaii	509	328	63	57	61
Delaware	513	17	173	189	134
Maine	329	57	61	44	167
New Jersey	285	113	63	47	62
Connecticut	126	8	81	19	18
Rhode Island	111	9	98	2	2
New Hampshire	23	20	Z	1	2
Indiana	18	Z	18	Z	Z
District of Columbia	Z	Z	Z	Z	Z
United States, total	360,697	51,696	219,382	59,289	30,330

¹ Roll-on/roll-off, breakbulk ships, partial containerships, refrigerated cargo ships, barge carriers, and specialized cargo ships.

KEY: Z= zero or less than 1 unit of measure.

SOURCE: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, Waterborne Databank 1999, May 2002.

Table 3-17: Scheduled and Nonscheduled Air Freight and Mail Enplaned: 2000 (Short tons)

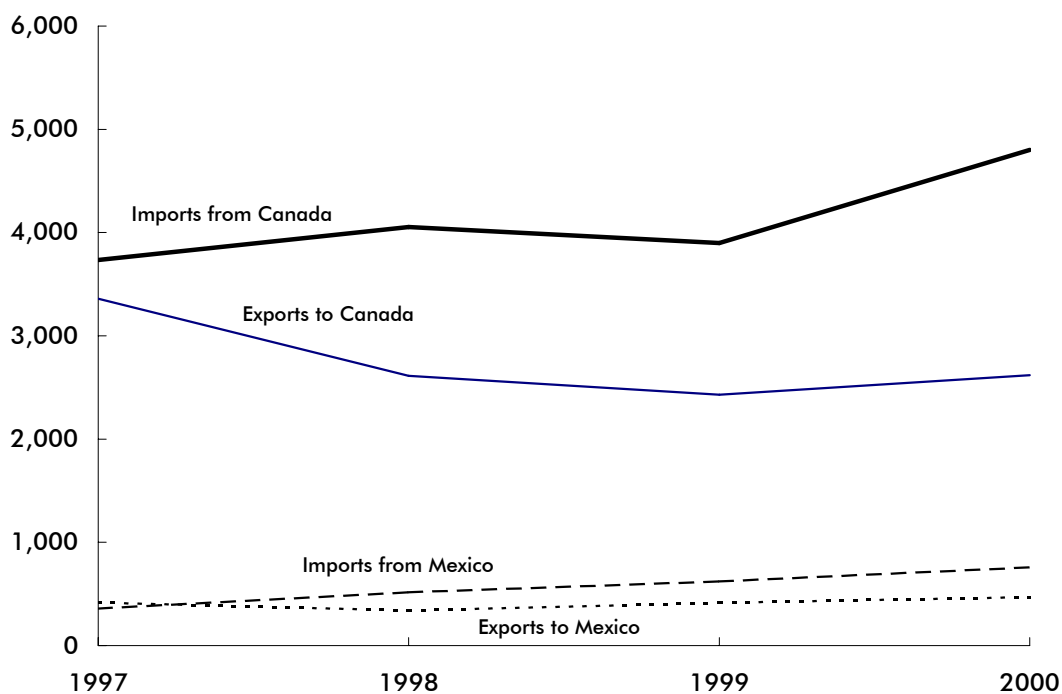
State	Freight		Mail	
	Scheduled	Nonscheduled	Scheduled	Nonscheduled
Alabama	17,233	139,250	6,796	25
Alaska	467,057	141,482	52,354	10,232
Arizona	70,430	66,143	36,115	27,465
Arkansas	1,886	12,578	6,534	2,955
California	1,176,476	504,757	237,537	87,278
Colorado	106,816	61,503	55,370	31,711
Connecticut	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
Iowa	15,346	53,766	7,429	3,984
Kansas	6,200	20,199	2,597	18
Kentucky	16,427	823,924	5,093	0
Louisiana	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 <http://www.bts.gov/publications/airactstats2000/> as of Oct. 29, 2001.

Table 3-18: Surface Merchandise Trade with Canada and Mexico: 2000 (Millions of current dollars)

	Exports to		Imports from	
	Canada	Mexico	Canada	Mexico
Massachusetts	2,619	471	4,801	760
United States, total	154,847	97,159	210,270	113,437

Figure 3-1: Massachusetts 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 Massachusetts by Weight

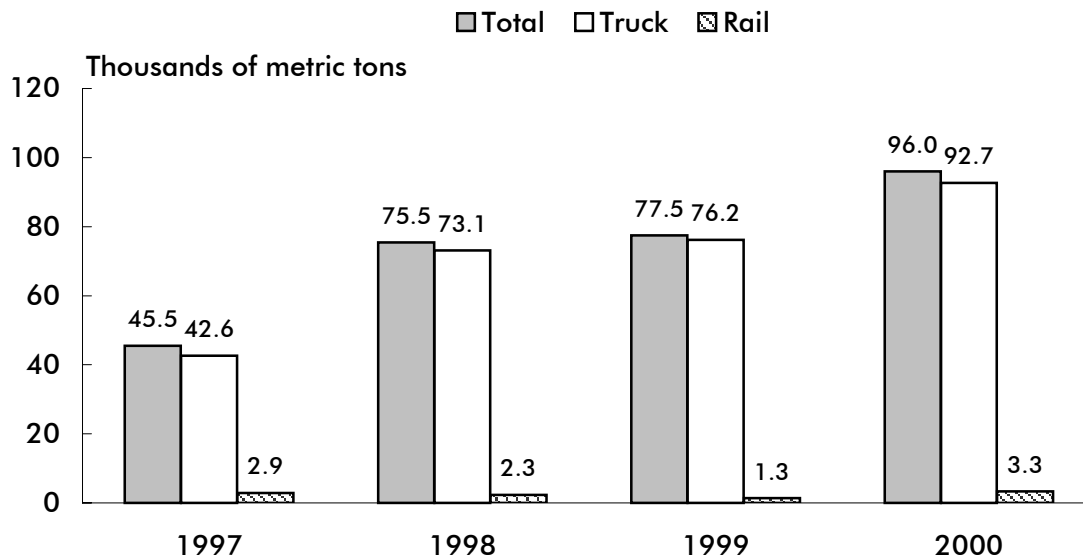
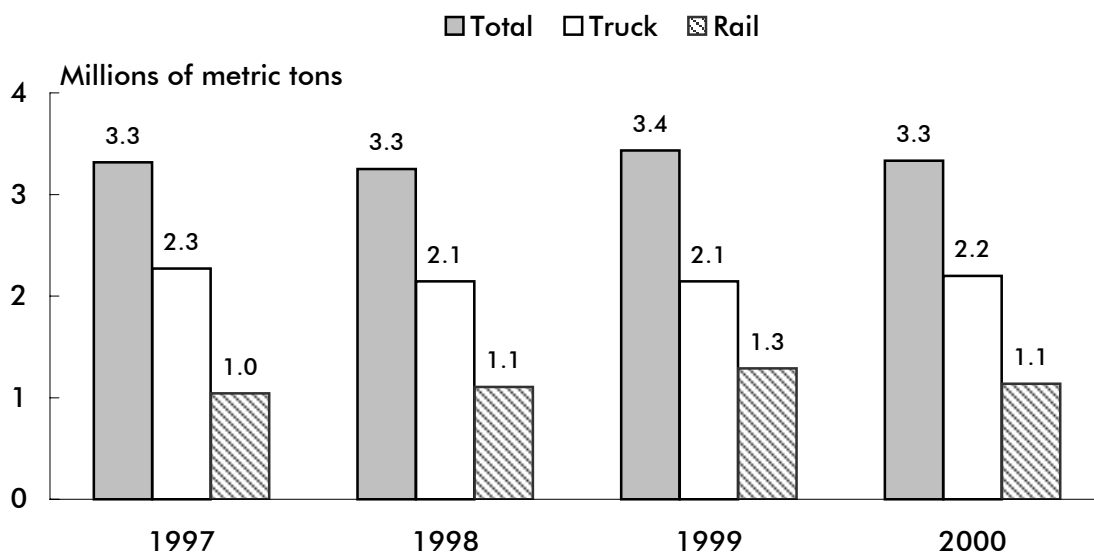


Figure 3-3: Truck and Rail Imports from Canada to Massachusetts by Weight



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.

Table 3-19: Top 50 U.S. Foreign Trade Freight Gateways: 2000
(Ranked by value of shipments in \$ billions)

	Mode	U.S. rank	Exports	Imports	Total
Massachusetts gateways¹ in top 50					
Boston (Logan International Airport)	Air	44	5.9	4.4	10.0
U.S. gateways¹ in top 50					
JFK International Airport, NY	Air	1	56.0	75.5	131.6
Port of Los Angeles, CA	Water	2	16.7	85.1	101.8
Port of Long Beach, CA	Water	3	16.9	81.3	98.2
Port of Detroit, MI	Land	4	49.5	44.9	94.4
San Francisco Airport, CA	Air	5	41.8	46.9	88.7
Port of Laredo, TX	Land	6	39.2	44.4	83.7
Port of New York, NY and NJ	Water	7	19.7	61.2	80.9
Los Angeles International Airport, CA	Air	8	41.7	35.6	77.3
Port of Buffalo-Niagara Falls, NY	Land	9	36.2	33.9	70.1
Port of Huron, MI	Land	10	18.8	40.9	59.7
Chicago, IL	Air	11	20.4	25.4	45.7
Port of Houston, TX	Water	12	18.7	24.6	43.4
Port of El Paso, TX	Land	13	17.5	21.9	39.4
Port of Seattle, WA	Water	14	5.4	26.9	32.3
New Orleans, LA	Air	15	16.2	15.9	32.0
Port of Charleston, SC	Water	16	11.3	20.2	31.5
Port of Norfolk Harbor, VA	Water	17	11.1	14.1	25.2
Port of Oakland, CA	Water	18	9.6	15.5	25.1
Cleveland, OH	Air	19	11.8	12.7	24.5
Miami International Airport, FL	Air	20	15.9	7.7	23.6
Anchorage, AK	Air	21	3.5	19.7	23.2
Port of Baltimore, MD	Water	22	5.3	15.3	20.6
Dallas-Fort Worth, TX	Air	23	10.1	10.2	20.4
Port of Tacoma, WA	Water	24	4.4	15.5	19.8
Port of Otay Mesa, CA	Land	25	8.1	10.7	18.8
Port of New Orleans, LA	Water	26	7.6	11.2	18.8
Port of Miami, FL	Water	27	8.4	9.1	17.5
Port of Champlain-Rouses Pt., NY	Land	28	6.0	11.3	17.3
Atlanta, GA	Air	29	8.4	8.7	17.2
Port of Savannah, GA	Water	30	5.9	10.5	16.3
Port of Nogales, AZ	Land	31	5.3	8.3	13.6
Port of Hidalgo, TX	Land	32	6.2	6.4	12.6
Port of Blaine, WA	Land	33	5.6	6.7	12.3
Port of Brownsville-Cameron, TX	Land	34	6.2	5.9	12.1
Port of Alexandria Bay, NY	Land	35	4.6	7.4	12.0
Port of South Louisiana, LA	Water	36	7.1	4.0	11.1
Port of Beaumont, TX	Water	37	1.0	9.6	10.6
Newark, NJ	Air	38	3.9	6.7	10.6
Port of Pembina, ND	Land	39	5.3	5.2	10.6
Port of Port Everglades, FL	Water	40	4.7	5.8	10.5
Port of Portland, OR	Water	41	3.0	7.5	10.5
Port of Corpus Christi, TX	Water	42	1.6	8.7	10.3
Port of Jacksonville, FL	Water	43	1.9	8.4	10.3
Port of Philadelphia, PA	Water	45	0.5	9.5	10.0
Port of Morgan City, LA	Water	46	0.1	9.3	9.4
Seattle-Tacoma International Airport, WA	Air	47	3.7	4.8	8.5
Port of Calexico-East, CA	Land	48	3.5	4.8	8.3
Port of Sweetgrass, MT	Land	49	3.4	4.4	7.8
Port of Highgate Springs-Alburg, VT	Land	50	3.0	4.6	7.6
Total, top 50	NA	NA	619	989	1,608

¹ Gateway means any port, airport, or border crossing that provides access for the import or export of goods.

KEY: NA = not applicable.

NOTES: Mode of transportation is the type of transportation as a shipment enters or exits at a border port. Flows through individual ports are based on reported data collected from U.S. trade documents. Low-value shipments, generally imports valued at less than \$1,250 and exports valued at less than \$2,500, are not included. Data for air gateways include some shipments (generally less than 3% of the total value) from small user-fee airports located in the same region. Air gateways not identified by airport name include major airport(s) in that geographic area in addition to small regional airports. In addition, due to U.S. Census Bureau confidentiality regulations, data for courier operations are included in the airport totals for JFK International Airport, New Orleans, Los Angeles, Cleveland, Chicago, Miami, and Anchorage.

SOURCES:

Air: U.S. Department of Commerce, U.S. Census Bureau, Foreign Trade Division, special tabulation, April 2002.

Water: U.S. Department of Transportation, Maritime Administration, Office of Statistical and Economic Analysis, Waterborne Databank 2000, September 2001.

Land: U.S. Department of Transportation, Bureau of Transportation Statistics, Transborder Surface Freight Data, 2001.

D Passenger Travel

Table 4-1: Commuting to Work: 2000

Mode	Massachusetts		United States	
	Number	Percent	Number	Percent
Total	3,074,632	100.0	127,448,586	100.0
Car, truck, or van -- drove alone	2,256,612	73.4	97,243,457	76.3
Car, truck, or van -- carpoled	269,854	8.8	14,299,090	11.2
Public transportation (including taxi)	303,860	9.9	6,592,685	5.2
Walked	121,964	4.0	3,417,546	2.7
Other means	32,052	1.0	1,820,578	1.4
Worked at home	90,290	2.9	4,075,230	3.2
Mean travel time to work (minutes)	26.2		24.3	

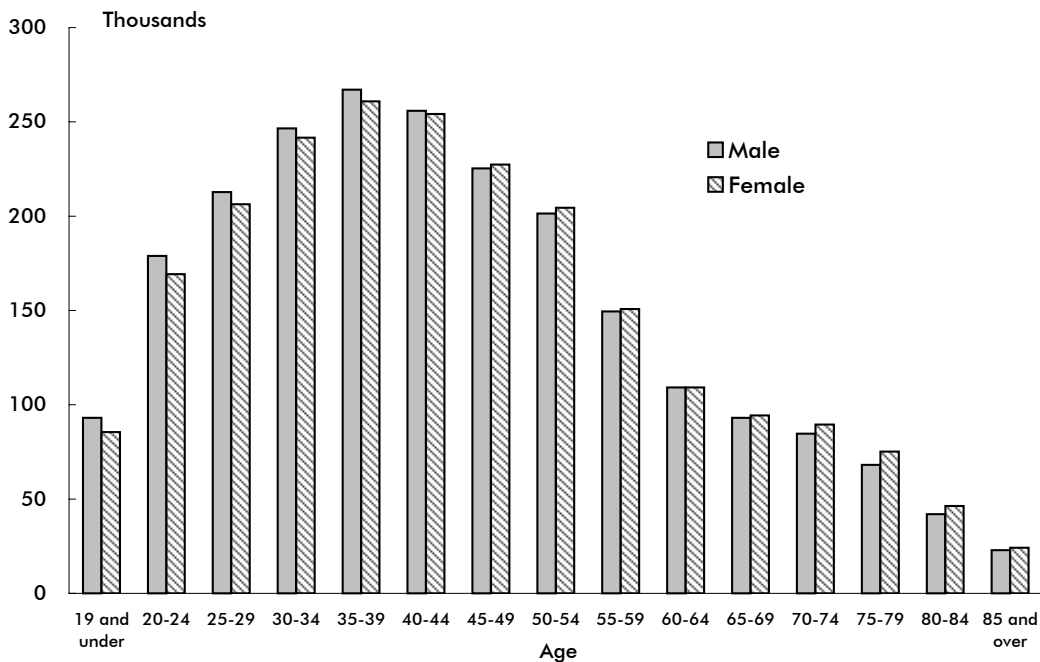
NOTE: Data are for workers 16 years and over.

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	Massachusetts		United States	
	Number	Percent	Number	Percent
Total	4,489,695	100.0	190,625,023	100.0
Male	2,250,493	50.1	95,796,069	50.3
Female	2,239,202	49.9	94,828,953	49.7

Figure 4-1: Licensed Drivers in Massachusetts 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 Massachusetts: 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
Massachusetts Bay Transportation Authority	Bus, demand responsive, light rail, commuter rail, ferryboat, trolley bus	Boston	354,860	1,188	899	300	2,769
Transit Express	Bus	Springfield	9,487	33	15	0	148
Worcester RTA	Bus, demand responsive	Worcester	4,832	17	13	8	232
Brockton Area Transit (BAT)	Bus, demand responsive	Brockton	3,577	13	11	<1	88
Pioneer Valley Transportation Authority	Bus, demand responsive	Springfield	2,678	9	26	7	140
Southeastern RTA	Bus, demand responsive	New Bedford	2,604	9	10	2	103
Lowell RTA	Bus, demand responsive	Lowell	1,812	7	6	3	69
Merrimack Valley RTA	Bus, demand responsive	Haverhill	1,744	6	8	7	82
Montachusett RTA	Bus, demand responsive	Fitchburg	1,526	6	7	1	159
Greater Attleboro-Taunton RTA	Bus, demand responsive	Attleboro	1,149	4	7	1	95
Cape Cod RTA	Bus, demand responsive	Dennis	930	3	4	1	98
Berkshire RTA	Bus, demand responsive	Pittsfield	547	2	4	<1	90
Cape Ann Transportation Authority	Bus, demand responsive	Gloucester	381	1	2	2	34

KEY: RTA = regional transit authority.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, National Transit Database, available at <http://www.ntdprogram.com/NTD/Profiles.nsf/ProfileInformation?OpenForm&2000&All> as of Dec. 6, 2001.

Table 4-4: Massachusetts Airports in Top 50 by Passengers Enplaned: 2000

Airport	Rank	Passenger enplanements
Massachusetts		11,548,711
Boston (Logan International)	17	11,505,983
Other top 50 airports		
Atlanta, GA (Hartsfield International)	1	38,255,778
Chicago, IL (O'Hare International)	2	30,888,464
Dallas/Fort Worth, TX (Dallas/Fort Worth International)	3	27,841,040
Los Angeles, CA (Los Angeles International)	4	25,109,993
Denver, CO (Denver International)	5	17,643,261
Phoenix, AZ (Sky Harbor International)	6	17,239,215
Detroit, MI (Detroit Metropolitan)	7	16,929,968
Las Vegas, NV (McCarran International)	8	16,738,909
Minneapolis, MN (Minneapolis-St. Paul International)	9	16,710,197
San Francisco, CA (San Francisco International)	10	16,664,399
Houston, TX (George Bush Intercontinental)	11	15,814,709
Newark, NJ (Newark International)	12	15,205,447
St. Louis, MO (Lambert-St.Louis International)	13	15,101,246
Orlando, FL (Orlando International)	14	13,465,706
Seattle, WA (Seattle-Tacoma International)	15	13,308,253
Miami, FL (Miami International)	16	12,654,506
New York, NY (La Guardia)	18	11,425,705
Philadelphia, PA (Philadelphia International)	19	10,973,074
New York, NY (John F. Kennedy International)	20	10,648,410
Charlotte, NC (Charlotte/Douglas International)	21	10,377,837
Cincinnati, OH (Greater Cincinnati)	22	9,962,765
Baltimore, MD (Baltimore-Washington International)	23	8,979,425
Salt Lake City, UT (Salt Lake City International)	24	8,700,973
Honolulu, HI (Honolulu International)	25	8,684,893
Pittsburgh, PA (Pittsburgh International)	26	8,650,976
San Diego, CA (San Diego International-Lindbergh Field)	27	7,624,519
Tampa, FL (Tampa International)	28	7,430,829
Miami/Fort Lauderdale, FL (Fort Lauderdale-Hollywood International)	29	7,140,518
Washington, DC (Ronald Reagan Washington National)	30	6,983,212
Chicago, IL (Midway)	31	6,972,213
Washington, DC (Washington Dulles International)	32	6,649,323
Portland, OR (Portland International Jetport)	33	6,558,859
Cleveland, OH (Cleveland Hopkins International)	34	6,154,094
San Jose, CA (Norman Y. Mineta San Jose International)	35	6,044,278
Kansas City, MO (Kansas City International)	36	5,748,758
Oakland, CA (Metropolitan Oakland International)	37	5,126,648
Memphis, TN (Memphis International)	38	4,977,238
Raleigh-Durham, NC (Raleigh-Durham International)	39	4,838,779
San Juan, PR (Luis Munoz Marin International)	40	4,834,298
New Orleans, LA (Louis Armstrong New Orleans International)	41	4,822,265
Nashville, TN (Nashville International)	42	4,365,127
Houston, TX (William P. Hobby)	43	4,322,108
Sacramento, CA (Sacramento International)	44	3,873,003
Los Angeles, CA (John Wayne Airport-Orange County)	45	3,828,324
Austin, TX (Robert Muller Municipal)	46	3,635,209
Indianapolis, IN (Indianapolis International)	47	3,629,716
Dallas, TX (Dallas Love Field)	48	3,594,539
Hartford/Springfield/Westfield, CT (Windsor Locks Bradley International)	49	3,508,023
San Antonio, TX (San Antonio International)	50	3,466,266
United States, all airports		638,902,993
Top 50 as % of all enplanements		84%

NOTE: Rank order by total enplaned passengers on large certificated U.S. air carriers, scheduled and nonscheduled operations, at all airports served within the 50 states, the District of Columbia, and other U.S. areas designated by the Federal Aviation Administration. These air carriers operate aircraft with more than 60 seats or a payload capacity of more than 18,000 pounds. Data for commuter, intrastate, and foreign-flag air carriers are not included. Data differ from those in table 1-11 which include enplaned passengers on air carriers of all types, including foreign-flag carriers.

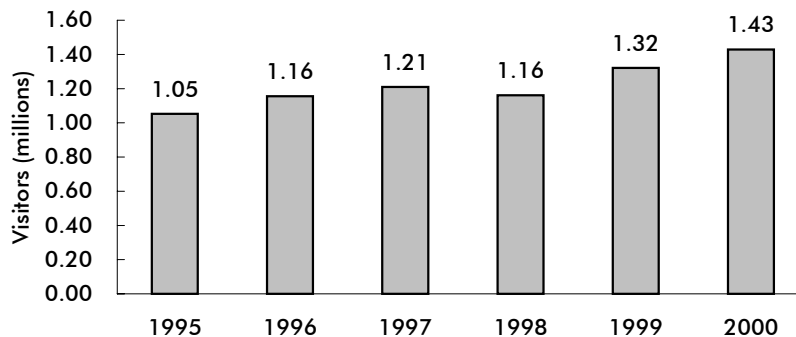
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, *Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 2000*, Washington, DC: 2001, available at <http://www.bts.gov/publications/airactstats2000/> as of Dec. 28, 2001.

Table 4-5: Overseas Visitors to the United States: Top 20 Destination States and Territories¹

	1995			2000		
	Rank	Visitors (thousands)	Share of U.S. total	Rank	Visitors (thousands)	Share of U.S. total
California	2	5,304	25.7	1	6,364	24.5
Florida	1	5,345	25.9	2	6,026	23.2
New York	3	4,479	21.7	3	5,922	22.8
Hawaii	4	2,910	14.1	4	2,727	10.5
Nevada	5	1,858	9.0	5	2,364	9.1
Massachusetts	8	1,053	5.1	6	1,429	5.5
Illinois	7	1,115	5.4	7	1,377	5.3
Guam	6	1,238	6.0	8	1,325	5.1
Texas	10	867	4.2	9	1,169	4.5
New Jersey	11	599	2.9	10	909	3.5
Arizona	9	887	4.3	11	883	3.4
Georgia	11	599	2.9	12	805	3.1
Pennsylvania	11	599	2.9	13	649	2.5
Colorado	15	433	2.1	14	519	2.0
Michigan	18	372	1.8	15	494	1.9
Washington	11	599	2.9	16	468	1.8
Utah	15	433	2.1	17	416	1.6
North Carolina	21	310	1.5	17	416	1.6
Louisiana	17	413	2.0	19	390	1.5
Ohio	19	351	1.7	19	390	1.5
United States, total		20,639			25,975	

NOTE: A visitor may visit more than one state. "Share of U.S. total" represents the percent of overseas visitors visiting the state. These columns, therefore, do not sum to 100.

Figure 4-2: Overseas Visitors to Massachusetts¹



¹ International travelers to the United States from Canada and Mexico are not included.

SOURCES FOR DATA ON THIS PAGE: 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.

Table 4-6: Overseas Visitors to the United States: Top 20 Destination Cities¹

	1995			2000		
	Rank	Visitors (thousands)	Share of U.S. total	Rank	Visitors (thousands)	Share of U.S. total
Massachusetts cities in top 20						
Boston	10	970	4.7	10	1,325	5.1
Top 20 cities						
New York City, NY	1	4,254	20.6	1	5,714	22.0
Los Angeles, CA	2	3,323	16.1	2	3,533	13.6
Orlando, FL	4	2,621	12.7	3	3,013	11.6
Miami, FL	3	2,951	14.3	4	2,935	11.3
San Francisco, CA	5	2,539	12.3	5	2,831	10.9
Las Vegas, NV	7	1,754	8.5	6	2,260	8.7
Oahu/Honolulu, HI	6	2,373	11.5	7	2,234	8.6
Washington, DC (metro)	8	1,589	7.7	8	1,481	5.7
Chicago, IL	9	1,053	5.1	9	1,351	5.2
San Diego, CA	11	722	3.5	11	701	2.7
Atlanta, GA	14	495	2.4	11	701	2.7
Tampa/St. Petersburg, FL	13	516	2.5	13	519	2.0
San Jose, CA	22	289	1.4	14	494	1.9
Anaheim, CA	14	495	2.4	14	494	1.9
Dallas/Fort Worth, TX	21	310	1.5	14	494	1.9
Fort Lauderdale, FL	17	413	2.0	17	468	1.8
Houston, TX	16	433	2.1	18	442	1.7
Maui, HI	U	U	U	18	442	1.7
Seattle, WA	12	537	2.6	20	416	1.6
United States, total		20,639			25,975	

¹ International travelers to the United States from Canada and Mexico are not included.

KEY: U = data are unavailable.

NOTE: A visitor may visit more than one city. "Share of U.S. total" represents the percent of visitors visiting the city. These columns, therefore, do not sum to 100.

SOURCES: U.S. Department of Commerce, International Trade Administration, Office of Tourism Industries, *Overseas Visitors to Select U.S. Cities/Hawaiian Islands 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. Cities/Hawaiian Islands 2000-1999 (Ranked by 2000 Market Share)*, 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: Massachusetts and U.S. Motor-Vehicle Registrations: 2000

Motor vehicle type	and commercial	Publicly owned	Massachusetts total	United States total
All motor vehicles	5,315,776	56,341	5,372,117	225,821,241
Automobiles	3,656,098	17,540	3,673,638	133,621,420
Buses	11,391	543	11,934	746,125
Trucks ¹	1,541,572	38,255	1,579,827	87,107,628
Light trucks	1,516,205	U	1,516,205	77,796,827
Farm trucks	9,150	U	9,150	1,885,170
Truck tractors	12,503	U	12,503	1,587,611
Motorcycles	106,715	3	106,718	4,346,068

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

KEY: 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: Massachusetts and U.S. Trailer and Semi-Trailer Registrations: 2000¹

Type	Massachusetts	United States
Total	284,130	21,541,490
Private and commercial	283,864	21,283,681
Commercial trailers ²	25,006	4,685,606
Light farm trailers, car trailers, etc. ³	258,858	14,113,392
House trailers ⁴	U	2,484,683
Publicly owned	266	257,809
Federal government	75	4,277
State, county, municipal government	191	253,532

¹ 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.

⁴ Some states may not require the registrations of mobile homes and house trailers. In states where this classification is not available, house trailers are included with light car trailers.

KEY: U = data are unavailable.

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: Massachusetts Truck Characteristics and Use: 1997
(Percent unless otherwise specified)**

Vehicular and operational characteristics	Trucks, excluding pickups, panels, vans, sport utilities, and station wagons		Vehicular and operational characteristics	Trucks, excluding pickups, panels, vans, sport utilities, and station wagons	
	All trucks	Station wagons		All trucks	Station wagons
Total, number (thousands)	1,240.8	91.9			
Major use	100.0	100.0	Year model	100.0	100.0
Agriculture	1.2	2.5	1 to 2 years old	17.2	8.5
Forestry and lumbering	0.4	1.2	3 to 4 years old	19.4	14.8
Mining and quarrying	V	0.6	Over 4 years old	63.4	76.7
Construction	12.9	34.2	Vehicle acquisition	100.0	100.0
Manufacturing	0.7	4.8	Purchased new	46.1	49.2
Wholesale and retail trade	5.5	23.2	Purchased used	46.1	42.4
For-hire transportation	1.0	8.9	Leased from someone or not reported	7.8	8.4
Utilities and service	7.1	13.6	Truck type	100.0	100.0
Personal transportation	69.5	4.1	Single-unit trucks	97.5	80.1
Other and not reported	1.6	7.0	2 axles	96.7	70.0
Body type	100.0	100.0	3 axles or more	0.7	10.1
Pickup, panel, minivan, sport utility	92.6	NA	Combination	2.5	19.9
Platform and catterl rack	1.6	21.8	3 axles	0.5	2.8
Van	1.6	21.2	4 axles	1.2	5.9
Public utility	0.2	2.3	5 axles or more	0.8	11.2
Multistop or stepvans	1.3	17.2	Trailer not specified	V	V
Dump	1.6	22.1	Range of operation	100.0	100.0
Tank for liquids or dry bulk	0.5	6.2	Local	78.1	63.9
Other or not reported	0.7	9.2	Short-range	16.3	24.6
Vehicle size	100.0	100.0	Long-range	2.6	6.8
Light	94.8	29.6	Off-the-road or not reported	2.9	4.8
Medium	1.7	22.6	Fuel type	100.0	100.0
Light-heavy	1.0	12.9	Gasoline	94.2	41.8
Heavy-heavy	2.6	34.8	Diesel, liquefied gas, and other	5.8	57.4
Annual miles driven	100.0	100.0	Not reported	0.1	0.8
Less than 5,000	9.3	24.7			
5,000 to 9,999	20.2	16.3			
10,000 to 19,999	49.7	24.6			
20,000 to 29,999	15.1	12.2			
30,000 or more	5.7	22.2			

KEY: NA = not applicable; V = less than 0.05 percent.

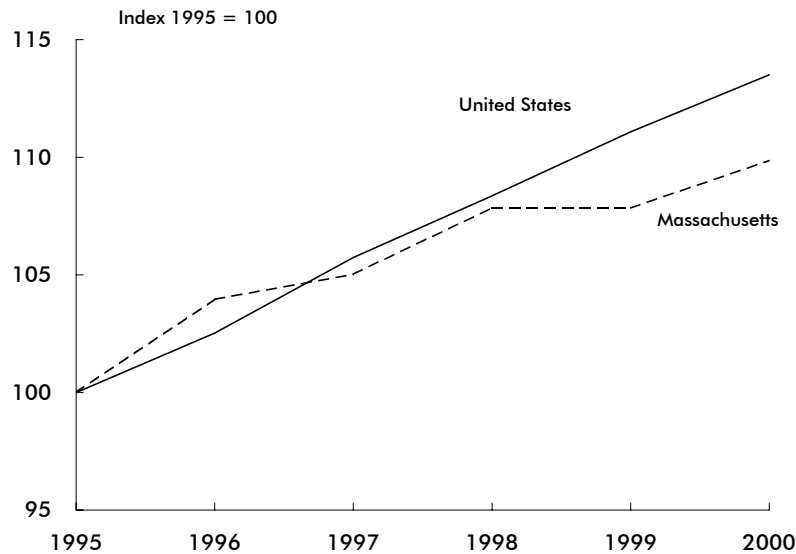
NOTE: Due to rounding, numbers may not sum to 100.

SOURCE: U.S. Department of Commerce, U.S. Census Bureau, *Vehicle Inventory and Use Survey*, state-specific reports, 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
Iowa	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 Massachusetts



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 Massachusetts: 2000

Federal-aid urbanized area ¹	Total roadway miles	Total DVMT (thousands)	Estimated population (thousands)	Net land area (square miles)	Persons per square mile	roadway per thousand persons	Total DVMT per capita	Total estimated freeway lane miles ²	Average daily traffic per freeway lane mile
Boston	10,148	59,361	2,917	1,138	2,563	3.5	20.3	1,295	17,671
Providence-Pawtucket, RI-MA	4,399	20,446	907	515	1,761	4.9	22.5	645	13,130
Springfield, MA-CT	2,928	13,124	608	422	1,441	4.8	21.6	388	10,947
Worcester, MA-CT	1,805	9,388	358	263	1,361	5.0	26.2	365	11,226
Lawrence-Haverhill, MA-NH	1,484	8,670	301	205	1,468	4.9	28.8	306	14,017
Lowell, MA-NH	936	5,799	223	116	1,922	4.2	26.0	153	17,693
Brockton	803	4,037	188	132	1,424	4.3	21.5	90	12,458
Fall River, MA-RI	753	3,785	159	116	1,371	4.7	23.8	179	9,295
New Bedford	580	2,498	149	67	2,224	3.9	16.8	87	9,236
Hyannis	1,354	4,195	115	153	752	11.8	36.5	86	10,839
Taunton	620	3,123	106	136	779	5.8	29.5	162	10,304
Fitchburg-Leominster	406	1,507	85	64	1,328	4.8	17.7	21	11,582
Pittsfield	311	995	55	65	846	5.6	18.1	0.0	0.0

¹A "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.

²Lane miles estimated by the Federal Highway Administration (FHWA).

KEY: DVMT = daily vehicle-miles of travel.

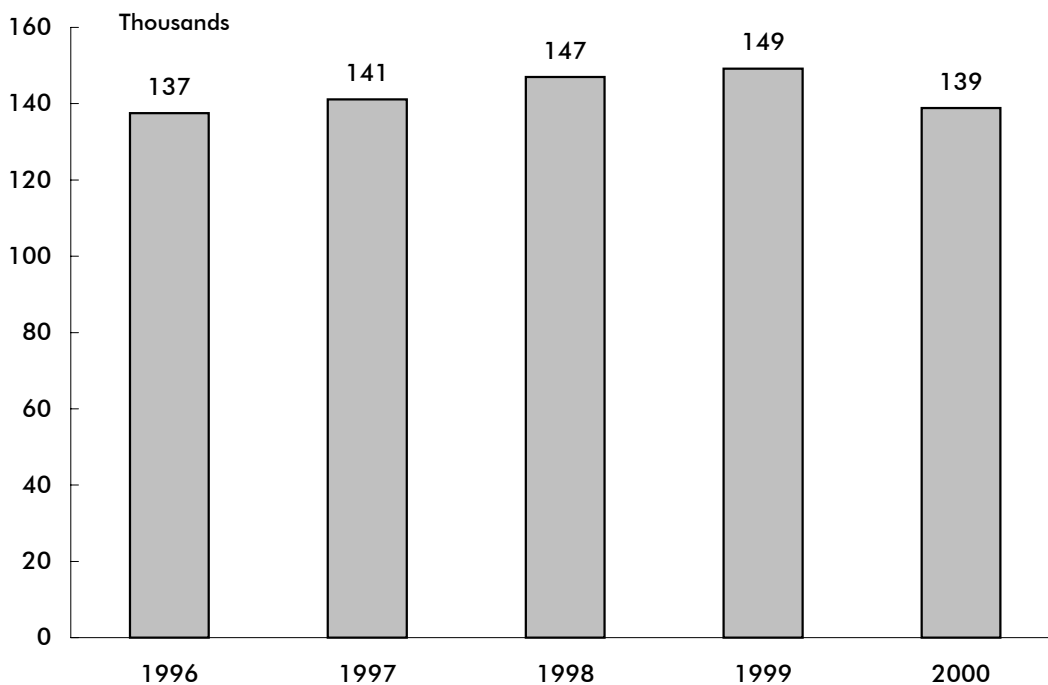
SOURCE: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics, 2000*, Washington, DC: 2001, available at <http://www.fhwa.dot.gov/ohim/ohimstat.htm> as of Dec. 6, 2001.

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

	Massachusetts		United States	
	1999	2000	1999	2000
Total	149,170	138,861	12,738,271	12,782,143
Powered	121,967	110,312	11,811,562	11,648,769
Nonpowered	0	0	481,191	547,271
Other	27,203	28,549	445,518	590,103

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

Figure 5-2: Massachusetts 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. Massachusetts statistics include all motorboats. 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
Iowa	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: 2000¹

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	
Iowa	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	
Louisiana	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	

¹An active pilot is a person who holds a pilot certificate and a valid medical certificate issued within the last 25 months.

²Includes pilots with an airplane only certificate and those with an airplane and a helicopter and/or glider certificate.

³Includes 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.

⁴Not 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.

F Economy and Finance

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

Business type	Establishments¹ (number)	Number of employees	Annual payroll (\$ thousands)
Total transportation and warehousing	3,383	71,203	2,098,028
Air transportation	106	11,516	416,415
Water transportation	48	1,114	58,251
Truck transportation	1,507	19,196	609,230
Transit and ground passenger transportation	683	18,533	347,407
Pipeline transportation	11	100-249	D
Scenic and sightseeing transportation	68	500-999	D
Support activities for transportation	553	5,880	196,755
Couriers and messengers	258	11,702	358,866
Warehousing and storage	149	2,537	77,988

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	Establishments¹ (number)	Number of employees	Annual payroll (\$ 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/view/cbpview.html> as of Oct. 25, 2001.

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

Mode	1995		1996		1997		1998		1999	
	State	Local	State	Local	State	Local	State	Local	State	Local
Total (current \$)	1,361	279	1,364	285	1,407	295	1,468	330	1,477	349
Highway	1,060	34	1,049	27	1,130	27	1,169	28	1,194	34
Transit	Z	233	Z	245	Z	256	Z	288	Z	299
Air	230	11	246	11	251	10	271	11	245	13
Water	71	2	70	2	26	3	28	3	37	3
Total (chained 1996 \$)	1,392	286	1,364	285	1,372	288	1,408	317	1,379	326
Highway	1,084	34	1,049	27	1,101	26	1,121	27	1,115	32
Transit	Z	239	Z	245	Z	250	Z	277	Z	279
Air	235	11	246	11	245	10	260	10	229	12
Water	72	2	70	2	25	3	27	3	35	3

Table 6-4: Transportation Expenditures by State and Local Governments in Massachusetts¹ (\$ millions)

Mode	1995		1996		1997		1998		1999	
	State	Local	State	Local	State	Local	State	Local	State	Local
Total (current \$)	1,857	1,795	1,973	2,165	2,190	2,115	2,422	2,025	2,429	2,022
Highway	1,576	517	1,649	645	1,936	615	2,188	634	2,070	664
Transit	Z	1,254	Z	1,496	Z	1,476	Z	1,358	Z	1,332
Air	181	18	230	19	210	18	188	26	307	18
Water	100	5	95	5	44	6	45	7	51	8
Total (chained 1996 \$)	1,899	1,836	1,973	2,165	2,135	2,061	2,322	1,942	2,268	1,889
Highway	1,612	529	1,649	645	1,887	599	2,098	608	1,934	621
Transit	Z	1,282	Z	1,496	Z	1,439	Z	1,302	Z	1,244
Air	185	19	230	19	204	18	181	25	287	17
Water	102	5	95	5	43	6	43	6	48	7

¹Includes 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)**

State	Gasoline	Diesel	Liquified petroleum	
			gas	Gasohol ¹
Alabama	18.00	19.00	17.00	18.00
Alaska	8.00	8.00	0.00	0.00
Arizona	18.00	27.00	18.00	18.00
Arkansas	19.50	20.50	16.50	18.60
California	18.00	18.00	6.00	18.00
Colorado	22.00	20.50	20.50	22.00
Connecticut	32.00	18.00	0.00	31.00
Delaware	23.00	22.00	22.00	23.00
District of Columbia	20.00	20.00	20.00	20.00
Florida	13.10	25.10	16.00	13.10
Georgia	7.50	7.50	7.50	7.50
Hawaii	16.00	16.00	11.00	16.00
Idaho	25.00	25.00	18.10	22.50
Illinois	19.00	21.50	19.00	19.00
Indiana	15.00	16.00	0.00	15.00
Iowa	20.00	22.50	20.00	19.00
Kansas	20.00	22.00	19.00	20.00
Kentucky	16.40	13.40	15.00	16.40
Louisiana	20.00	20.00	16.00	20.00
Maine	19.00	20.00	18.00	19.00
Maryland	23.50	24.25	23.50	23.50
Massachusetts	21.00	21.00	8.10	21.00
Michigan	19.00	15.00	15.00	19.00
Minnesota	20.00	20.00	15.00	20.00
Mississippi	18.40	18.40	17.00	18.40
Missouri	17.00	17.00	17.00	17.00
Montana	27.00	27.75	0.00	27.00
Nebraska	22.80	22.80	22.80	22.80
Nevada	24.75	27.75	22.00	24.75
New Hampshire	19.50	19.50	18.00	19.50
New Jersey	10.50	13.50	5.25	10.50
New Mexico	18.50	19.50	0.00	18.50
New York	29.30	27.95	8.00	29.30
North Carolina	21.20	21.20	21.20	21.20
North Dakota	21.00	21.00	21.00	21.00
Ohio	22.00	22.00	22.00	22.00
Oklahoma	17.00	14.00	17.00	17.00
Oregon	24.00	24.00	24.00	24.00
Pennsylvania	25.90	30.80	18.90	25.90
Rhode Island	29.00	29.00	29.00	29.00
South Carolina	16.00	16.00	16.00	16.00
South Dakota	22.00	22.00	20.00	20.00
Tennessee	20.00	17.00	14.00	20.00
Texas	20.00	20.00	15.00	20.00
Utah	24.50	24.50	24.50	24.50
Vermont	20.00	17.00	0.00	20.00
Virginia	17.50	16.00	10.00	17.50
Washington	23.00	23.00	0.00	23.00
West Virginia	25.35	25.35	25.35	25.35
Wisconsin	25.40	25.40	25.40	25.40
Wyoming	14.00	14.00	0.00	14.00
Federal tax	18.40	24.40	13.60	13.00

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.

G Energy and Environment

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

State	Petroleum							Ethanol ⁴	Electricity	Net energy	Electrical system energy losses ⁵	Total
	Natural gas ¹	Distillate fuel		Motor gasoline ²	Residual fuel	Other ³	Total					
		(diesel)	Jet fuel									
Alabama	22.9	118.4	11.1	298.0	6.5	3.7	437.8	S	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
Iowa	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	S	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	S	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	S	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 Includes 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.

KEY: Btu = British thermal unit; 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
Iowa	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

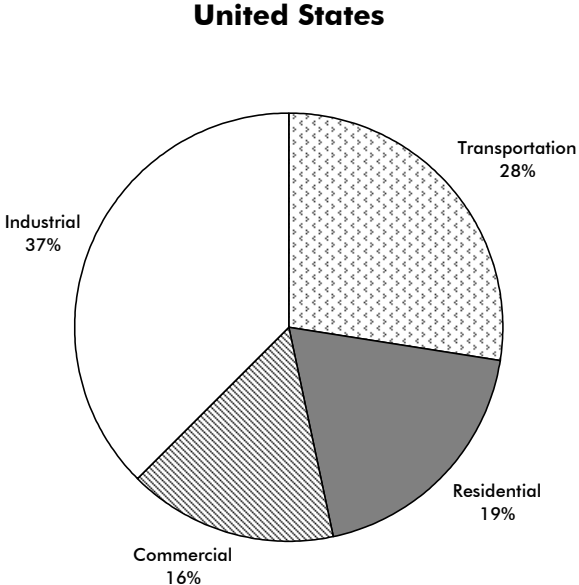
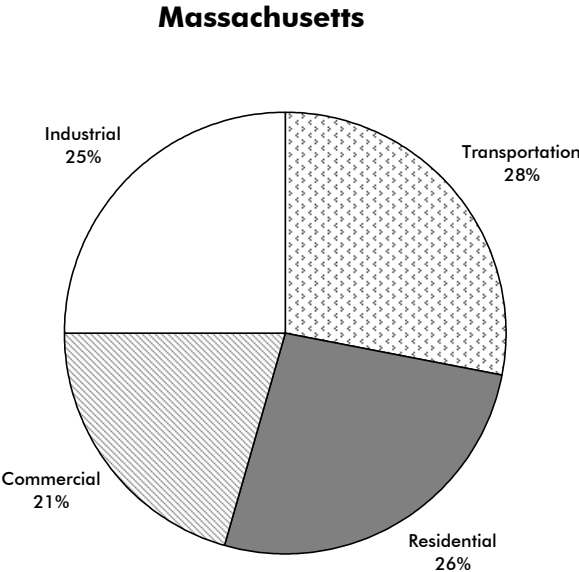
¹ U.S. total energy and U.S. industrial sector include 57.7 trillion Btu of net imports of coal coke that is not allocated to the states. State and U.S. totals include 92.6 trillion Btu of net imports of electricity generated from nonrenewable energy sources.

² End-use sector data include electricity sales and associated electrical system energy losses.

KEY: Btu = British thermal unit; Number = trillion Btu.

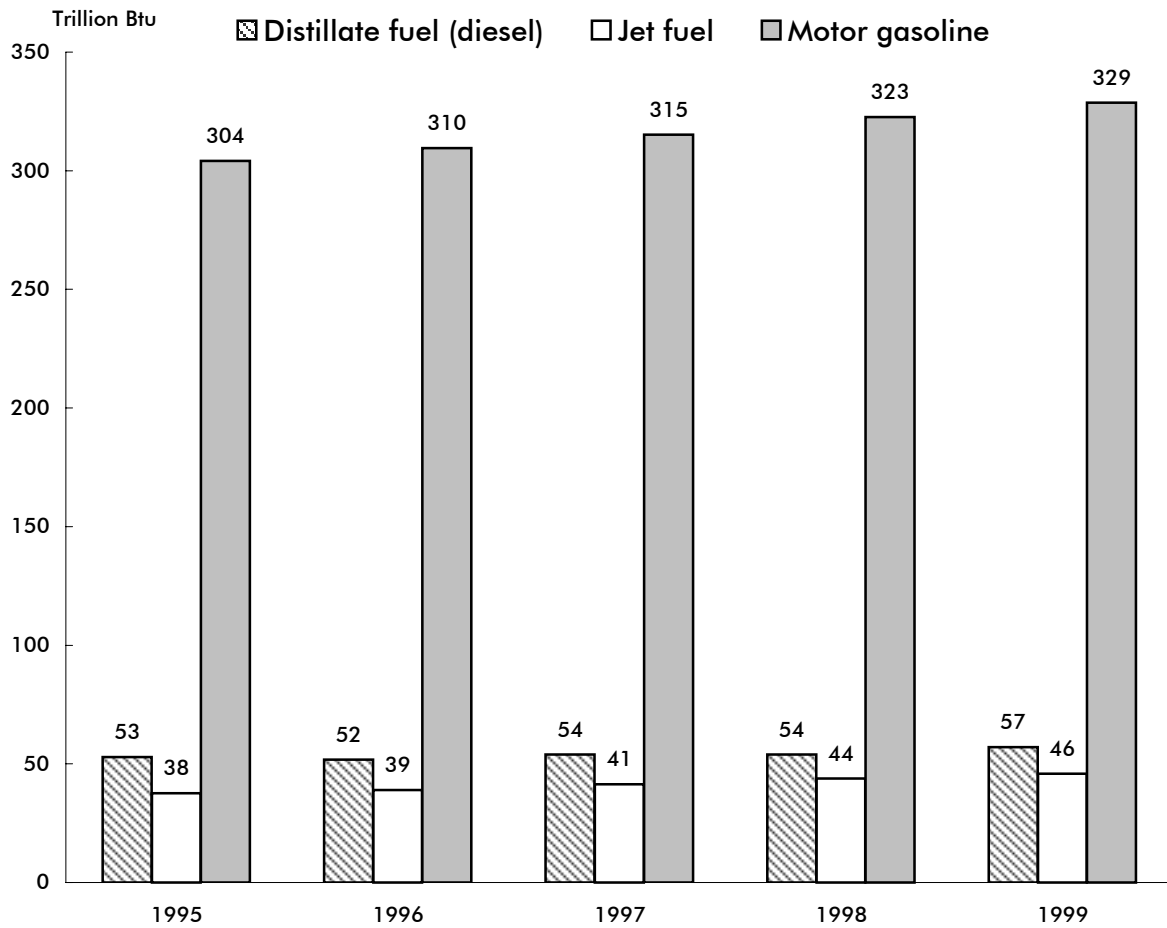
SOURCE: U.S. Department of Energy, Energy Information Administration, *State Energy Data Report 1999*, Washington, DC: May 2001, available at <http://www.eia.doe.gov/pub/state.data/pdf/sedr.pdf> as of Feb. 21, 2002.

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.

Figure 7-2: Massachusetts 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, 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
Iowa	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

¹Calculated by the Bureau of Transportation Statistics.

KEY: Btu = 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: Massachusetts and U.S. Motor-Fuel Use: 2000¹
(Millions of gallons)

Vehicle ownership	Gasoline				Special fuel (mainly diesel)		Total use	
	Highway use		Nonhighway use		Massachusetts	United States	Massachusetts	United States
	Massachusetts	United States	Massachusetts	United States				
Private and commercial	2,676	126,735	49	2,876	408	33,377	3,133	162,988
Public use	38	2,149	2	96	N	N	40	2,245
Total	2,714	128,884	51	2,972	408	33,377	3,173	165,232

¹Based 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: 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: Massachusetts Air Quality Nonattainment Areas for Carbon Monoxide (CO)

County	Area	Nonattainment in year	Redesignation to attainment	Classification	Part or whole county	Population (2000)
Hampden	Springfield	95 96 97 98 99 00 01	NA	Not classified	Part	152,082
Middlesex	Boston	95	4/1/96	Moderate <= 12.7ppm	Part	328,975
Middlesex	Lowell	95 96 97 98 99 00 01	NA	Not classified	Part	105,167
Middlesex	Waltham	95 96 97 98 99 00 01	NA	Not classified	Part	59,226
Norfolk	Boston	95	4/1/96	Moderate <= 12.7ppm	Part	88,025
Suffolk	Boston	95	4/1/96	Moderate <= 12.7ppm	Part	671,504
Worcester	Worcester	95 96 97 98 99 00 01	NA	Not classified	Part	172,648

KEY: NA = not applicable; ppm = parts per million.

NOTES: Nonattainment areas do not meet the national primary or secondary ambient air quality standard for the specified pollutant. Nonattainment areas are classified based on design values: Serious = an area with a design value of 16.5 ppm and above; Moderate = an area with a design value of 9.1 up to 16.4 ppm.

SOURCE: U.S. Environmental Protection Agency, Green Book, available at <http://www.epa.gov/oar/oaqps/greenbk/anay.html> as of Apr. 20, 2002.

Table 7-6: Massachusetts Air Quality Nonattainment Areas for Ozone (O₃)

County	Area	Nonattainment in year	Redesignation to attainment	Classification	Part or whole county	Population (2000)
Barnstable	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	222,230
Berkshire	Springfield (Western MA), MA	95 96 97 98 99 00 01	NA	Serious	Whole	134,953
Bristol	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	534,678
Dukes	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	14,987
Essex	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	723,419
Franklin	Springfield (Western MA), MA	95 96 97 98 99 00 01	NA	Serious	Whole	71,535
Hampden	Springfield (Western MA), MA	95 96 97 98 99 00 01	NA	Serious	Whole	456,228
Hampshire	Springfield (Western MA), MA	95 96 97 98 99 00 01	NA	Serious	Whole	152,251
Middlesex	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	1,465,396
Nantucket	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	9,520
Norfolk	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	650,308
Plymouth	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	472,822
Suffolk	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	689,807
Worcester	Boston-Lawrence-Worcester (E. MA), MA-NH	95 96 97 98 99 00 01	NA	Serious	Whole	750,963

KEY: NA = not applicable.

NOTES: Nonattainment areas do not meet the national primary or secondary ambient air quality standard (NAAQS) for the specified pollutant. Nonattainment areas are classified based on design values: Extreme = design value of 0.280 parts per million (ppm) and above; Severe-17 = design value of 0.190 up to 0.280 ppm and has 17 years to reach attainment; Severe-15 = design value of 0.180 up to 0.190 ppm and has 15 years to reach attainment; Serious = design value of 0.160 up to 0.180 ppm; Moderate = design value of 0.138 up to 0.160 ppm; Marginal = design value of 0.121 up to 0.138 ppm; Section 185A = an area designated as an ozone nonattainment area as of the date of enactment of the Clean Air Act Amendments of 1990 and has not violated the national primary ambient air quality standard for ozone for the 36-month period commencing on Jan. 1, 1987, and ending on Dec. 31, 1989.

SOURCE: U.S. Environmental Protection Agency, Green Book, available at <http://www.epa.gov/oar/oaqps/greenbk/anay.html> as of Apr. 20, 2002.

Table 7-7: 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
Iowa	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

¹Includes 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

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 Mode-Distance 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 Survey to collect demographic, social,

Data Sources

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 inpatient 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 long-term), 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.

Data Sources

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 tractor-semitrailer 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 807 094 (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

Data Sources

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 non-residents 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 non-Class 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 non-Class 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 on-track 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:

Contact: USDOT, Federal Railroad Administration, Office of Safety

Data Sources

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 transshipments 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:

Contact: USDOT, Federal Transit Administration

Print source: USDOT, Federal Transit Administration, *Data Tables*. Washington, DC: Annual issues; and USDOT, Federal Transit Administration, *National Transit Database Reporting Manual*. Washington, DC: Annual issues.

Internet: <http://www.fta.dot.gov>

Data Sources

Transportation establishment, employees, and payroll data

Data on employees, establishments, and payroll are taken from County Business Patterns, a database of employment in the United States using the North American Industry Classification System (NAICS). Data are collected annually. Data are extracted from the Business Register, the Census Bureau's file of all known single and multi-establishment companies. The Annual Company Organization Survey and quinquennial Economic Censuses provide individual establishment data for multi-location firms. Data for single-location firms are obtained from various programs conducted by the Census Bureau, such as the Economic Censuses, the Annual Survey of Manufactures, and Current Business Surveys. They are also obtained from administrative records of the Internal Revenue Service (IRS), the Social Security Administration (SSA), and the Bureau of Labor Statistics (BLS).

Additional information:

Contact: USDOC, U.S. Census Bureau, Economic Planning and Coordination Division

Print source: USDOC, U.S. Census Bureau, [State]: *County Business Patterns 1999*. CBP/99-6. Washington, DC: 2001.

Internet: <http://www.census.gov/epcd/cbp/view/cbpview.html>

Vehicle Inventory and Use Survey

The Vehicle Inventory and Use Survey (VIUS) collects data on the physical and operational characteristics of private and commercial trucks in the United States. The 1997 VIUS sampled about 131,000 trucks from an estimated universe of over 75 million trucks. The sample excludes vehicles owned

by federal, state, and local government including ambulances, buses, motor homes, farm tractors, unpowered trailer units, and trucks reported to have been sold, junked, or wrecked prior to July 1, 1996. Light trucks registered as cars, as is the practice in many states, were included. Unregistered trucks used off-road are not included. Census delivered a mail-out/mail-back survey to the owner identified in the vehicle registration records. Data collection is staggered as state records become available. Owners report data only for the vehicles selected. The response rate for the 1997 VIUS was about 85 percent.

Additional information:

Contact: USDOC, U.S. Census Bureau, Service Sector Statistics Division

Print source: USDOC, U.S. Census Bureau, [State]: *1997 Vehicle Inventory and Use Survey*. EC97TV-[State]. Washington, DC: 1999.

Internet: <http://www.census.gov/svsd/www/tiusview.html>

Waterborne imports and vessel data

The U.S. Department of Transportation's Maritime Administration (MARAD) classifies merchant-based vessels by size and type and reports this information in its annual publication, *Merchant Fleets of the World*. MARAD compiles these figures from a data service provided by Lloyd's Maritime Information Service. The parent company, Lloyd's Register (LR), collects data from several sources, including its offices around the world, data transfers and agreements with other classification societies, questionnaires to ship owners and shipbuilders, feedback from government agencies, and input from port agents.

MARAD's Office of Statistical and Economic Analysis maintains the waterborne databank used to compile the annual import and export statistics from monthly and quarterly data provided by the U.S. Army Corps of Engineers. MARAD publishes the data in reports of vessel movements, trade and cargo by type of service, U.S. and foreign port, country of origin/destination, commodity, value, weight, and containerized cargo.

MARAD distributes the reports and performs special tabulations and customized maritime data reports created for other government agencies and the private sector on a reimbursable basis. MARAD also provides these services for historic data and maintains the Schedule K Classification of Foreign Ports by Geographic Trade Area and Country.

Additional information:

Contact: USDOT, Maritime Administration, Office of Statistical and Economic Analysis

Print source: USDOT, Maritime Administration, *Merchant Fleets of the World*.

Internet: <http://www.marad.dot.gov>

Waterborne shipments data

The U.S. Army Corps of Engineers' (Corps) Navigation Data Center (NDC) collects data on waterborne commodity and vessel movements, domestic commercial vessel characteristics, port and waterway facilities, and navigation dredging projects.

The NDC's databases contain information on physical characteristics, infrastructure, and commodities for principal facilities on the U.S. coast, Great Lakes, and inland ports. The data consists of listings of port area's waterfront facilities, including information on berthing, cranes, transit sheds, grain elevators, marine repair plants, fleeting areas, and docking and storage facilities.

All vessel operators of record report their domestic waterborne traffic movements to the Corps via ENG Forms 3925 and 3925b. Cargo movements are reported according to points of loading and unloading. Excluded cargo movements are: 1) cargo carried on general ferries, 2) coal and petroleum products loaded from shore facilities directly into vessels for fuel use, 3) military cargo moved in U.S. Department of Defense vessels, and 4) cargo weighing less than 100 tons moved on government equipment. The Corps calculates ton-miles by multiplying the cargo's tonnage by the distance between points of loading and unloading.

An annual survey of companies that operate inland waterway vessels is the principal source of data for inland non self-propelled vessels, self-propelled vessels, and flag passenger and cargo vessels. More than 3,000 surveys are sent to these companies, and response rates are typically above 90 percent.

Additional information:

Contact: U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center

Print source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*. New Orleans, LA: Annual issues.

Internet: <http://www.wrsc.usace.army.mil>

I Glossary

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.

Glossary

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.

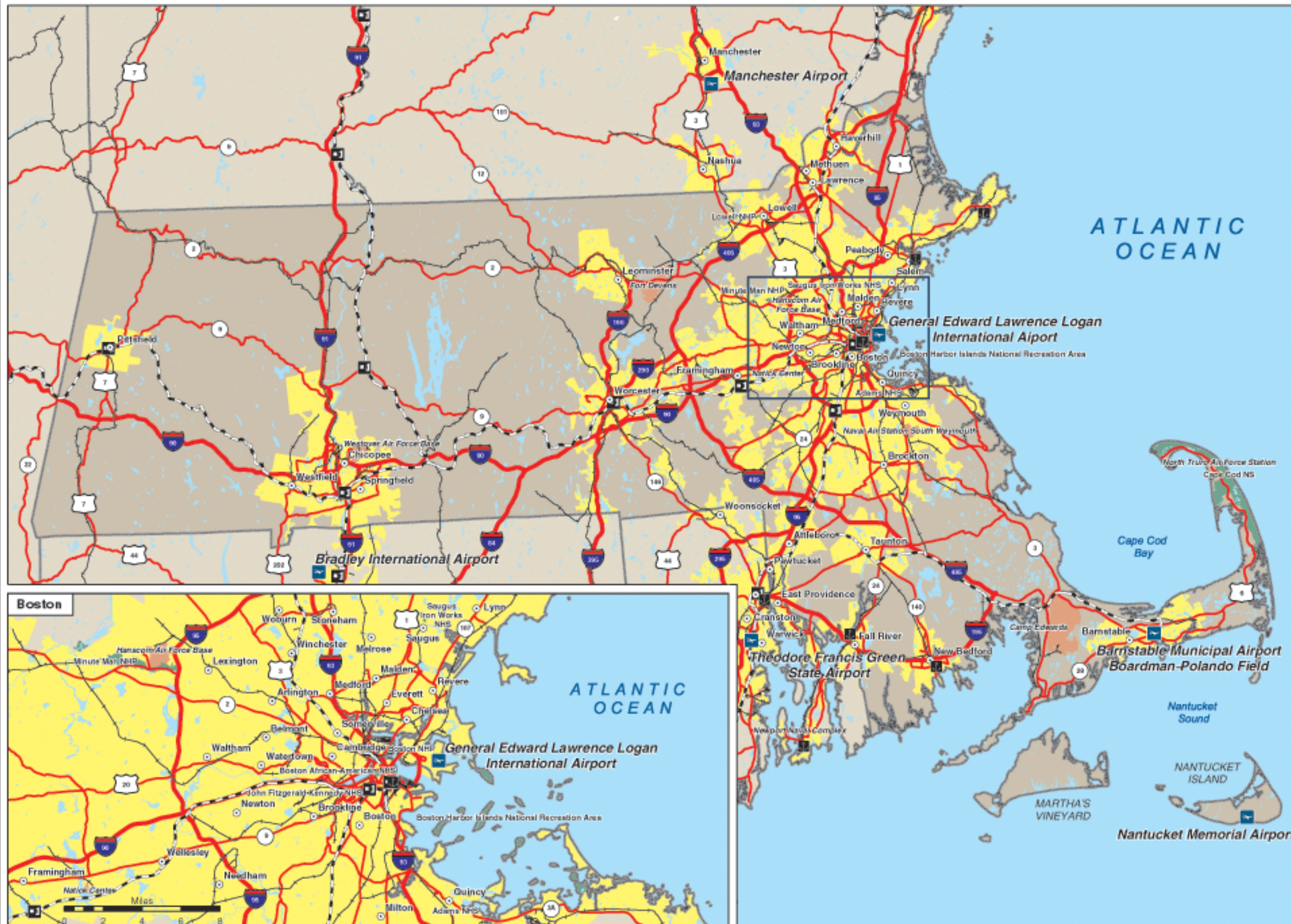
Trolley bus: Rubber-tired, electric transit vehicle, manually steered and propelled by a motor drawing current, normally through overhead wires, from a central power source.

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.

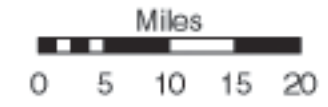
Vehicle-miles traveled (highway): Miles of travel by all types of motor vehicles as determined by the states on the basis of actual traffic counts and established estimating procedures.

Massachusetts: Major Transportation Facilities



Legend

- Cities
- Airports
- Ports
- Amtrak Stations
- Interstate Highways
- Other Highway Routes
- Amtrak Routes
- Other Rail Lines
- Navigable Waterways
- Urbanized Areas
- National Park Facilities
- Military Bases



Bureau of Transportation Statistics

Notes: Data in this map are derived from federal data sources, primarily the U.S. Department of Transportation, U.S. Geological Survey, and the Army Corps of Engineers. Displayed data may not include all state and local transportation or other facilities. Airports depicted are those reporting 100,000 or more enplanements in 2000. Pipelines and transit facilities are not shown.

