

U.S. Department of Transportation



Bureau of Transportation Statistics

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Michigan Fast Facts 2000

Transportation System Extent

All public roads: 121,979 miles Interstate: 1,241 miles Road bridges: 10,581 Class I railroad trackage: 2,228 miles Public use airports: 228 (22 certificated for air carrier operations)¹

Vehicles and Conveyances

Automobiles registered: 5.0 million Light trucks registered: 3.1 million Heavy trucks registered: 71,000 Buses registered: 26,000 Motorcycles registered: 184,000 Rail transit systems: 1 light rail, 1 automated guideway

Numbered boats: 1.0 million

Geographic

Land area: 56,804 sq. miles (rank: 22)

Percent of land area owned by federal government: 11.2² (rank: 15) Persons per square mile: 175.0 (rank: 15)

Highest point: Mount Arvon (1,979 ft.)

Lowest point: Lake Erie (571 ft.)

¹2002

²1999

³1997

⁴Apportionment based on 2000 census ⁵1990

Political Subdivisions

Counties: 83 Municipal governments: 534³ Congressional districts: 15⁴

Demographic Population: 9,938,444 (rank: 8) Percent urban population: 71⁵ (rank: 20)

Socioeconomic

Gross state product: \$308 billion² (rank: 9) Civilian labor force: 5.2 million² (rank: 8) Median household income: \$46,181 (rank: 15)

Commuting (percent of workers)

Car, truck, or van—drove alone: 83.8 Car, truck, or van—carpooled: 9.1 Public transportation (including taxi): 1.1 Walked: 2.0 Other means: 1.3 Worked at home: 2.7

State Transportation Department

Michigan Department of Transportation (MDOT) 425 West Ottawa Street Lansing, MI 48909 (517) 373-2160 http://www.mdot.state.mi.us/ The Bureau of Transportation Statistics (BTS) presents a profile of transportation in New Jersey—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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Map: Michigan Major Transportation Facilities

A Infrastructure

	1995	1996	1997	1998	1999	2000
Total rural and urban	117,611	117,620	119,183	121,482	121,722	121,979
Rural	89,528	89,478	89,549	91,745	91,790	91,972
Interstate	740	740	740	741	741	741
Other principal arterial	2,753	2,755	2,755	2,762	2,762	2,765
Minor arterial	3,999	4,024	4,026	4,082	4,072	4,112
Major arterial	17,026	16,985	17,024	16,988	16,994	16,963
Minor collector	6,315	6,314	6,233	6,229	6,194	6,202
Local	58,695	58,660	58,771	60,943	61,027	61,189
Urban	28,083	28,142	29,634	29,737	29,932	30,007
Interstate	500	499	500	500	500	500
Other freeways and expressways	218	221	221	223	224	224
Other principal arterial	1,973	1,974	1,977	1,976	1,973	1,975
Minor arterial	3,425	3,435	3,402	3,406	3,413	3,415
Collector	2,506	2,522	2,533	2,544	2,549	2,545
Local	19,461	19,491	21,001	21,088	21,273	21,348

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

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: Michigan Public Road Length, Miles by Ownership: 2000

	National	Other		
	Highway	federal-aid	Nonfederal-	
	System	highway	aid highway	Total
Total	4,721	28,521	88,738	121,980
State highway agency	4,412	5,287	14	9,713
County	213	19,829	69,457	89,499
Town, township, municipal	96	3,405	17,165	20,666
Other jurisdiction ¹	0	0	0	0
Federal agency ²	0	0	2,102	2,102

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.

Facility	Financing or operating authority Location		Length in miles	Toll collection direction	Electronic collection system	
Interstate	achiomy	Estanon		ancentri	3/316111	
Mackinac Bridge (Interstate 75)	Mackinac Bridge Authority of Michigan	From Mackinac City, MI to St. Ignace, MI	4.4	Both ways	No	
Sault Ste. Marie (Interstate 75)	International Bridge Authority of Michigan	From Sault Ste. Marie, MI to Sault Ste. Marie, ON	2.4	Both ways	No	
Blue Water Bridge (Interstate 94)	Michigan Department of Transportation	From Port Huron, MI to Pointe Edward, ON	1.5	Both ways	Card for trucks	
New Blue Water Bridge	Michigan Department of Transportation	From Port Huron, MI to Pointe Edward, ON	1.2	East	Card for trucks	
Noninterstate						
Grosse Isle	Grosse Isle Bridge Authority	From Riverview, MI to Grosse Isle, MI	0.5	Both ways	No	
Ambassador	Detroit International Bridge Authority	From Detroit, MI to Windsor, ON	1.7	Both ways	Card system and AVI-trucks and commuters only	
Detroit-Windsor	Detroit and Canada Tunnel Corporation; Detroit, MI	From Detroit, MI to Windsor, ON	1.0	Both ways	Card for trucks	
Vehicular toll ferries						
Harson's Island	Champion Auto Ferry, Inc.	From Algonac, MI to Harson's Island, MI	U	Both ways	No	
St. Mary's River Ferry System	Eastern Upper Peninsula Transit Authority	From Sault Ste. Marie, MI to Sugar Island, MI	U	Both ways	No	
St. Mary's River Ferry System	Eastern Upper Peninsula Transit Authority	From Barbeau, MI to Neebish Island, MI	U	Both ways	No	
St. Mary's River Ferry System	Eastern Upper Peninsula Transit Authority	From Detour, MI to Drummond Island, MI	U	Both ways	No	
Ironton	Charlevoix County Transit Authority	From Ironton, MI to Ironton, MI	U	Both ways	No	
Charlevoix/Beaver Island	Beaver Island Boat Company/Beaver Island Transit Authority	From Charlevoix, MI to Beaver Island, MI	U	Both ways	No	
Cheboygan	Raymond Plaunt Ferry Service	From Cheboygan, MI to Bois Blanc Isle, MI	U	Both ways	No	
Algonac	Walpole - Algonac Ferry Company	From Algonac, MI to Walpole Isle, ON	U	Both ways	No	
Marine City	Bluewater Ferry	From Marine City, MI to Sombra, ON	U	Both ways	No	
Detroit Windsor Truck Ferry	Detroit Windsor Truck Ferry	From Detroit, MI to Windsor, ON	U	Both ways	No	
Ludington - Manitowoc	Lake Michigan Car Ferry Service, Inc.	From Ludington, MI to Manitowoc, WI	U	Both ways	No	

Table 1-3: Michigan Toll Bridges, Tunnels, and Ferries: 2001

KEY: U = data are unavailable; AVI = automatic vehicle identification.

SOURCE: 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.

	1995	1996	1997	1998	1999	2000
Interstate (total reported)	740	740	739	742	741	742
Very good	89	70	70	35	67	67
Good	280	287	286	257	257	257
Fair	207	186	186	172	187	185
Mediocre	142	165	165	212	182	185
Poor	22	32	32	66	48	48
Not reported	0	0	0	0	0	0
Other principal arterial (total reported)	2,739	2,743	2,743	2,744	2,750	2,749
Very good	360	251	248	330	470	470
Good	1,160	1,203	1,218	1,046	1,128	1,117
Fair	1,129	1,145	1,136	1,191	1,013	1,022
Mediocre	77	122	120	141	104	107
Poor	13	22	21	36	35	33
Not reported	14	12	12	18	12	15
Minor arterial (total reported)	3,973	4,024	4,026	4,081	4,072	4,113
Very good	347	363	397	851	867	878
Good	1,619	1,681	1,893	1,658	1,666	1,666
Fair	1,577	1,580	1,483	1,411	1,385	1,406
Mediocre	388	308	216	96	87	96
Poor	42	92	37	65	67	67
Not reported	26	0	0	0	0	0
Major collector (total reported)	N	N	Ν	Ν	Ν	N
Very good	N	N	Ν	Ν	Ν	N
Good	N	N	Ν	Ν	Ν	N
Fair	N	N	Ν	Ν	Ν	N
Mediocre	N	N	Ν	Ν	Ν	N
Poor	N	N	Ν	Ν	Ν	N
Not reported	N	Ν	Ν	Ν	Ν	N

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

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.

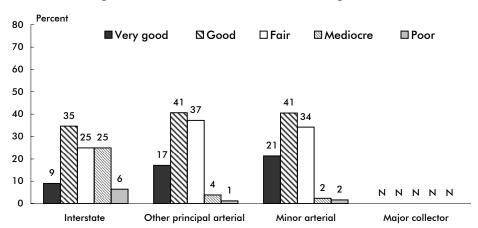


Figure 1-1: Rural Road Conditions in Michigan: 2000

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

KEY FOR DATA ON THIS PAGE: N = data do not exist.

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.

Infrastructure

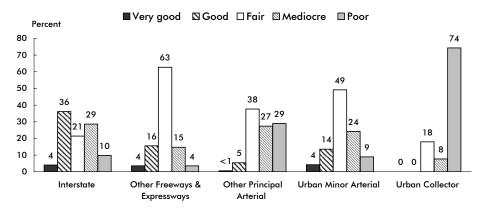
Table 1-5: Michigan Road Condition by Functional System -- Urban (Miles)

	1995	1996	1997	1998	1999	2000
Interstate (total reported)	500	499	502	500	499	499
Very good	29	23	23	15	20	20
Good	193	189	192	129	179	180
Fair	108	117	117	131	112	107
Mediocre	144	137	137	151	138	143
Poor	26	33	33	74	50	49
Not reported	0	0	0	0	1	1
Other freeways and expressways (total reported)	218	221	221	221	225	225
Very good	2	2	2	0	8	8
Good	58	45	45	36	35	35
Fair	137	154	154	152	141	141
Mediocre	20	19	19	28	33	33
Poor	1	1	1	5	8	8
Not reported	0	0	0	3	0	C
Other principal arterial (total reported)	1,875	1,922	1,970	1,959	1,972	1,973
Very good	9	9	9	13	12	12
Good	112	109	110	103	106	106
Fair	769	841	869	739	744	742
Mediocre	505	480	483	541	533	540
Poor	480	483	499	563	577	573
Not reported	98	52	6	17	1	2
Urban minor arterial (total reported)	N	Ν	N	Ν	N	517
Very good	N	N	N	N	N	22
Good	N	N	N	N	N	70
Fair	N	N	N	N	N	254
Mediocre	N	N	N	N	N	125
Poor	N	N	N	N	N	46
Not reported	Ν	Ν	Ν	Ν	N	N
Urban collector (total reported)	N	Ν	N	N	N	39
Very good	N	Ν	Ν	Ν	N	C
Good	N	Ν	Ν	Ν	N	C
Fair	N	Ν	Ν	Ν	N	7
Mediocre	N	Ν	Ν	Ν	N	3
Poor	N	Ν	Ν	Ν	N	29
Not reported	Ν	N	Ν	N	N	N

KEY: N = data do not exist.

NOTE: In 2000, the Federal Highway Administration began reporting road condition for urban minor arterials and urban collectors using the International Roughness Index, if available. In prior years, data were only available using the Present Serviceability Rating.

Figure 1-2: Urban Road Conditions in Michigan: 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.

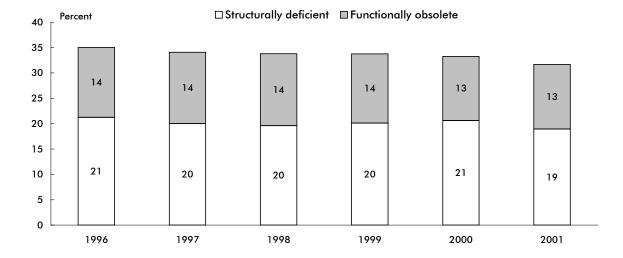
SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Washington, DC: annual editions, tables HM-63 and HM-64, available at http://www.fhwa.dot.gov/ as of Feb. 1, 2002.

		Structurally	Functionally	T 1		
C 1 1	All bridges	deficient	obsolete	Total of both		
State	(number)	(number)	(number)	(number)	(percent)	
Alabama	15,641	2,677	2,245	4,922	31.5	
Alaska	1,433	169	243 541	412	28.8	
Arizona	6,918	194		735	10.6	
Arkansas	12,434	1,479	1,996	3,475	27.9	
California	23,770	2,636	4,204	6,840	28.8	
Colorado	8,082	596	847	1,443	17.9	
Connecticut	4,171	362	943	1,305	31.3	
Delaware	829	47	82	129	15.6	
District of Columbia	243	25	136	161	66.3	
Florida	11,303	300	1,814	2,114	18.7	
Georgia	14,394	1,578	1,924	3,502	24.3	
Hawaii	1,071	193	344	537	50.1	
Idaho	4,069	320	436	756	18.6	
Illinois	25,529	2,725	2,099	4,824	18.9	
Indiana	18,067	2,257	2,161	4,418	24.5	
lowa	25,030	5,036	2,060	7,096	28.3	
Kansas	25,638	3,465	2,959	6,424	25.1	
Kentucky	13,442	1,189	2,864	4,053	30.2	
Louisiana	13,426	2,425	2,166	4,591	34.2	
Maine	2,367	354	512	866	36.6	
Maryland	4,957	436	1,010	1,446	29.2	
, Massachusetts	4,986	696	1,792	2,488	49.9	
Michigan	10,631	2,012	1,354	3,366	31.7	
Minnesota	12,830	1,221	563	1,784	13.9	
Mississippi	16,825	3,694	1,308	5,002	29.7	
Mississippi Missouri	•	6,083	2,747	•	37.4	
	23,604	•	560	8,830		
Montana	5,009	570		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	
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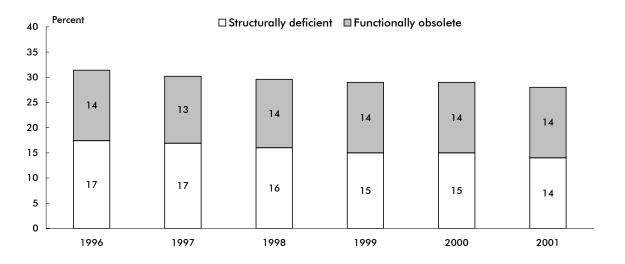
SOURCE: U.S. Department of Transportation, Federal Highway Administration, National Bridge Inventory: Deficient Bridges by State and Highway System, Washington, DC: 2001, available at http://www.fhwa.dot.gov/bridge/britab.htm as of Jan. 31, 2002.

Figure 1-3: Highway Bridge Condition

Michigan



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.

	Directional route-miles				
Transit agency	Exclusive right-of- way	Controlled right-of-way	Mixed right-of-way		
Ann Arbor Transportation Authority	0.0	0.0	393.3		
Battle Creek Transit	0.0	0.0	92.1		
Bay Metropolitan Transit Authority	0.0	0.0	457.0		
Blue Water Area Transportation	0.0	0.0	66.0		
Capital Area Transportation Authority	0.0	0.0	446.0		
City of Detroit Department of Transportation	0.0	0.0	1,323.9		
Interurban Transit	0.0	0.0	337.1		
Jackson Transportation Authority	0.0	0.0	67.0		
Kalamazoo Metropolitan Transit System	0.0	0.0	172.0		
Mass Transportation Authority	0.0	0.0	275.0		
Muskegon Area Transit System	0.0	0.0	116.0		
Suburban Mobility Authority Regional Transit	0.0	0.0	1,446.5		
Twin Cities Area Transportation	0.0	0.0	16.5		
University of Michigan	0.0	0.0	24.0		
Total	0.0	0.0	5,232.4		

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

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.

Transit agency	Directional route-miles	Miles of track	Number of crossings	Number of stations	Number of ADA accessible stations
Light rail Detroit Downtown Trolley	1.2	1.2	U	0	0
Automated guideway Detroit Transportation Corporation	2.9	2.9	0	13	13

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

KEY: ADA = Americans with Disabilities Act of 1990; U = data are unavailable.

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.

				Seaplane	
Ownership and usage	Airports	Heliports	STOL ports	bases	Total
Publicly owned	129	8	0	0	137
Open to public	129	1	0	0	130
Closed to public	0	7	0	0	7
Privately owned	251	77	2	7	337
Open to public	99	1	0	1	101
Closed to public	152	76	2	6	236
Total	380	85	2	7	474

Table 1-9: Civil and Joint-Use Airports, Heliports, STOLports, and Seaplane Bases in Michigan: 2002¹

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.

Airport	Large certificated air carriers	Commuter and small certificated air carriers	Air taxi commuter operators	Foreign air carriers	Total enplanements
Detroit Metropolitan Wayne County	16,945,119	70,818	586	310,252	17,326,775
Gerald R. Ford International	873,979	81,421	616	4,624	960,640
Bishop International	306,178	32,745	71	0	338,994
Capital City	243,222	89,303	144	0	332,669
MBS International	267,473	15,052	23	0	282,548
Kalamazoo/Battle Creek International	224,979	35,722	87	0	260,788
Cherry Capital	165,399	30,226	1,435	0	197,060
Detroit City	124,598	0	573	0	125,171
Muskegon County	23,151	21,887	628	0	45,666
Sawyer International	37,503	7,791	0	0	45,294
Pellston Regional Airport of Emmet	31,535	0	36	0	31,571
Houghton County Memorial	31,187	70	6	0	31,263
Delta County	15,618	3,701	23	0	19,342
Chippewa County International	15,516	45	5	0	15,566
Charlevoix Municipal	0	0	15,357	0	15,357
Alpena County Regional	10,701	1,894	14	0	12,609
Ford	0	8,866	8	0	8,874
Southwest Michigan Regional	2,776	0	47	0	2,823

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

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 includes only enplanements on large certificated carriers.

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

	Number of railroads		Miles operated ²				
				Michigan			
Type of railroad	United States	Michigan	United States	Excluding trackage rights	Including trackage rights	Percent of U.S. total	
Total	562	26	172,101	3,687	4,425	2.6	
Class I	8	4	120,597	1,525	2,228	1.8	
Regional	35	3	20,978	742	766	3.7	
Local	304	9	21,512	1,095	1,101	5.1	
Switching and terminal	213	9	7,425	319	324	4.4	
Canadian ¹	2	1	1,589	6	6	0.4	

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

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.

	Miles operated in
Railroad	Michigan ¹
Class I railroads	2,228
CSX Transportation	838
Grand Trunk Western Railroad, Inc.	485
Norfolk Southern Corporation	643
Soo Line Railroad Company	262
Regional railroads	766
The Indiana and Ohio Railway	22
Tuscola and Saginaw Bay Railway	396
Wisconsin Central Ltd.	348
Local railroads	1,101
Ann Arbor Railroad Company	47
Central Michigan Railway Company	92
Escanaba and Lake Superior Railroad	226
Huron and Eastern Railway	181
Indiana Northeastern Railroad Company	48
Lake State Railway Company	231
Lake Superior and Ishpeming Railroad	50
Saginaw Valley Railway Company, Inc.	66
Sault Ste. Marie Bridge Company	160
Switching and terminal railroads	324
Adrian & Blissfield Railroad Company	27
Coe Rail	8
Conrail, Inc.	101
Delray Connecting Railroad	1
Grand Rapids Eastern Railroad	50
Michigan Shore Railroad	6
Michigan Southern Railroad Company, Inc.	46
Mid-Michigan Railroad, Inc.	67
West Michigan Railroad Company	18
Canadian railroads	6
Canadian Nation Railway Company	6

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

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.

		Millio	ns of short t	tons
Port	U.S. rank	Total	Foreign	Domestic
Detroit	41	17.3	5.3	12.0
Presque Isle	53	10.7	2.5	8.2
Escanaba	63	8.6	0.0	8.6
Calcite	66	8.5	1.4	7.1
Stoneport	67	7.8	0.3	7.6
St. Clair	73	5.6	<0.1	5.6
Port Inland	74	5.5	0.5	5.0
Marine City	89	4.0	0.1	3.9
Alpena	99	3.4	0.2	3.2
Port Dolomite	102	3.2	0.2	3.0
Muskegon	114	2.4	0.5	2.0
Charlevoix	127	1.7	0.2	1.6
Grand Haven	133	1.6	0.5	1.0
Drummond Island	140	1.4	0.0	1.4
Marysville	145	1.2	0.5	0.7

Table 1-13: Michigan Water Ports Ranked in Top 150 U.S.Ports by Tonnage: 2000

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.

B Safety

					Fatality rate per			
		Licensed	Registered	Vehicle-miles	100,000	100,000	100 million	
	Traffic	drivers	vehicles	traveled	licensed	registered	vehicle-	
State	fatalities	(thousands)	(thousands)	(millions)	drivers	vehicles	miles	
Alabama	995	3,521	4,015	56,534	28.3	24.8	1.8	
Alaska	103	465	611	4,613	22.2	16.9	2.2	
Arizona	1,036	3,434	3,960	49,768	30.2	26.2	2.1	
Arkansas	652	1,948	1,865	29,167	33.5	35.0	2.2	
California	3,753	21,244	28,146	306,649	17.7	13.3	1.2	
Colorado	681	3,107	3,724	41,771	21.9	18.3	1.6	
Connecticut	342	2,653	2,907	30,756	12.9	11.8	1.1	
Delaware	123	557	641	8,240	22.1	19.2	1.5	
District of Columbia	49	348	244	3,498	14.1	20.1	1.4	
Florida	2,999	12,853	12,036	152,136	23.3	24.9	2.0	
Georgia	1,541	5,550	7,243	105,010	27.8	21.3	1.5	
Hawaii	131	769	758	8,543	17.0	17.3	1.5	
Idaho	276	884	1,220	13,534	31.2	22.6	2.0	
Illinois	1,418	7,961	9,168	102,866	17.8	15.5	1.4	
Indiana	875	3,976	5,689	70,862	22.0	15.4	1.2	
lowa	445	1,953	3,233	29,433	22.8	13.8	1.5	
Kansas	461	1,908	2,346	28,130	24.2	19.7	1.6	
Kentuckv	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	
Missiouri	1,157	3,856	4,641	67,083	30.0	24.9	1.7	
Montana	237	3,858 679	1,053	•	30.0	24.9	2.4	
Nebraska	237		,	9,882	23.1	16.8	2.4 1.5	
	323	1,195	1,640	18,081	23.1	25.9		
Nevada		1,371	1,245	17,639			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	

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

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.

	Restraint used		No restraint used		Restraint use	unknown	Total occupants killed		
State	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Alabama	204	38.2	308	57.7	22	4.1	534	100.0	
Alaska	11	39.3	17	60.7	0	0.0	28	100.0	
Arizona	131	36.0	183	50.3	50	13.7	364	100.0	
Arkansas	95	32.3	160	54.4	39	13.3	294	100.0	
California	917	53.5	499	29.1	298	17.4	1,714	100.0	
Colorado	129	47.1	142	51.8	3	1.1	274	100.0	
Connecticut	69	38.1	90	49.7	22	12.2	181	100.0	
Delaware	20	29.0	47	68.1	2	2.9	69	100.0	
District of Columbia	4	22.2	7	38.9	7	38.9	18	100.0	
Florida	523	37.7	836	60.3	27	1.9	1,386	100.0	
Georgia	337	42.9	351	44.7	98	12.5	786	100.0	
Hawaii	23	37.7	29	47.5	9	14.8	61	100.0	
Idaho	42	35.9	69	59.0	6	5.1	117	100.0	
Illinois	234	34.3	311	45.6	137	20.1	682	100.0	
Indiana	203	43.0	222	47.0	47	10.0	472	100.0	
lowa	107	41.6	98	38.1	52	20.2	257	100.0	
Kansas	77	33.2	127	54.7	28	12.1	232	100.0	
Kentucky	156	36.3	269	62.6	5	1.2	430	100.0	
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	
Marsachusetts	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	40.4	185	53.8	6	1.7	344	100.0	
West Virginia	71	31.1	165	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	231	53.5 54.0	40	9.3 0.0	432	100.0	
United States	8,472	40.0	10,229	49.9	1,791	8.7	20,492	100.0	

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

NOTE: Fatalities in this table include passenger car occupants only. Occupants of other vehicle types - light trucks, heavy trucks, motorcycles, and buses - are excluded as are other types of highway related fatalities such as pedestrian fatalities. Hence, the fatalities represented here are lower then those in table 2-1. Percents may not add to totals due to rounding.

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

State	Effective ¹	Enforcement ²	Fine	Seats	Vehicles exempted ³
Alabama	7/18/1992	Primary	\$25	Front	Designed for more than 10 passengers
Alaska	9/12/1990	Secondary	\$15	All	School bus
Arizona	1/1/1991	Secondary	\$10	Front	Designed for more than 10 passengers; model year before 1972
Arkansas	7/15/1991	Secondary	\$25 ⁴	Front	School bus, church bus, public bus
California	1/1/1986	Primary	\$20 ⁵	All	None
Colorado	7/1/1987	Secondary	\$15	Front	Passenger bus, school bus
Connecticut	1/1/1986	Primary	\$15	Front	Truck or bus over 15,000 lbs.
Delaware	1/1/1992	Secondary	\$20	Front	None
District of Columbia	12/12/1985	Primary	\$50 ⁶	All	Seating more than 8 people
Florida	7/1/1986	Secondary	\$30	Front	School bus, public bus, truck over 5,000 lbs.
Georgia	9/1/1988	Primary	\$15	Front	Designed for more than 10 passengers, pickup
Hawaii	2/16/1985	Primary	\$45	Front	Bus or school bus over 10,000 lbs.
daho	7/1/1986	Secondary	\$5	Front	Over 8,000 lbs.
llinois	7/1/1985	Secondary	\$25	Front	None
ndiana	7/1/1987	Primary	\$25	Front	Truck, tractor, RV
owa	7/1/1986	Primary	\$10	Front	None
Gwa Gansas	7/1/1986	Secondary	\$10	Front	Designed for more than 10 people, truck over
					12,000 lbs.
(entucky	7/13/1994	Secondary	\$25	All	Designed for more than 10 people
ouisiana	7/1/1986	Primary	\$25 ⁷	Front	Manufactured before 1/1/81
Maine	12/27/1995	Secondary	\$50	All	None
Maryland	7/1/1986	Primary	\$25	Front	Historic vehicle
Aassachusetts	2/1/1994	Secondary	\$25	All	Truck over 18,000 lbs., bus, taxi
Michigan	7/1/1985	Primary	\$25	Front	Bus
Ainnesota	8/1/1986	Secondary	\$25	Front	Farm pickup truck
٨ississippi	3/20/1990	Secondary	\$25	Front	Farm vehicle, bus
Aissouri	9/28/1985	Secondary	\$10	Front	Designed for more than 10 people, truck over 12,000 lbs.
Nontana	10/1/1987	Secondary	\$20	All	None
Nebraska	1/1/1993	Secondary	\$25	Front	Manufactured before 1973
Nevada	7/1/1987	Secondary	\$25	All	Taxi, bus, school bus
New Hampshire	None	NA	NA	NA	NA
New Jersey	3/1/1985	Secondary	\$20	Front	None
New Mexico	1/1/1986	Primary	\$25	Front	Vehicle over 10,000 lbs.
New York	12/1/1984	Primary	\$50	Front	Bus, school bus, taxi
North Carolina	10/1/1985	Primary	\$25	Front	Designed for more than 10 people
North Dakota	7/14/1994	Secondary	\$20	Front	Designed for more than 10 people
Dhio	5/6/1986	Secondary	\$25	Front	None
Oklahoma	2/1/1987	Primary	\$20	Front	Farm vehicle, truck, truck tractor, RV
Dregon	12/7/1990	Primary	\$75	All	None
Pennsylvania	11/23/1987	Secondary	\$10	Front	Truck over 7,000 lbs.
Rhode Island	6/18/1991	Secondary	\$50	All	None
South Carolina	7/1/1989	Secondary	\$10	All	School bus, public bus
South Dakota	1/1/1995	Secondary	\$20	Front	Bus, school bus
ennessee	4/21/1986	Secondary	\$50	Front	Vehicle over 8,500 lbs.
exas	9/1/1985	Primary	\$50	Front	Designed for more than 10 people, truck over 15.000 lbs.
Jtah	4/28/1986	Secondary	\$45	Front	Vehicle over 10,000 lbs., school/public bus, taxi
/ermont	1/1/1994	Secondary	\$45 \$10	All	Bus, taxi
/irginia	1/1/1988	Secondary	\$25	Front	Designed for more than 10 people, taxi
Washington	6/11/1986	Secondary	\$25 \$35	All	Designed for more than 10 people, laxi Designed for more than 10 people
Washington West Virginia	9/1/1993	Secondary	\$35 \$25	Front	Designed for more than 10 people
Wisconsin	12/1/1993	Secondary	\$25 \$10	All	Taxi, farm truck
Wyoming	6/8/1989	Secondary	\$25	Front	Designed for more than 10 people, bus

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

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.

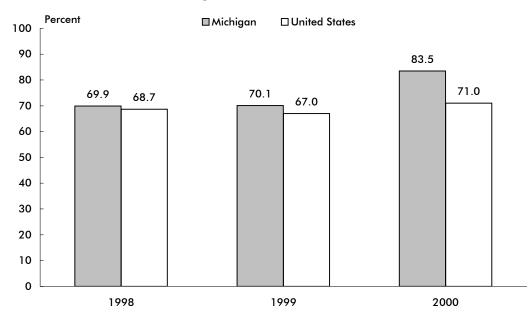
SOURCE: U.S. Department of Transportation, National Highway Traffic Safety Administration, *Traffic Safety Facts 2000*, Washington, DC: 2001, available at http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/TSFAnn/TSF2000.pdf as of Jan. 4, 2002.

State	Percent	State	Percer	
Alabama	70.6	Montana	75.6	
Alaska	61.0	Nebraska	70.5	
Arizona	75.2	Nevada	78.5	
Arkansas	52.4	New Hampshire	N	
California	88.9	New Jersey	74.2	
Colorado	65.1	New Mexico	86.6	
Connecticut	76.3	New York	77.3	
Delaware	66.1	North Carolina	80.5	
District of Columbia	82.6	North Dakota	47.7	
Florida	64.8	Ohio	65.3	
Georgia	73.6	Oklahoma	67.5	
Hawaii	80.4	Oregon	83.6	
Idaho	58.6	Pennsylvania	70.7	
Illinois	70.2	Rhode Island	64.4	
Indiana	62.1	South Carolina	73.9	
lowa	78.0	South Dakota	53.4	
Kansas	61.6	Tennessee	59.0	
Kentucky	60.0	Texas	76.6	
Louisiana	68.2	Utah	75.7	
Maine	N	Vermont	61.6	
Maryland	85.0	Virginia	69.6	
Massachusetts	50.0	Washington	81.6	
Michigan	83.5	West Virginia	49.5	
Minnesota	73.4	Wisconsin	65.4	
Mississippi	50.4	Wyoming	66.8	
Missouri	67.7			

Table 2-4: Shoulder Belt Use: 2000

KEY: N = data do not exist.





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.

	Total		Pedestrian fatalities as	State	Pedestrian fatality rate per
	traffic	Pedestrians	percent of	population	100,000
State	fatalities	killed	total	(thousands)	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	1,237	0.4
Illinois	1,418	187	13.2	12,051	1.6
Indiana	875	51	5.8	6,045	0.8
lowa	445	25	5.6		0.8
Iowa Kansas	445	25 19	5.0 4.1	2,900	0.9
		53		2,668	
Kentucky	820		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	3,709	33	8.8	20,119	1.5
	373 79	33 7	o.o 8.9		
Vermont Virginia		/ 92	8.9 9.9	617 6 997	1.1
Virginia Washington	930			6,997	1.3
Washington	632	66	10.4	5,858	1.1
West Virginia	410	25	6.1	1,841	1.4
Wisconsin Wyoming	799 152	51 12	6.4	5,326	1.0 2.3
		10	7.9	525	

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

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

Safety

		1995			2000			
	Fatalities							
		involving			Fatalities			
	Total	high blood		Total	involving high			
State	fatalities	alcohol	Percent	fatalities	blood alcohol	Percent		
Alabama	1,113	381	34	995	326	33		
Alaska	87	37	42	103	44	43		
Arizona	1,031	347	34	1,036	354	34		
Arkansas	631	148	23	652	139	21		
California	4,192	1,308	31	3,753	1,061	28		
Colorado	645	226	35	681	198	29		
Connecticut	317	130	41	342	119	35		
Delaware	121	38	31	123	49	40		
District of Columbia	58	25	44	49	14	29		
Florida	2,805	873	31	2,999	930	31		
Georgia	1,488	400	27	1,541	438	28		
Hawaii	130	41	32	131	37	28		
Idaho	262	69	27	276	81	29		
Illinois	1,586	551	35	1,418	489	34		
Indiana	960	263	27	875	214	24		
lowa	527	159	30	445	100	22		
Kansas	442	152	34	461	118	26		
Kentucky	849	227	27	820	203	25		
Louisiana	883	353	40	937	352	38		
Maine	187	44	40 24	169	38	22		
	671	176	24	588	161	27		
Maryland	444	178	33	433	153	35		
Massachusetts								
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		
-	653	272	30	632	237	28 34		
Washington West Virginia								
West Virginia Wissensin	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		

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

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

				License sanction (Mandatory minimum for a DWI conviction)			
.	Administrative per se	Illegal per se	Lower BAC for youthful DWI offenders		Second	Third	
State	(BAC level)	(BAC level)	(BAC level and age)	First offense		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	
lorida	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	
lawaii	Y-0.08	0.08	Y-0.02 (<21)	S-30 days	S-1 yr	R-1 yr	
daho	Y-0.08	0.08	Y-0.02 (<21)	S-30 days	S-1 yr	S-1 yr	
linois	Y-0.08	0.08	Y-0.02 (<21)	Nms	Nms	Nms	
ndiana	Y-0.10	0.10	Y-0.02 (<21)	S-30 days	S-1 yr	S-1 yr	
owa	Y-0.10	0.10	Y-0.02 (<21)	R-30 days	, R-1 yr	R-1 yr	
ansas	Y-0.08	0.08	Y-0.02 (<21)	S-30 days	ý S-1 yr	S-1 yr	
(entucky	А	0.08	Y-0.02 (<21)	S-30 days	R-12 mos	R-24 mos	
ouisiana	Y-0.10	0.10	Y-0.02 (<21)	Nms	Nms	Nms	
Naine	Y-0.08	0.08	Y-0.00 (<21)	S-60 davs	S-18 mos	S-4 yrs	
Naryland	Y-0.10	0.10	Y-0.02 (<21)	Nms	Nms	Nms	
Aassachusetts	Y-0.08	N	Y-0.02 (<21)	S-45 days	R-6 mos	R-2 yrs	
Nichigan	N	0.10		Nms	R-1 yr	S-5 yrs	
•			Y-0.02 (<21)				
Ainnesota	Y-0.10	0.10	Y-0.00 (<21)	R-15 days	R-90 days	R-90 days	
Aississippi	Y-0.10	0.10	Y-0.02 (<21)	S-30 days	S-1 yr	S-3 yrs	
Aissouri	Y-0.10	0.10	Y-0.02 (<21)	S-30 days	R-2 yrs	R-3 yrs	
Aontana	N	0.10	Y-0.02 (<21)	Nms	R-3 mos	R-3 mos	
Vebraska	Y-0.10	0.10	Y-0.02 (<21)	R-60 days	R-1 yr	R-1 yr	
Vevada	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	
lew Jersey	Ν	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	
√ew York	Α	0.10	Y-0.02 (<21)	Nms	R-I 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	
Dhio	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	
Dregon	Y-0.08	0.08	Y-0.00 (<21)	Nms	S-90 days	S-1 yr	
ennsylvania	Ν	0.10	Y-0.02 (<21)	S-1 mo	S-12 mos	S-12 mos	
hode Island	Ν	0.08	Y-0.02 (<21)	S-3 mos	S-1 yr	S-2 yrs	
outh Carolina	Y-0.15	0.10	Y-0.02 (<21)	Nms	S-1 yr	S-4 yrs	
outh Dakota	N	0.10	Y-0.02 (<21)	Nms	R-1 yr	R-1 yr	
ennessee	N	0.10	Y-0.02 (<21)	Nms	R-2 yrs	R-3 yrs	
exas	Y-0.08	0.08	Y-0.00 (<21)	Nms	Nms	Nms	
Itah	Y-0.08	0.08	Y-0.00 (<21)	S-90 days	R-1 yrs	R-1 yrs	
/ermont	Y-0.08	0.08	Y-0.02 (<21)	S-90 days	S-18 mos	R-2 yrs	
'irginia	Y-0.08	0.08	Y-0.02 (<21)	Nms	R-1 yr	R-2 yrs R-3 yrs	
•			· · ·		,		
Vashington	Y-0.08	0.08	Y-0.02 (<21)	S-30 days	R-1 yr	R-2 yrs	
Vest Virginia	Y-0.10	0.10	Y-0.02 (<21)	R-30 days	R-1 yr	R-1 yr	
Visconsin	Y-0.10	0.10	Y-0.02 (<21)	Nms	R-60 days	R-90 days	
Vyoming	Y-0.10	0.10	Y-0.02 (<21)	Nms	S-1 yr	R-3 yrs	

Table 2-7: Impaired Driving Laws: 2000

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.

Safety

	Intersto	ite	Other limited-		
State	Rural	Urban	access roads ²	Other roads	
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	
)elaware	65	55	65	55	
District of Columbia	NA	55	NA	25	
lorida	70	65	70	65	
	70 70	65	65	65	
Georgia	55	50			
lawaii			45	45	
laho	75, Trucks: 65	65	65	65	
linois	65, Trucks: 55	55	65	55	
ndiana	65, Trucks: 60	55	55	55	
owa	65	55	65	55	
ansas	70	70	70	65	
lentucky	65	55	55	55	
ouisiana	70	55	70	65	
Naine	65	55	55	55	
Naryland	65	65	65	55	
Nassachusetts	65	65	65	55	
۸ichigan	70, Trucks: 55	65	70	55	
Ainnesota	70	65	65	55	
Nississippi	70	70	70	65	
Aissouri	70	60	70	65	
Nontana	75, Trucks: 65	65	Day: 70, Night: 65	Day: 70, Night: 65	
lebraska	75	65	65	60	
levada	75	65	70	70	
New Hampshire	65	65	55	55	
lew Jersey	65	55	65	55	
lew Mexico	75	55	65	55	
lew York	65	65	65	55	
lorth Carolina	70	65	65	55	
lorth Dakota	70	55	65	Day: 65, Night: 55	
Dhio	65, Trucks: 55	65	55	55	
Oklahoma	75	70	70	70	
Dregon	65, Trucks: 55	55	55	55	
ennsylvania	65	55	65	55	
hode Island	65	55	55	55	
outh Carolina	70	70	60	55	
outh Dakota	70 75	65	65	65	
	75	85 70	65 70	65 55	
ennessee					
exas	70	70	70	70	
ltah	75	65	55	55	
ermont	65	55	50	50	
irginia	65	55	65	55	
Vashington	70, Trucks: 60	60	55	55	
Vest Virginia	70	55	65	55	
Visconsin	65	65	65	55	
Vyoming	75	60	65	65	

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

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.

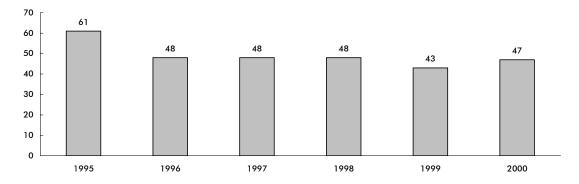
NOTE: Interstates are divided into urban and rural sections based primarily on population size and population density.

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.

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

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

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



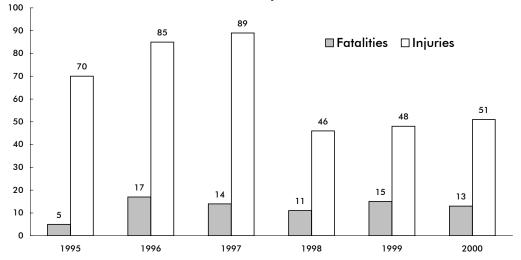
NOTE FOR DATA ON THIS PAGE: "Accidents/incidents" includes all events reportable to the U.S. Department of Transportation, Federal Railroad Administration under applicable regulations. These include: train accidents, reported on Form F 6180.54, comprised of collisions, derailments, and other events involving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

State	Number of grade crossings	Incidents	Fatalities	Injuries	State	Number of grade crossings	Incidents	Fatalities	Injuries
Alabama	5,418	95	10	39	Montana	3,514	24	1	2
Alaska	336	7	0	0	Nebraska	6,575	55	7	14
Arizona	1,628	29	8	13	Nevada	571	2	0	0
Arkansas	4,655	115	27	36	New Hampshire	637	3	0	0
California	12,775	174	27	54	New Jersey	2,493	36	5	10
Colorado	3,271	36	6	8	New Mexico	1,355	17	0	11
Connecticut	624	8	2	0	New York	6,216	41	5	14
Delaware	456	10	0	7	North Carolina	7,813	113	14	25
District of Columbia	42	2	0	0	North Dakota	6,343	17	6	2
Florida	5,324	86	15	67	Ohio	9,633	148	15	38
Georgia	8,453	128	10	38	Oklahoma	5,913	89	12	47
Hawaii	8	0	0	0	Oregon	5,213	30	0	13
Idaho	2,645	33	11	1	Pennsylvania	8,946	69	8	17
Illinois	13,916	217	31	68	Rhode Island	189	0	0	0
Indiana	9,129	194	23	55	South Carolina	4,270	80	10	24
lowa	9,317	109	6	31	South Dakota	3,495	11	0	5
Kansas	10,756	67	11	18	Tennessee	5,062	90	8	26
Kentucky	5,037	69	5	20	Texas	18,289	388	52	164
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

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





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.

Fatalities

	Mich	nigan	United States		
	Number	Percent	Number	Percent	
Total	8,028	100.0	256,241	100.0	
Public, motor vehicle	5,405	67.3	155,370	60.6	
Private, motor vehicle	2,557	31.9	98,918	38.6	
Pedestrian	66	0.8	1,953	0.8	

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

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

	Mich	nigan	United	States
	Number	Percent	Number	Percent
Total	5,405	100.0	155,370	100.0
Cross bucks	1,187	22.0	71,468	46.0
Gates	944	17.5	34,296	22.1
Flashing lights	1,384	25.6	27,100	17.4
Stop signs	1,680	31.1	11,630	7.5
Unknown	57	1.1	5,253	3.4
Special warning	97	1.8	3,723	2.4
HWTS, WW, bells	42	0.8	1,417	0.9
Other	14	0.3	483	0.3

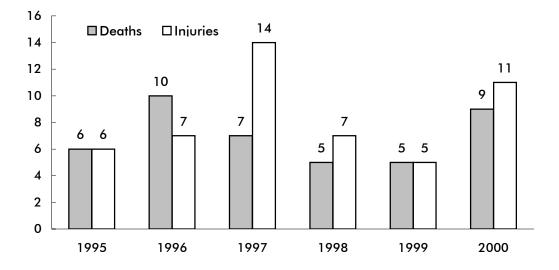
KEY: HWTS = highway traffic signals; WW = wigwags.

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.

Type of person	Fatalities	Injuries
Worker on duty (railroad employee)	0	216
Employee not on duty	0	4
Passenger on train	0	7
Nontrespasser	9	37
Trespasser	12	19
Worker on duty (contractor)	1	12
Contractor (other)	1	2
Worker on duty (volunteer)	0	0
Volunteer (other)	0	0
Nontrespasser (off railroad property)	0	3

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

Figure 2-4: Railroad Trespasser Deaths and Injuries in Michigan (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: Michigan Transit Safety Data: 2000

	Collision						
	Number of incidents	Fatalities	Injuries	Number of incidents	Fatalities	Injuries	Total property damage (\$ thousands)
Automated guideway	0	0	0	0	0	0	0
Cable car	0	0	0	0	0	0	0
Commuter rail	0	0	0	0	0	0	0
Demand responsive	64	0	29	50	0	53	160
Ferry boat	0	0	0	0	0	0	0
Heavy rail	0	0	0	0	0	0	0
Light rail	0	0	0	0	0	0	0
Motor bus	269	4	354	227	1	232	2,817
Trolley bus	0	0	0	0	0	0	0
Van pool	0	0	0	0	0	0	0

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

	Collision			1	Noncollision			
	Number of incidents	Fatalities	Injuries	Number of incidents	Fatalities	Injuries	Total property damage (\$ thousands)	
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.

	Michigan	United States
Number of accidents		
Total	227	7,740
Fatal	26	616
Nonfatal injury	103	3,292
Property damage	98	3,832
Number of persons		
Killed	31	701
Injured	138	4,355

Table 2-16: Recreational Boating Accidents: 2000

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

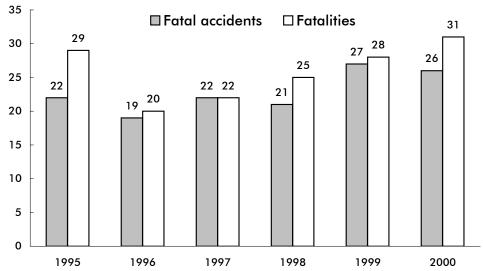


Figure 2-5: Michigan Recreational Boating Accidents

NOTES FOR DATA ON THIS PAGE: An accident is listed under one category only, with fatal being the highest priority, followed by nonfatal injury, followed by property damage. For example, if two vessels are in an accident resulting in a fatality and a nonfatal injury, the accident is counted as a fatal accident involving two vessels.

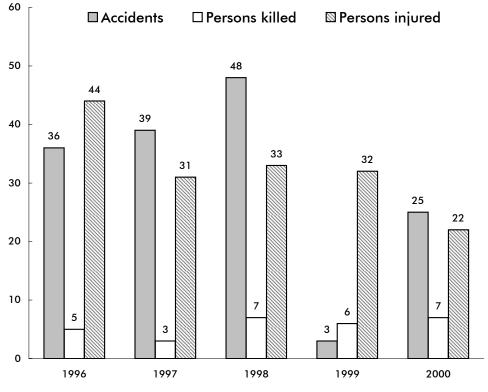
These data do not include: 1) accidents involving only slight injury not requiring medical treatment beyond first-aid; 2) accidents involving property damage of \$500 or less; 3) accidents not caused or contributed to by a vessel, its equipment, or its appendages; and 4) accidents in which the boat was used solely as a platform for other activities, such as swimming or skin diving. Such cases are not included because the victims freely left the safety of a boat. However, the data do include accidents involving people in the water who are struck by their boat or another boat.

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

		1999	2000		
	Michigan	United States	Michigan	United States	
Number of accidents					
Total	3	633	25	696	
Number of persons					
Killed	6	191	7	215	
Injured	32	476	22	542	

Table 2-17: Alcohol Involvement in Recreational Boating





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.

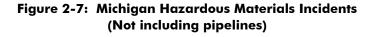
Table 2-18:	Hazardous Materials Incidents: 2000
(Not includin	ıg pipelines)

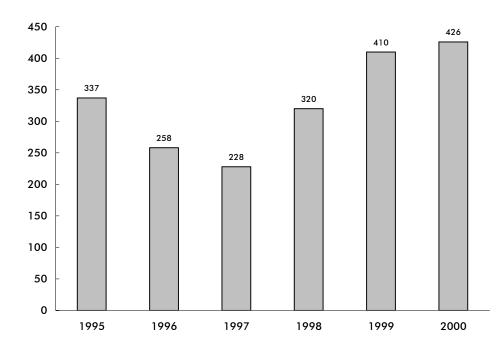
				Injuries	Damages	
	Incidents	Deaths	Total	Major	Minor	(\$ thousands)
Michigan	426	0	5	0	5	303
United States	17,514	13	246	18	228	72,728

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.





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

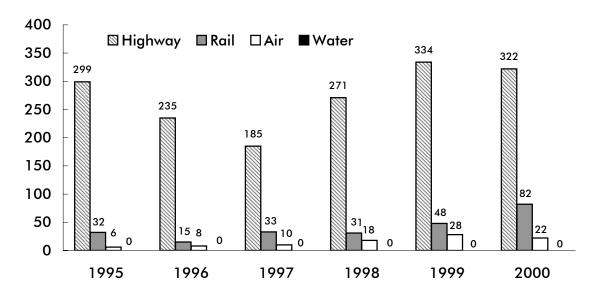
SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, *Hazmat Summary by State for Calendar Year 2000*, and earlier years, Washington, DC: 2002, available at http://hazmat.dot.gov as of Apr. 24, 2002.

			Inju	Damages	
Mode	Total incidents	Deaths	Major	Minor	(\$ thousands)
Highway	322	0	0	5	294
Rail	82	0	0	0	9
Air	22	0	0	0	0
Water ¹	0	0	0	0	0
Total	426	0	0	5	303

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

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





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.

Safety

	1995	1996	1997	1998	1999	2000
Michigan						
Number of incidents	4	4	10	5	12	3
Number of fatalities	0	2	2	1	6	2
Number of injuries	2	1	3	3	4	2
Property damage (\$ thousands)	1,131	200	1,720	400	1,295	450
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

Table 2-20: Natural Gas Distribution Pipeline Incidents

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.

	1995	1996	1997	1998	1999	2000
Michigan						
Number of incidents	1	2	2	1	2	2
Number of fatalities	0	0	0	0	0	0
Number of injuries	2	0	0	0	0	2
Property damage (\$ thousands)	0	585	23	1,414	863	299
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

Table 2-21: Natural Gas Transmission Pipeline Incidents

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.

	1995	1996	1997	1998	1999	2000
Michigan						
Number of incidents	0	4	1	2	3	1
Number of fatalities	0	0	0	0	0	0
Number of injuries	0	1	0	0	0	0
Property damage (\$ thousands)	0	272	65	185	530	1,000
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

Table 2-22: Hazardous Liquid Pipeline Incidents

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

State of origin	Rank	Value (\$ millions)	Weight (thousand short tons)	State of origin	Rank	Value (\$ millions)	Weight (thousand short tons)
Michigan	1	149,271	278,128	Oregon	27	641	411
Ohio	2	33,840	21,089	Washington	28	1,273	403
Illinois	3	17,887	11,340	South Dakota	29	S	390
Indiana	4	20,052	10,730	Kansas	30	1,109	371
West Virginia	5	1,611	6,669	Maryland	31	1,087	361
Wisconsin	6	9,447	5,984	Massachusetts	32	2,024	316
Pennsylvania	7	5,830	4,613	Idaho	33	450	309
Kentucky	8	7,829	3,836	North Dakota	34	176	258
Wyoming	9	165	2,693	New Hampshire	35	997	139
Georgia	10	3,845	2,062	Connecticut	36	1,464	138
Tennessee	11	5,194	1,844	Utah	37	578	111
New York	12	7,298	1,816	Maine	38	295	80
lowa	13	3,206	1,800	Delaware	39	161	78
California	14	9,098	1,667	New Mexico	40	206	49
Virginia	15	2,183	1,484	Nevada	41	147	37
Alabama	16	2,472	1,348	Rhode Island	42	225	8
Louisiana	17	1,639	1,283	Alaska	43	1	S
North Carolina	18	4,162	1,133	Arizona	43	792	S
New Jersey	19	5,760	1,043	Colorado	43	1,360	S
Missouri	20	4,122	1,031	District of Columbia	43	S	S
Florida	21	1,860	818	Hawaii	43	S	S
Mississippi	22	1,263	760	Minnesota	43	3,532	S
South Carolina	23	2,472	711	Montana	43	117	S
Nebraska	24	1,364	688	Texas	43	10,301	S
Arkansas	25	1,201	667	Vermont	43	250	S
Oklahoma	26	749	488	From all states		331,821	388,841

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

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.

State of destination	Rank	Value (\$ millions)	Weight (thousand short tons)	State of destination	Rank	Value (\$ millions)	Weight (thousand short tons)
Michigan	1	149,271	278,128	Kansas	27	1,526	516
Ohio	2	25,870	28,835	Arkansas	28	861	482
Indiana	3	10,685	16,227	Massachusetts	29	2,598	477
Illinois	4	12,554	11,005	Colorado	30	1,418	387
Wisconsin	5	5,298	7,119	Louisiana	31	1,587	382
Pennsylvania	6	6,422	4,452	Oregon	32	1,193	304
Minnesota	7	3,135	4,125	Mississippi	33	705	303
Texas	8	13,809	2,793	Arizona	34	2,118	269
Missouri	9	9,320	2,430	Nebraska	35	1,523	238
North Carolina	10	3,665	2,316	Utah	36	1,307	222
New York	11	5,575	1,986	New Hampshire	37	251	151
California	12	9,640	1,972	Maine	38	364	116
Kentucky	13	4,532	1,892	Nevada	39	535	91
Georgia	14	6,596	1,721	South Dakota	40	191	80
New Jersey	15	6,613	1,647	North Dakota	41	241	58
Maryland	16	3,126	1,497	Vermont	42	182	55
Tennessee	17	4,348	1,444	New Mexico	43	551	52
Virginia	18	3,616	1,252	Idaho	44	189	47
Oklahoma	19	2,255	1,101	Rhode Island	45	135	30
Alabama	20	1,258	1,093	Montana	46	233	29
Florida	21	6,087	1,076	District of Columbia	47	88	17
South Carolina	22	1,852	883	Alaska	48	13	1
lowa	23	1,622	771	Delaware	50	567	S
West Virginia	24	933	736	Hawaii	49	S	S
Washington	25	2,816	605	Wyoming	51	58	S
Connecticut	26	1,099	537	To all states		320,536	382,277

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

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.

	Valu	е	Short tons		Ton-m	iles
	Number		Number		Number	
	(\$ millions)	Percent	(thousands)	Percent	(millions)	Percent
All modes	320,536	100.0	382,277	100.0	70,963	100.0
Single modes	268,337	83.7	355,111	92.9	59,202	83.4
Truck	227,120	70.9	289,401	75.7	34,767	49.0
For-hire	140,068	43.7	148,872	38.9	26,315	37.1
Private truck	85,506	26.7	135,113	35.3	8,150	11.5
Rail	36,965	11.5	30,876	8.1	14,036	19.8
Water	433	0.1	29,979	7.8	9,779	13.8
Shallow draft	S	S	S	S	S	S
Great Lakes	433	0.1	29,979	7.8	9,779	13.8
Deep draft	S	S	S	S	S	S
Air (including truck and air)	2,704	0.8	290	Z	204	0.3
Pipeline	S	S	S	S	S	S
Multiple modes	33,468	10.4	16,816	4.4	10,084	14.2
Parcel, U.S. Postal Service, or courier	19,871	6.2	653	0.2	352	0.5
Truck and rail intermodal combination	13,375	4.2	2,142	0.6	2,898	4.1
Truck and water	S	S	6,224	1.6	3,392	4.8
Rail and water	S	S	S	S	S	S
Other multiple modes	25	Z	3,937	1.0	1,099	1.5
Other and unknown modes	18,732	5.8	s	S	1,677	2.4

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

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.

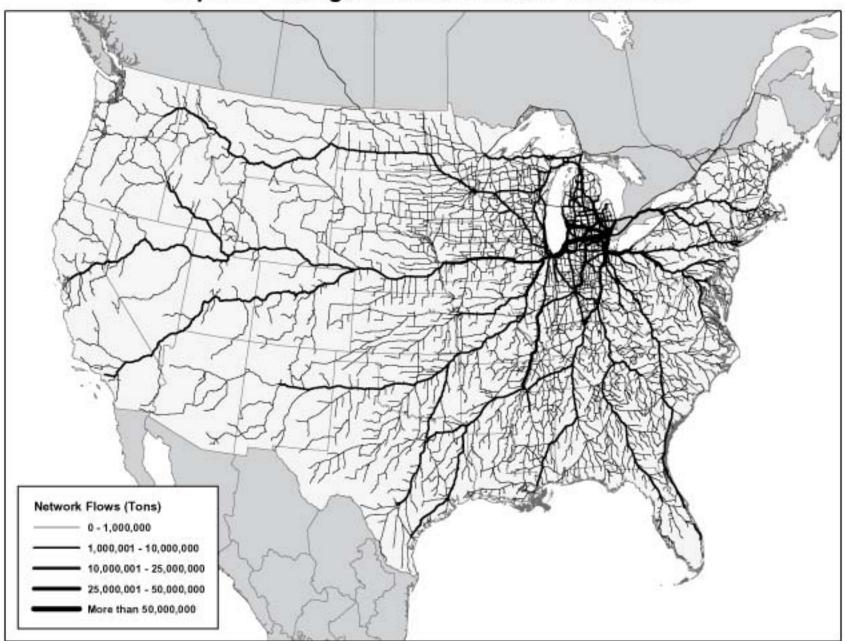
State of destination	Value (\$ millions)	Weight (thousand short tons)
Michigan	129,165	234,503
Ohio	19,241	16,273
Indiana	8,310	8,428
Illinois	9,239	5,844
Wisconsin	4,035	2,765
Pennsylvania	3,766	2,602
Texas	5,844	1,636
Missouri	4,774	1,311
Kentucky	3,326	1,295
New York	3,115	1,174
All other states	36,305	13,570
Total, all states	227,120	289,401

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

Table 3-5: Domestic Shipments to Michigan byTruck: 1997 (Descending order by weight)

State of origin	Value (\$ millions)	Weight (thousand short tons)
Michigan	129,165	234,503
Ohio	28,800	17,015
Indiana	18,353	9,221
Illinois	12,783	7,333
Wisconsin	7,954	5,171
Pennsylvania	3,808	2,161
Minnesota	2,376	1,773
Kentucky	5,647	1,705
Tennessee	4,661	1,581
New York	5,515	1,580
All other states	45,990	18,509
Total, all states	265,052	300,552

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: Michigan Network Truck Flows: 1998

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

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

Commodity (2-digit commodity code)	Value (\$ millions)	Weight (thousand short tons)
Gravel and crushed stone (12)	271	46,592
Base metal in primary or semifinished forms and in finished basic shapes (32)	18,903	44,501
Gasoline and aviation turbine fuel (17)	S	35,806
Nonmetallic mineral products (31)	2,684	20,869
Natural sands (11)	128	15,827
Motorized and other vehicles (including parts) (36)	52,044	15,770
Other prepared foodstuffs and fats and oils (07)	10,588	12,078
Coal and petroleum products, n.e.c. (19)	1,875	9,482
Fuel oils (18)	1,811	7,843
Waste and scrap (41)	1,652	7,458
Wood products (26)	2,798	4,884
Articles of base metal (33)	10,631	4,823
Machinery (34)	24,077	4,235
Mixed freight (43)	7,555	4,142
Basic chemicals (20)	2,217	3,694
Other agricultural products (03)	2,469	3,281
Nonmetallic minerals, n.e.c. (13)	231	3,104
Chemical products and preparations, n.e.c. (23)	6,206	3,082
Cereal grains (02)	1,253	2,900
Animal feed and products of animal origin, n.e.c. (04)	1,019	2,895
All other commodities	S	36,135
Total, all commodities	227,120	289,401

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

NOTE: There are 41 two-digit Standard Classification of Transported Goods (SCTG) commodity codes.

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

		Percent of	F	Percent of
Commodity	1999 total		2000	total
Coal	20,057,228	39.6	19,380,688	37.3
Metallic ores	8,551,139	16.9	9,176,295	17.6
Chemicals	4,366,620	8.6	4,654,270	9.0
Primary metal products	3,644,280	7.2	3,797,926	7.3
Petroleum	U	U	2,323,233	4.5
Mixed freight	2,065,160	4.1	U	U
All other commodities	11,996,833	23.7	12,666,021	24.4
Michigan, total	50,681,260	100.0	51,998,433	100.0

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

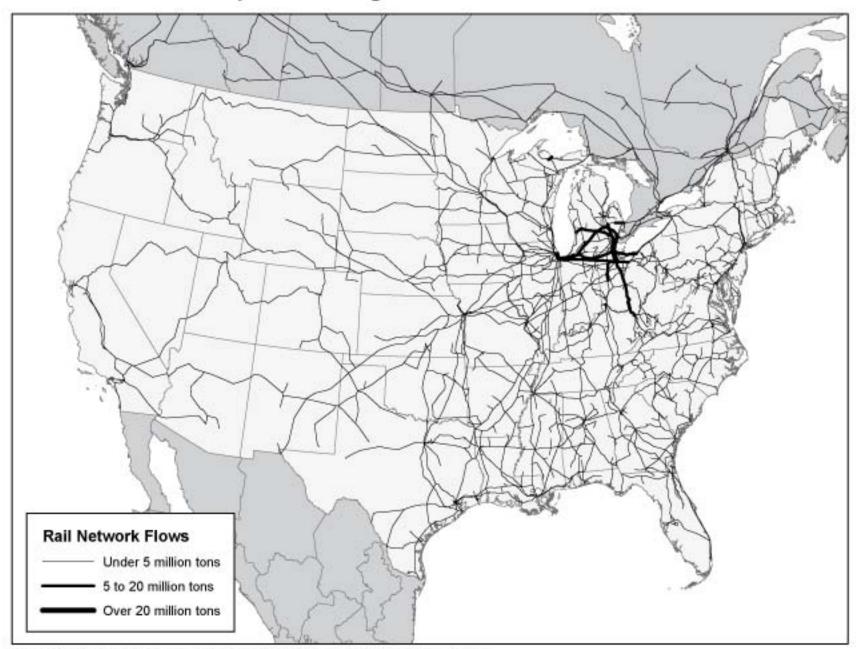
KEY: U = data are unavailable.

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

		Percent of		Percent of
Commodity	1999	total	2000	total
Metallic ores	8,465,138	27.0	9,101,938	27.7
Transportation equipment	7,591,676	24.2	7,772,374	23.6
Primary metal products	2,375,914	7.6	3,066,635	9.3
Farm products	2,646,765	8.4	2,720,183	8.3
Waste and scrap material	2,357,652	7.5	2,282,324	6.9
All other commodities	7,912,264	25.2	7,972,076	24.2
Michigan, total	31,349,409	100.0	32,915,530	100.0

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: Michigan Total Rail Flows: 1999

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

		Percent of
Destination	Short tons	total
Total originating in Michigan	48,973,807	100.0
Michigan (intrastate)	15,455,815	31.6
Indiana	10,188,471	20.8
Ohio	9,020,673	18.4
Canada	5,810,771	11.9
Wisconsin	2,577,973	5.3
Minnesota	2,464,952	5.0
Illinois	2,238,554	4.6
Pennsylvania	659,204	1.3
New York	501,352	1.0
Foreign (excluding Canada)	56,042	<0.1

Table 3-9: Foreign and Domestic Waterborne ShipmentsOriginating in Michigan by Destination: 2000

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

		Percent of
Origin	Short tons	total
Total shipped to Michigan	45,765,656	100.0
Michigan (intrastate)	15,455,815	33.8
Wisconsin	14,121,666	30.9
Canada	7,129,454	15.6
Ohio	4,877,322	10.7
Foreign (excluding Canada)	1,383,489	3.0
Illinois	1,284,477	2.8
Indiana	1,180,854	2.6
Minnesota	332,396	0.7
Pennsylvania	183	<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.

Commodity	Short tons	Percent of total
Total	48,973,807	100.0
Sand, gravel, shells, clay, salt, and slag	26,665,557	54.4
Iron ore, iron, and steel waste and scrap	12,818,288	26.2
Primary nonmetal products	3,978,578	8.1
Petroleum products	216,492	0.4
Chemicals excluding fertilizers	126,908	0.3
Coal, lignite, and coal coke	68,376	0.1
Manufactured goods	38,395	<0.1
Primary metal products	36,332	<0.1
Food and food products	2,000	<0.1
Unknown and not elsewhere classified products ²	5,022,881	10.3

Table 3-11: Foreign and Domestic Waterborne ShipmentsOriginating in Michigan by Commodity: 20001

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

Commodity	Short tons	Percent of total
Total	43,106,994	100.0
Sand, gravel, shells, clay, salt, and slag	23,948,542	55.6
Iron ore, iron, and steel waste and scrap	10,289,121	23.9
Primary nonmetal products	3,592,845	8.3
Petroleum products	216,492	0.5
Manufactured goods	37,113	<0.1
Unknown and not elsewhere classified products ²	5,022,881	11.7

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.

		Percent of
Commodity	Short tons	total
Total	39,034,337	100.0
Coal, lignite, and coal coke	16,795,050	43.0
Sand, gravel, shells, clay, salt, and slag	15,403,064	39.5
Primary nonmetal products	2,667,206	6.8
Iron ore, iron, and steel waste and scrap	1,729,147	4.4
Petroleum products	1,227,614	3.1
Primary metal products	851,402	2.2
Chemicals excluding fertilizers	143,922	0.4
Lumber, logs, wood chips, and pulp	123,634	0.3
Manufactured goods	52,543	0.1
Chemical fertilizers	40,755	0.1
Food and food products	11,000	<0.1
Unknown and not elsewhere classified products ²	6,720,319	17.2

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

Table 3-14: Domestic Waterborne Shipments to Michigan byCommodity: 20001

		Percent of
Commodity	Short tons	total
Total	37,252,713	100.0
Coal, lignite, and coal coke	16,435,618	44.1
Sand, gravel, shells, clay, salt, and slag	11,792,884	31.7
Petroleum products	1,135,854	3.0
Primary nonmetal products	1,130,925	3.0
Manufactured goods	37,113	<0.1
Unknown and not elsewhere classified products ²	6,720,319	18.0

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.

	_	Vessel type					
		Dry-bulk Full Other					
Cargo discharged in	Total	Tanker	carrier	container	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		

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

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, Waterborne Databank the Office of Statistical and Economic Analysis, May 29, 2002.

		Vessel type				
			Dry-bulk	Full	Other	
Cargo loaded in	Total	Tanker	carrier	container	freighter ¹	
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	

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

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, Waterborne Databank the Office of Statistical and Economic Analysis, May 29, 2002.

		eight		Mail
State	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	2,95
California	1,176,476	504,757	237,537	87,278
Colorado	106,816	61,503	55,370	31,71
Connecticut	14,802	54,627	10,260	1,575
Delaware	0	3,251	0	(
District of Columbia	92,526	6,208	46,511	6,61
Florida	461,831	334,177	85,818	14,182
Georgia	204,986	66,293	116,174	3,96
Hawaii	208,048	52,473	33,768	470
Idaho	11,231	5,064	3,065	1,30
Illinois	318,957	202,867	112,959	9,11
Indiana	408,262	85,326	24,814	134,145
lowa	15,346	53,766	7,429	3,984
Kansas	6,200	20,199	2,597	18
Kentucky	16,427	823,924	5,093	(
Louisiana	29,577	21,753	11,399	1,75
Maine	8,428	11,368	185	9
Maryland	25,723	24,781	19,850	3,573
Massachusetts	114,243	422,158	31,133	9,38
Michigan	87,127	68,108	41,678	4,848
Vinnesota	85,691	51,285	59,550	9,19
Nississippi	, 398	11,338	2,198	,
Missouri	71,317	67,157	67,876	4,12
Nontana	16,261	7,917	1,987	3,34
Nebraska	12,188	26,366	10,825	6,54
Nevada	45,636	12,641	30,407	1,37
New Hampshire	17,995	30,439	740	1
New Jersey	352,556	115,712	54,837	4,55
New Mexico	12,845	29,355	9,327	3,37
New York	317,258	167,388	113,892	5,62
North Carolina	85,996	85,765	35,985	3,49
North Dakota	5,424	383	222	2,82
Ohio	283,292	292,529	48,750	6,44
Oklahoma	25,773	16,804	9,022	-,
Oregon	73,035	59,101	12,655	22,72
Pennsylvania	156,043	312,359	45,377	9,03
Puerto Rico	78,117	44,530	4,319	3,31:
Rhode Island	3,883	2,753	2,543	-,
South Carolina	17,237	76,688	3,234	
South Dakota	8,114	12,298	1,040	4,58
Tennessee	1,324,829	60,779	31,342	6,41
Texas	440,864	482,724	138,548	47,64
Utah	66,549	133,609	30,908	25,073
Vermont	3,257	100,007	122	25,07
Virginia	20,961	35,881	5,189	3,492
Washington	152,299	84,367	34,449	55,97
West Virginia	4,306	128	4	55,77
Wisconsin	30,060	19,618	11,558	1,08
Wyoming	6,786	17,018	5	1,08
United States, total	7,582,577	5,422,002	1,714,348	584,95

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

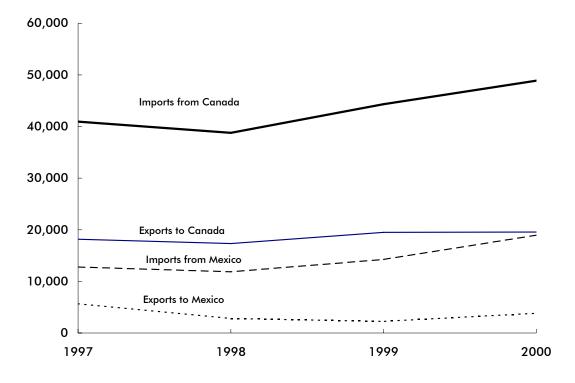
SOURCE: U.S. Department of Transportation, Bureau of Transportation Statistics, Airport Activity Statistics of Certificated Air Carriers: Summary Tables, Twelve Months Ending December 31, 2000, Washington, DC: 2001, available at

http://www.bts.gov/publications/ airactstats2000/ as of Oct. 29, 2001.

	Expor	ts to	Impo	rts from
	Canada N		Canada	Mexico
Michigan	19,559	3,833	48,879	18,961
United States, total	154,847	97,159	210,270	113,437

Table 3-18: Surface Merchandise Trade with Canada and Mexico:2000 (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.

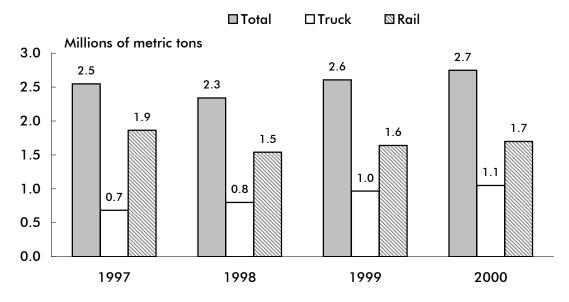
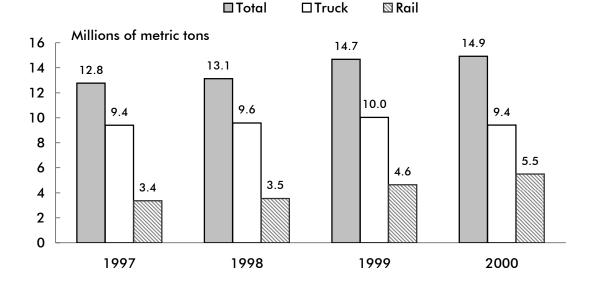


Figure 3-2: Truck and Rail Imports from Mexico to Michigan by Weight

Figure 3-3: Truck and Rail Imports from Canada to Michigan 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.

(moosunus)						
State/port	1995	1996	1997	1998	1999	2000
Alaska	12	19	12	11	10	11
Idaho	47	51	52	52	59	59
Maine	363	396	405	445	497	536
Michigan	1,881	2,032	2,186	2,348	2,620	2,676
Algonac	U	U	U	U	U	U
Detroit	1,206	1,332	1,441	1,564	1,759	1,769
Port Huron	618	636	679	715	791	839
Sault Ste. Marie	56	64	66	68	70	67
Minnesota	136	121	143	115	119	130
Montana	133	148	157	166	183	206
New York	1,505	1,555	1,662	1,797	1,955	1,983
North Dakota	258	271	301	307	325	345
Vermont	241	240	254	281	313	325
Washington	559	597	655	748	736	778
United States, total	5,135	5,431	5,827	6,271	6,817	7,048

Table 3-19: Incoming Truck Crossings, U.S.-Canadian Border (Thousands)

NOTE: Data represent the number of truck crossings, not the number of unique vehicles, and include both loaded and unloaded trucks.

Table 3-20: Incoming Truck Container (Loaded) Crossings, U.SCanadian Border	
(Thousands)	

State/port	1995	1996	1997	1998	1999	2000
Alaska	U	U	1	8	7	7
Idaho	U	45	42	43	47	51
Maine	U	164	222	332	343	344
Michigan	U	656	899	1,982	2,186	2,069
Algonac	U	U	U	U	U	U
Detroit	U	55	401	1,367	1,544	1,401
Port Huron	U	553	459	596	642	627
Sault Ste. Marie	U	48	39	19	U	42
Minnesota	U	31	37	77	83	100
Montana	U	121	137	147	165	170
New York	U	1	145	805	1,544	1,708
North Dakota	U	74	1	138	268	305
Vermont	U	94	116	148	171	217
Washington	U	235	367	552	517	363
United States, total	U	1,421	1,966	4,232	5,331	5,335

Table 3-21: Incoming Truck Container (Unloaded) Crossings, U.S	Canadian Border
(Thousands)	

State/port	1995	1996	1997	1998	1999	2000
Alaska	U	U	< 1	3	3	2
Idaho	U	< 1	< 1	2	2	2
Maine	U	44	48	59	52	50
Michigan	U	75	130	274	335	402
Algonac	U	U	U	U	U	U
Detroit	U	6	56	186	219	254
Port Huron	U	65	71	86	116	140
Sault Ste. Marie	U	4	3	2	U	8
Minnesota	U	14	17	30	32	31
Montana	U	18	19	22	19	28
New York	U	1	22	99	191	202
North Dakota	U	10	< 1	26	38	36
Vermont	U	10	11	7	6	9
Washington	U	62	110	163	174	134
United States, total	U	235	358	685	852	897

KEY FOR DATA ON THIS PAGE: U = data are unavailable.

NOTE FOR DATA ON THIS PAGE: The data for incoming trucks will exceed the data for truck containers loaded and empty because the data for trucks include all incoming trucks regardless of whether or not they are carrying a container.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, April 2002. Based on the following primary data source: U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, special tabulation, Washington, DC: 2001.

Freight

State/port	1995	1996	1997	1998	1999	2000
Alaska	227	234	259	277	266	326
Idaho	506	443	482	577	673	699
Maine	1,201	1,357	1,380	1,698	1,653	1,428
Michigan	7,576	8,654	9,278	9,224	8,993	9,757
Algonac	NA	NA	NA	NA	NA	NA
Detroit	3,368	4,078	3,967	4,071	3,784	3,919
Port Huron	3,744	3,715	4,606	4,764	4,762	5,406
Sault Ste. Marie	464	861	705	389	447	432
Minnesota	10,052	9,451	9,754	11,351	9,207	9,162
Montana	366	340	348	373	392	471
New York	5,274	5,134	5,418	5,837	5,961	5,725
North Dakota	1,268	1,283	1,406	1,621	1,596	1,728
Vermont	1,427	1,316	1,410	1,287	1,238	1,119
Washington	3,124	3,245	3,128	3,190	2,951	3,032
United States, total	31,021	31,457	32,863	35,435	32,930	33,447

Table 3-22: Incoming Train Crossings, U.S.-Canadian Border

Table 3-23: Incoming Rail Container (Full) Crossings, U.S.-Canadian Border

State/port	1995	1996	1997	1998	1999	2000
Alaska	NA	NA	NA	NA	NA	NA
Idaho	U	24,912	27,371	33,623	39,872	47,263
Maine	U	9,917	11,496	23,324	31,210	28,139
Michigan	U	197,196	269,954	433,779	459,213	528,096
Algonac	NA	NA	NA	NA	NA	NA
Detroit	U	U	72,404	214,099	206,025	192,340
Port Huron	U	181,960	182,706	216,058	253,188	323,246
Sault Ste. Marie	U	15,236	14,844	3,622	Ū	12,510
Minnesota	U	20,940	44,891	175,229	210,011	204,386
Montana	U	18,195	18,596	17,824	17,595	15,964
New York	U	U	17,931	105,854	190,227	192,614
North Dakota	U	U	Ū	20,087	102,225	112,462
Vermont	U	15,408	21,396	33,122	34,857	37,745
Washington	U	43,415	52,446	60,742	65,726	48,770
United States, total	U	329,983	464,081	903,584	1,150,936	1,215,439

Table 3-24: Incoming Rail Containers (Empty) Crossings, U.S.-Canadian Border

State/port	1995	1996	1997	1998	1999	2000
Alaska	NA	NA	NA	NA	NA	NA
Idaho	U	2,095	2,295	3,956	2,464	2,977
Maine	U	16,902	17,293	23,558	35,738	32,219
Michigan	U	75,756	116,426	153,538	140,390	151,651
Algonac	NA	NA	NA	NA	NA	NA
Detroit	U	U	17,436	61,004	56,059	45,628
Port Huron	U	67,753	89,162	91,980	84,331	101,965
Sault Ste. Marie	U	8,003	9,828	554	U	4,058
Minnesota	U	3,553	8,283	40,670	45,482	46,557
Montana	U	5,095	7,323	5,905	5,737	9,291
New York	U	U	5,331	34,568	43,950	64,541
North Dakota	U	U	U	6,595	36,818	42,236
Vermont	U	5,372	5,554	10,429	11,385	13,324
Washington	U	15,234	17,910	22,086	15,603	16,602
United States, total	U	124,007	180,415	301,305	337,567	379,398

KEY FOR DATA ON THIS PAGE: NA = not applicable; U= data are unavailable.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, April 2002. Based on the following primary data source: U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, special tabulation, Washington, DC: 2001.

	Mode	U.S. rank	Exports	Imports	Tota
Michigan gateways ¹ in top 50			•		
Port of Detroit	Land	4	49.5	44.9	94.4
Port of Huron	Land	10	18.8	40.9	59.7
U.S. gateways ¹ 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
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
Chicago, IL	Air	1Í	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	13	5.4	26.9	37.4
New Orleans, LA	Air	14	16.2	15.9	32.0
	Water	16	11.3	20.2	32.0
Port of Charleston, SC	Water	17	11.3	14.1	25.2
Port of Norfolk Harbor, VA	Water	18	9.6	14.1	25.2
Port of Oakland, CA	Air	18	9.0 11.8	15.5	
Cleveland, OH					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
Boston Logan Airport, MA	Air	44	5.9	4.4	10.0
Port of Philadelphia, PA	Water	45	0.5	9.5	10.0
Port of Morgan City, LA	Water	45	0.1	9.3	9.4
Seattle-Tacoma International Airport, WA	Air	40	3.7	4.8	8.5
Port of Calexico-East, CA	Land	48	3.5	4.8	8.3
Port of Sweetgrass, MT	Land	48	3.4	4.8	7.8
Port of Highgate Springs-Alburg, VT	Land	50	3.4	4.6	7.6
Total, top 50	NA	NA	619	4.0 989	1,608

Table 3-25: Top 50 U.S. Foreign Trade Freight Gateways: 2000 (Ranked by value of shipments in \$ billions)

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

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, 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

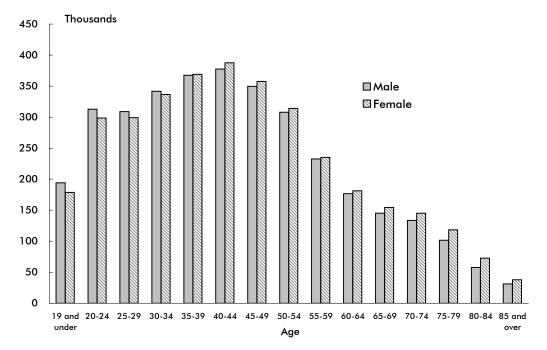
	Michig	gan	United States		
Mode	Number	Percent	Number	Percent	
Total	4,468,604	100.0	127,448,586	100.0	
Car, truck, or van drove alone	3,742,479	83.8	97,243,457	76.3	
Car, truck, or van carpooled	406,721	9.1	14,299,090	11.2	
Public transportation (including taxi)	50,924	1.1	6,592,685	5.2	
Walked	90,398	2.0	3,417,546	2.7	
Other means	58,181	1.3	1,820,578	1.4	
Worked at home	119,901	2.7	4,075,230	3.2	
Mean travel time to work (minutes)	22.7		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

	Michi	United States		
Licensed drivers	Number	Percent	Number	Percent
Total	6,925,246	100.0	190,625,023	100.0
Male	3,439,223	49.7	95,796,069	50.3
Female	3,486,023	50.3	94,828,953	49.7





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 Michigan: 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
City of Detroit Department of Transportation (DDOT)	Bus, demand responsive	Detroit	44,042	152	145	17	560
Suburban Mobility Authority for Regional Transportation (SMART)	Bus, demand responsive	Detroit	11,598	40	58	30	477
Mass Transportation Authority	Bus, demand responsive	Flint	7,050	25	19	9	367
Capital Area Transportation Authority	Bus, demand responsive	Lansing	6,477	22	22	3	189
Interurban Transit	Bus, demand responsive	Grand Rapids	4,643	17	18	2	209
Ann Arbor Transportation Authority	Bus, demand responsive	Ann Arbor	4,525	16	18	6	73
University of Michigan	Bus	Ann Arbor	4,176	16	3	0	51
Kalamazoo Metro Transportation System	Bus, demand responsive	Kalamazoo	2,126	8	7	3	48
Detroit Transportation	Automated guideway	Detroit	1,486	4	11	< 1	7
Blue Water Area Transportation	Bus, demand responsive	Port Huron	906	4	5	< 1	86
Jackson Transportation Authority	Bus, demand responsive	Jackson	721	3	4	< 1	70
Bay Metropolitan Transportation Authority	Bus, demand responsive	Bay City	611	2	5	< 1	56
Battle Creek Transit	Bus, demand responsive	Battle Creek	606	2	3	< 1	27
Muskegon Area Transit System	Bus, demand responsive	Muskegon	499	2	2	2	22
Twin Cities Area Transportation	Bus, demand responsive	Benton Harbor	170	< 1	1	< 1	20
City of Holland	Bus, demand responsive	Holland	142	< 1	2	< 1	19
Niles Dial-A-Ride	Bus, demand responsive	Niles	95	< 1	0	< 1	9

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.

		Passenger
Airport	Rank	enplanements
Aichigan, all airports		19,300,152
Detroit (Detroit Metropolitan)	7	16,929,968
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
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
Boston, MA (Logan International)	17	11,505,983
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
Fop 50 as % of all enplanements		84%

Table 4-4: Michigan Airports in Top 50 by Passengers Enplo
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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 1-10 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.

State/port	1995	1996	1997	1998	1999	2000
Alaska	125	117	115	124	120	118
Idaho	247	239	234	219	219	209
Maine	4,436	4,273	4,263	4,026	3,903	3,909
Michigan	11,427	11,859	11,776	12,019	12,396	11,970
Algonac	U	U	U	U	U	U
Detroit	7,806	8,252	8,125	8,551	8,919	8,360
Port Huron	2,026	2,015	2,028	2,036	2,150	2,332
Sault Ste. Marie	1,595	1,592	1,623	1,432	1,327	1,277
Minnesota	1,104	1,100	1,024	1,049	1,137	1,104
Montana	560	530	540	526	577	490
New York	10,694	10,773	11,101	10,555	10,658	10,833
North Dakota	754	705	666	620	636	632
Vermont	1,640	1,630	1,539	1,422	1,573	1,599
Washington	8,158	8,305	7,694	6,036	6,002	6,052
United States, total	39,146	39,531	38,950	36,597	37,220	36,915

Table 4-5: Incoming Personal Vehicle Crossings, U.S.-Canadian Border (Thousands)

Table 4-6: Incoming Passengers in Personal Vehicles, U.SCanadi	an Border
(Thousands)	

State/port	1995	1996	1997	1998	1999	2000
Alaska	271	259	257	303	260	264
Idaho	595	533	540	497	526	510
Maine	9,883	9,535	9,216	8,549	8,176	7,968
Michigan	32,425	34,869	27,690	29,634	29,456	32,471
Algonac	U	U	U	U	U	U
Detroit	21,632	24,152	16,813	19,496	19,382	21,724
Port Huron	5,436	5,392	5,443	5,444	4,309	6,866
Sault Ste. Marie	5,357	5,325	5,434	4,693	5,766	3,881
Minnesota	3,049	3,028	2,782	2,882	2,932	3,040
Montana	1,717	1,639	1,661	1,616	1,806	1,453
New York	24,583	26,097	27,579	26,083	25,478	25,302
North Dakota	1,975	1,861	1,700	1,577	1,629	1,675
Vermont	3,408	3,541	3,275	3,042	3,302	3,123
Washington	18,901	19,708	17,948	14,100	15,803	14,239
United States, total	96,807	101,071	92,647	88,283	89,369	90,047

Table 4-7: Incoming Train Passengers, U.S.-Canadian Border (Thousands)

State/port	1995	1996	1997	1998	1999	2000
Alaska	19	23	22	31	28	35
Idaho	2	1	1	2	2	2
Maine	3	3	3	3	3	3
Michigan	36	44	47	53	52	54
Algonac	NA	NA	NA	NA	NA	NA
Detroit	2	12	12	12	12	12
Port Huron	33	29	33	40	39	41
Sault Ste. Marie	1	3	2	1	1	1
Minnesota	30	26	26	20	20	20
Montana	1	1	1	1	1	1
New York	82	62	73	76	85	93
North Dakota	4	4	4	4	5	5
Vermont	13	3	4	3	3	3
Washington	39	47	67	52	50	52
United States, total	227	214	249	246	249	270

KEY FOR DATA ON THIS PAGE: NA = not applicable; U = data are unavailable.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, April 2002. Based on the following primary data source: U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, special tabulation, Washington, DC: 2001.

State/port	1995	1996	1997	1998	1999	2000
Alaska	7	8	9	10	10	10
Idaho	<1	<1	<1	1	1	1
Maine	2	2	2	2	2	2
Michigan	51	53	31	48	51	54
Algonac	NA	NA	NA	NA	NA	NA
Detroit	38	40	21	38	39	41
Port Huron	3	3	3	3	4	5
Sault Ste. Marie	10	10	7	7	8	8
Minnesota	5	5	4	4	4	4
Montana	2	2	2	2	3	2
New York	68	71	81	74	77	85
North Dakota	4	3	3	3	3	3
Vermont	6	6	6	6	6	7
Washington	21	23	25	23	24	22
United States, total	166	173	164	173	182	189

Table 4-8: Incoming Bus Crossings, U.S.-Canadian Border (Thousands)

Table 4-9: Incoming Passengers on Buses, U.S.-Canadian Border (Thousands)

State/port	1995	1996	1997	1998	1999	2000
Alaska	86	107	133	150	156	149
Idaho	9	11	12	14	18	18
Maine	74	66	61	110	60	64
Michigan	754	792	671	767	864	1,157
Algonac	NA	NA	NA	NA	NA	NA
Detroit	530	564	471	563	625	858
Port Huron	106	106	123	127	126	155
Sault Ste. Marie	117	122	77	77	113	144
Minnesota	104	96	100	93	100	98
Montana	53	45	46	44	54	40
New York	1,624	1,880	2,195	1,948	2,245	2,475
North Dakota	134	117	117	119	117	112
Vermont	165	180	177	174	180	192
Washington	526	577	613	550	573	567
United States, total	3,530	3,870	4,124	3,970	4,367	4,873

Table 4-10: Incoming Pedestrians, U.S.-Canadian Border (Thousands)

State/port	1995	1996	1997	1998	1999	2000
Alaska	1	1	1	1	<1	<1
Idaho	3	2	4	3	3	3
Maine	120	113	112	122	121	122
Michigan	35	33	15	U	U	U
Algonac	U	U	U	U	U	U
Detroit	NA	NA	NA	NA	NA	NA
Port Huron	35	33	15	U	U	U
Sault Ste. Marie	NA	NA	NA	NA	NA	NA
Minnesota	39	36	38	45	26	28
Montana	13	18	16	16	21	14
New York	361	267	225	306	313	287
North Dakota	10	11	10	10	8	7
Vermont	23	22	23	22	29	22
Washington	93	105	105	74	67	102
United States, total	698	608	550	598	588	585

KEY FOR DATA ON THIS PAGE: NA = not applicable; U = data are unavailable.

SOURCE FOR DATA ON THIS PAGE: U.S. Department of Transportation, Bureau of Transportation Statistics, special tabulation, April 2002. Based on the following primary data source: U.S. Department of Treasury, U.S. Customs Service, Office of Field Operations, Operations Management Database, special tabulation, Washington, DC: 2001.

		1995			2000			
		Visitors	Share of		Visitors	Share of		
	Rank	(thousands)	U.S. total	Rank	(thousands)	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, tot	al	20,639			25,975			

Table 4-11: Overseas Visitors to the United States: Top 20 Destination States	
and Territories ¹	

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.

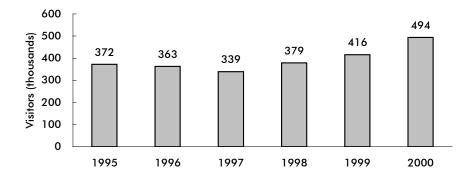


Figure 4-2: Overseas Visitors to Michigan¹

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.

E Registered Vehicles and Vehicle-Miles Traveled

Motor vehicle type	Private and commercial	Publicly owned	Michigan total	United States total
All motor vehicles	8,478,544	140,769	8,619,313	225,821,241
Automobiles	4,976,218	47,203	5,023,421	133,621,420
Buses	10,495	15,332	25,827	746,125
Trucks ¹	3,309,618	76,855	3,386,473	87,107,628
Light trucks	3,063,378	U	3,063,378	77,796,827
Farm trucks	48,986	U	48,986	1,885,170
Truck tractors	71,288	U	71,288	1,587,611
Motorcycles	182,213	1,379	183,592	4,346,068

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

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.

Туре	Michigan	United States
Total	1,141,906	21,541,490
Private and commercial	1,137,298	21,283,681
Commercial trailers ²	118,987	4,685,606
Light farm trailers, car trailers, etc. ³	874,409	14,113,392
House trailers	143,902	2,484,683
Publicly owned	4,608	257,809
Federal government	87	4,277
State, county, municipal government	4,521	253,532

Table 5-2: Michigan and U.S. Trailer and Semi-TrailerRegistrations: 20001

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.

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.

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

Vehicular and operational characteristics	All trucks	Trucks, excluding pickups, panels, vans, sport utilities, and station wagons	Vehicular and operational characteristics	All trucks	Trucks, excluding pickups, panels, vans, sport utilities, and station wagons
Total, number (thousands)	2,734.5	156.4			
Major use	100.0	100.0	Year model	100.0	100.0
Agriculture	2.7	10.8	1 to 2 years old	17.7	10.3
Forestry and lumbering	0.3	2.1	3 to 4 years old	18.4	16.5
Mining and guarrying	0.1	1.2	Over 4 years old	63.8	73.2
Construction	8.0	24.5	,		
Manufacturina	1.4	7.5	Vehicle acquisition	100.0	100.0
Wholesale and retail trade	3.3	17.6	Purchased new	37.3	42.0
For-hire transportation	1.1	13.8	Purchased used	51.7	47.0
Utilities and service	5.4	14.2	Leased from someone or	11.0	11.0
Personal transportation	76.3	3.3	not reported	11.0	11.0
Other and not reported	1.4	4.9	norreported		
Office and not reported	1.4	4.7			
			Truck type	100.0	100.0
Body type	100.0	100.0	Single-unit trucks	97.2	65.8
Pickup, panel, minivan, and	94.3	NA	2 axles	96.6	54.3
sport utility			3 axles or more	0.7	11.5
Platform and cattlerack	1.7	30.0	Combination	2.8	34.2
Van	1.3	23.6	3 axles	0.6	2.1
Public utility	0.2	2.7	4 axles	0.8	7.4
Multistop or stepvans	0.6	10.2	5 axles or more	1.4	24.7
Dump	0.8	13.5	Trailer not specified	V	V
Tank for liquids or dry bulk	0.3	4.6			
Other or not reported	0.9	15.4	Range of operation	100.0	100.0
			Local	76.6	58.3
Vehicle size	100.0	100.0	Short-range	15.6	23.6
Light	94.9	22.7	Long-range	4.3	11.7
Medium	1.7	17.5	Off-the-road or not	3.4	6.5
Light-heavy	0.7	12.7	reported		
Heavy-heavy	2.7	47.1	·		
			Fuel type	100.0	100.0
Annual miles driven	100.0	100.0	Gasoline	93.7	39.2
Less than 5,000	14.6	23.7	Diesel, liquefied gas,	6.2	59.7
5,000 to 9,999	16.9	15.0	and other	-	
10,000 to 19,999	42.3	22.1	Not reported	0.1	1.1
20,000 to 29,999	17.6	10.9		0.1	
30.000 or more	8.5	28.4			

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

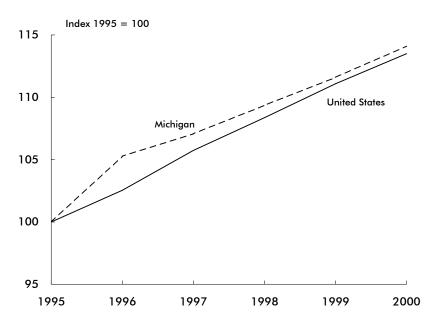
KEY: NA = not applicable; V = less than 0.05 percent.

SOURCE: U.S. Department of Commerce, U.S. Census Bureau, Vehicle Inventory and Use Survey, state-specific report, Washington, DC: 1999, available at http://www.census.gov/econ/www/viusmain.html as of Dec. 27, 2001.

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

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

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



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: Hiahway, [Demoaraphic, and	d Geoaraphic Characteristics	of Urbanized Areas in Michigan: 2000

Federal-aid urbanized area ¹	Total roadway miles	Total DVMT (thousands)	Estimated population (thousands)	Net land area (square miles)	Persons per square mile	Miles of roadway per thousand persons	Total DVMT per capita	Total estimated freeway lane miles ²	Average daily traffic per freeway lane mile
Detroit	13,808	92,359	3,836	1,304	2,942	3.6	24.1	1,813	17,169
Grand Rapids	2,273	12,151	530	318	1,667	4.3	22.9	292	12,231
Toledo, OH-MI	2,121	11,830	500	255	1,961	4.2	23.7	319	12,615
Flint	1,700	9,699	339	237	1,430	5.0	28.6	322	10,570
Lansing-East Lansing	1,236	6,376	285	157	1,815	4.3	22.4	206	9,794
Ann Arbor	991	7,131	277	159	1,742	3.6	25.7	244	13,590
South Bend-Mishawaka, IN-MI	1,431	5,329	240	147	1,633	6.0	22.2	147	6,603
Kalamazoo	881	4,635	184	123	1,496	4.8	25.2	113	10,275
Saginaw	749	3,113	135	78	1,731	5.5	23.1	97	7,780
Muskegon	685	2,357	119	87	1,368	5.8	19.8	62	9,033
Jackson	544	2,204	90	78	1,154	6.0	24.5	87	8,307
Holland	401	1,619	87	58	1,500	4.6	18.6	53	4,072
Battle Creek	557	2,082	81	79	1,025	6.9	25.7	57	9,279
Port Huron	452	1,829	78	62	1,258	5.8	23.5	60	6,568
Bay City	415	1,585	74	49	1,510	5.6	21.4	47	6,735
Benton Harbor	412	1,891	60	49	1,224	6.9	31.5	84	8,950

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: Michigan and U.S. Recreational BoatRegistrations by Propulsion Type

	Michi	gan	United States		
	1999	2000	1999	2000	
Total	985,732	1,000,049	12,738,271	12,782,143	
Powered	985,732	941,157	11,811,562	11,648,769	
Nonpowered	0	54,745	481,191	547,271	
Other	0	4,147	445,518	590,103	

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

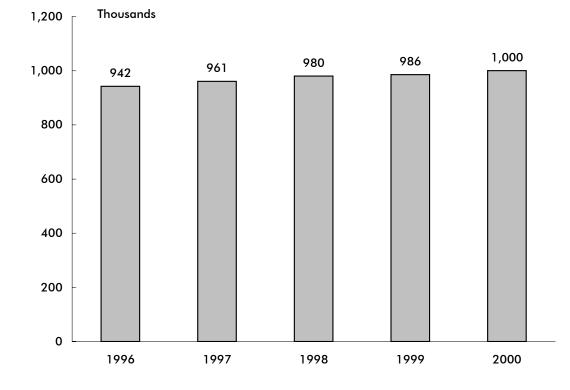


Figure 5-2: Michigan Recreational Boat Registrations

NOTES FOR DATA ON THIS PAGE: U.S. totals include Guam, Puerto Rico, the Virgin Islands, American Samoa, and the Northern Mariana Islands. Michigan statistics include all watercraft except manually propelled boats 16 feet or less in length, and nonmotorized rafts, canoes, and kayaks. 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)

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

				Airplane pilots ²			
		-			Airline		Flight
	Total	Students	Private	Commercial	transport	Misc. ³	instructor ⁴
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	399
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
owa	6,135	912	3,372	1,130	667	54	771
Kansas	8,412	1,169	4,136	1,729	1,268	110	1,184
Kentuckv	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
•						192	
Minnesota	15,530	2,244	6,728	2,949	3,417		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
√ermont	1,487	220	681	261	264	61	162
∕irginia	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
Wvomina	1,812	254	5,082 901	354	273	30	1,455
United States, total	593,218	87,319	244.389	112,092	134,024	15.394	78,686

Table 5-8: Active Aviation Pilots and Flight Instructors: 2000¹

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

Business type	Establishments ¹ (number)	Number of employees	Annual payroll (\$ thousands)
Total transportation and warehousing	4,963	95,562	3,470,820
Air transportation	147	17,676	807,921
Water transportation	39	250-499	D
Truck transportation	3,131	39,797	1,515,956
Transit and ground passenger transportation	244	2,500-4,999	D
Pipeline transportation	59	1,000-2,499	D
Scenic and sightseeing transportation	45	100-249	D
Support activities for transportation	797	10,242	327,224
Couriers and messengers	311	18,606	542,030
Warehousing and storage	190	2,762	78,505

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

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

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

Business type	Establishments ¹ (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.

	19	95	19	96	19	997	19	998	19	99
Mode	State	Local								
Total (current \$)	1,468	344	1,470	361	1,550	393	1,827	413	1,912	406
Highway	1,465	93	1,470	96	1,550	112	1,827	122	1,911	129
Transit	Z	59	Z	57	Z	61	Z	62	Z	64
Air	Z	193	1	207	Z	219	Z	228	1	212
Water	4	Z	Z	Z	Z	1	Z	1	Z	1
Total (chained 1996 \$)	1,502	352	1,470	361	1,511	383	1,752	396	1,786	379
Highway	1,498	95	1,470	96	1,511	109	1,752	117	1,785	120
Transit	Z	60	Z	57	Z	59	Z	60	Z	60
Air	Z	197	1	207	Z	214	Z	219	1	198
Water	4	Z	Z	Z	Z	1	Z	1	Z	1

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

Table 6-4: Transportation Expenditures by State and Local Governments in Michigan¹ (\$ millions)

	19	995	19	996	19	997	19	798	19	99
Mode	State	Local								
Total (current \$)	826	1,919	893	2,046	923	2,158	1,099	2,394	1,296	2,438
Highway	824	1,442	885	1,511	912	1,594	1,087	1,789	1,283	1,817
Transit	Z	259	Z	293	2	370	2	366	1	359
Air	Z	218	6	243	7	191	1	236	12	260
Water	2	Z	2	Z	2	3	9	3	Z	4
Total (chained 1996 \$)	853	1,963	893	2,046	899	2,103	1,054	2,296	1,211	2,277
Highway	843	1,475	885	1,511	889	1,554	1,043	1,716	1,198	1,697
Transit	Z	265	Z	293	2	361	2	351	1	335
Air	8	223	6	243	6	186	1	226	11	242
Water	2	Z	2	Z	2	2	8	3	Z	3

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.

(Cents per gallon)				
			Liquified	
State	Gasoline	Diesel	petroleum	Gasohol ¹
<u>State</u> Alabama	18.00	19.00	gas 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
lowa	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	27.00
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		
	20.00	20.00	14.00 15.00	20.00
Texas Utah	20.00	20.00	24.50	20.00 24.50
Vermont	24.50	24.50 17.00	24.50 0.00	24.50 20.00
Virginia	17.50	16.00	10.00	17.50
				23.00
Washington West Virginia	23.00 25.35	23.00 25.35	0.00 25.35	23.00
Wisconsin	25.35	25.35	25.35 25.40	25.35 25.40
Wyoming	25.40 14.00	25.40 14.00	25.40 0.00	25.40 14.00
Federal tax	14.00	24.40	13.60	13.00
	10.40	∠4.4U	13.00	13.00

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

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

				Petrol	eum							
6	Natural	Distillate		Motor	Residual	0 .1 ³		Ethanol ⁴	F 1	Net	Electrical system energy	
State	gas ¹ 22.9	fuel (diesel) 118.4	Jet fuel	gasoline ² 298.0	fuel 6.5	Other ³ 3.7	Total 437.8	Efficience	Electricity 0.0	energy 460.7	losses ⁵ 0.0	Total 460.7
Alabama	4.5	21.5		32.9	1.7	3.7	437.8	0.4	0.0	480.7	0.0	460.7 198.0
Alaska Arizona	4.5 19.0	21.5 92.0	134.1 54.6	283.9	0.0	3.3	433.5	1.3	0.0	452.5	0.0	452.5
Arkansas	9.1	92.0 84.5	25.9	172.6	0.0	5.1	288.0	0.0	0.0	452.5 297.2	0.0	452.5 297.2
California	12.9	373.3	25.9 559.5	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	559.5 44.2	241.5	0.0	23.0	2,880.8	4.9	1.0 S	2,895.3	3.0 S	2,898.9
	0.4 0.8	34.4	44.2 13.9	183.9	0.0	3.9 1.9	234.2	4.5	0.0	234.9	0.0	234.9
Connecticut Delaware	0.8	34.4	0.6	47.7	13.2	0.5	234.2	0.3	0.0	234.9	0.0	234.9
			0.0	20.5	0.0	0.5	24.5	0.0	0.0	25.3	1.2	26.5
Dist. of Columbia Florida	0.3 7.2	3.6 210.3	164.3	20.5	57.4	8.7	24.5 1.338.1	0.0	0.8	1.345.4	0.4	20.5
							,			,		,
Georgia	9.1	196.7	86.8	566.9	5.7	5.2 0.8	861.3	0.0	0.3	870.8	0.7	871.4
Hawaii	0.0	9.1	53.7	45.8	12.9		122.3			122.3		122.3
Idaho	4.7	34.0	4.9	80.8	0.0	1.2	121.0	0.0	0.0	125.7	0.0	125.7
Illinois	55.3	202.6	103.4	612.7	0.2	11.8	930.8	20.3	1.5	987.5	2.9	990.5
Indiana	14.6	186.4	63.5	373.7	1.9	5.1	630.6	9.0	0.1	645.3	0.1	645.4
lowa	7.9	74.9	5.0	185.9	0.0	3.8	269.6	6.7	S	277.5	S	277.5
Kansas	31.6	60.5	19.7	170.7	0.1	5.2	256.2	0.5	0.0	287.8	0.0	287.8
Kentucky	17.2	122.9	39.5	261.0	0.0	3.6	427.0	0.3	0.0	444.2	0.0	444.2
Louisiana	50.0	147.4	192.9	255.9	153.5	5.1	754.9	0.1	S	804.9	S	804.9
Maine	0.0	22.2	4.9	83.7	1.4	1.0	113.2	0.0	S	113.2	S	113.2
Maryland	3.4	73.3	22.3	295.0	7.4	2.2	400.3	0.2	0.5	404.1	1.0	405.1
Massachusetts	2.8	57.0	45.8	328.7	0.2	4.1	435.7	0.0	0.8	439.2	1.6	440.8
Michigan	23.3	132.7	51.7	624.5	0.3	12.2	821.4	3.4	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	47.7.2	42.2	119.2	0.0	1.7	208.2	0.9	S	2,540.0	S	2,547.0
Vermont	2.0 S	12.3	42.2	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	2.8	0.3	617.1	0.0	617.3
Washington West Virginia	0.2 31.5	46.9	125.0	100.5	0.0	4.0	150.1	2.5 S	0.1	181.6	0.0	181.6
Wisconsin	31.5 4.2	46.9 101.0	1.0	303.0	0.0 S	4.3	427.6	s 2.5	0.0 S	431.8	0.0 S	431.8
Wyoming	4.2 14.5	62.4	19.3	303.0	0.0	4.3	427.8	0.0	0.0	431.8	0.0	431.8
United States	761.1	5.160.9	3,461.8		798.9	2.2	25,511.8	121.6	17.5	26,290.3	34.3	
Unifed States	/01.1	5,100.9	J,401.8	15,855.4	/90.9	∠ 34.8	∠3,311.8	121.0	17.5	20,290.3	34.3	26,324.6

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

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, 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)

		End-use sectors ²								
	Total energy	Transport	Resident		Commer	cial	Industrial			
State	consumed ¹	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Alabama	2,004.8	460.7	23.0	341.0	17.0	226.3	11.3	976.7	48.7	
Alaska	694.7	198.0	28.5	47.7	6.9	63.1	9.1	385.9	55.5	
Arizona	1,219.8	452.5	37.1	279.0	22.9	266.7	21.9	221.6	18.2	
Arkansas	1,203.7	297.2	24.7	193.3	16.1	123.8	10.3	589.4	49.0	
California	8,375.4	2,898.9	34.6	1,416.2	16.9	1,236.5	14.8	2,823.7	33.7	
Colorado	1,155.5	365.9	31.7	261.4	22.6	255.1	22.1	273.1	23.6	
Connecticut	839.3	234.9	28.0	245.2	29.2	196.8	23.4	162.4	19.3	
Delaware	278.8	70.6	25.3	56.0	20.1	44.8	16.1	107.4	38.5	
District of Columbia	169.8	26.5	15.6	33.5	19.7	106.2	62.5	3.7	2.2	
Florida	3,852.9	1,345.8	34.9	1,017.8	26.4	809.5	21.0	679.8	17.6	
Georgia	2,798.1	871.4	31.1	553.1	19.8	416.3	14.9	957.3	34.2	
Hawaii	241.4	122.3	50.7	23.0	9.5	24.8	10.3	71.3	29.5	
Idaho	518.3	125.7	24.3	95.9	18.5	86.9	16.8	209.8	40.5	
Illinois	3,882.6	990.5	25.5	897.4	23.1	722.0	18.6	1,272.6	32.8	
Indiana	2,735.8	645.4	23.6	483.6	17.7	300.7	11.0	1,306.2	47.7	
lowa	1,121.7	277.5	24.7	222.5	19.8	158.5	14.1	, 463.3	41.3	
Kansas	1,050.0	287.8	27.4	200.9	19.1	169.2	16.1	392.2	37.4	
Kentucky	1,830.2	444.2	24.3	315.9	17.3	219.0	12.0	851.1	46.5	
Louisiana	3,615.4	804.9	22.3	325.0	9.0	236.5	6.5	2,249.0	62.2	
Maine	528.6	113.2	21.4	97.6	18.5	57.6	10.9	260.2	49.2	
Maryland	1,378.2	405.1	29.4	358.6	26.0	337.1	24.5	277.4	20.1	
Massachusetts	1,569.1	440.8	28.1	411.7	26.2	325.2	20.7	391.4	24.9	
Michigan	3,239.6	844.8	26.1	744.3	23.0	568.1	17.5	1,082.5	33.4	
Minnesota	1,675.3	499.6	29.8	340.2	20.3	217.9	13.0	617.7	36.9	
Mississippi	1,208.5	408.9	33.8	202.6	16.8	145.6	12.0	451.4	37.4	
Missouri	1,768.0	622.6	35.2	431.7	24.4	334.1	18.9	379.6	21.5	
Montana	412.4	106.5	25.8	61.8	15.0	48.0	11.6	196.1	47.6	
Nebraska	602.0	194.4	32.3	130.0	21.6	111.3	18.5	166.2	27.6	
Nevada	615.3	197.8	32.1	122.4	19.9	97.1	15.8	198.0	32.2	
New Hampshire	335.4	100.5	30.0	81.9	24.4	56.2	16.8	96.9	28.9	
New Jersey	2,588.7	863.3	33.3	539.9	20.9	540.8	20.9	644.7	24.9	
New Mexico	635.0	233.9	36.8	93.2	14.7	105.6	16.6	202.4	31.9	
New York	4,283.0	979.6	22.9	1,092.3	25.5	1,216.1	28.4	994.9	23.2	
North Carolina	2,446.9	690.9	28.2	562.7	23.0	439.5	18.0	753.7	30.8	
North Dakota	365.7	82.4	22.5	54.2	14.8	42.6	11.6	186.4	51.0	
Ohio	4,323.4	969.2	22.4	866.7	20.0	632.1	14.6	1,855.3	42.9	
Oklahoma	1,377.5	402.5	29.2	259.1	18.8	197.7	14.4	518.2	37.6	
Oregon	1,109.2	328.2	29.6	238.4	21.5	190.5	17.2	352.1	31.7	
Pennsylvania	3,715.5	983.9	26.5	858.6	23.1	582.6	15.7	1,290.4	34.7	
Rhode Island	261.1	65.9	25.2	66.0	25.3	52.2	20.0	77.0	29.5	
South Carolina	1,493.0	376.4	25.2	288.1	19.3	210.3	14.1	618.2	41.4	
South Dakota	239.0	84.3	35.3	53.3	22.3	39.2	16.4	62.2	26.0	
Tennessee	2.070.5	590.1	28.5	441.5	21.3	328.1	15.8	710.8	34.3	
Texas	11,501.0	2,549.0	22.2	1,323.3	11.5	1,147.2	10.0	6,481.5	56.4	
Utah	693.9	211.1	30.4	127.5	18.4	120.2	17.3	235.1	33.9	
Vermont	165.0	53.2	32.2	42.6	25.8	29.4	17.8	39.9	24.2	
Virginia	2,227.3	655.7	29.4	42.0	22.2	462.8	20.8	614.4	24.2	
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	19.4	101.0	14.3	310.8	42.3	
Wisconsin	1,810.5	431.8	24.7	375.8	20.8	285.4	15.8	717.4	42.3 39.6	
Wyoming	421.8	119.8	23.8	375.8	20.8	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.

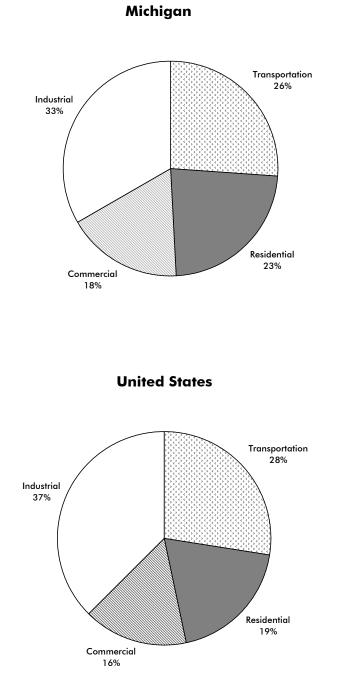


Figure 7-1: Energy Consumption by End-Use Sector: 1999

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.

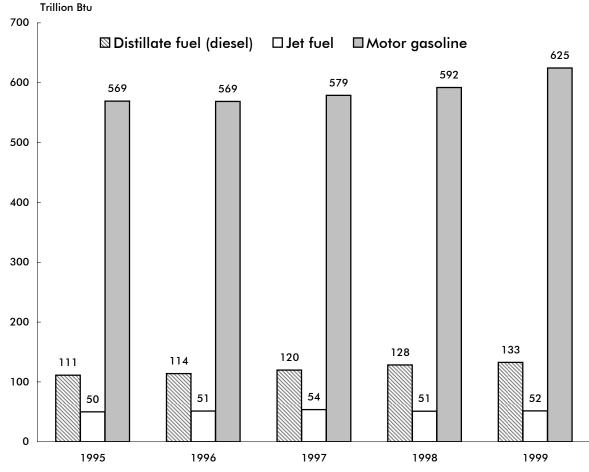


Figure 7-2: Michigan Transportation Energy Consumption

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.

				All energy sources		
State	Population (thousands)	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	
	7,788	861.3	110.6	871.4	111.9	
Georgia Hawaii		122.3	103.2	122.3	103.2	
	1,185					
Idaho Illinois	1,252	121.0 930.8	96.6 76.7	125.7 990.5	100.4 81.7	
Illinois Indiana	12,128					
Indiana	5,943	630.6	106.1	645.4	108.6	
lowa Kana na	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	
Pennsvlvania	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	
	733 5,484	564.2		84.3 590.1		
Tennessee Tevre	•		102.9		107.6	
Texas	20,044	2,475.8	123.5	2,549.0	127.2	
Utah Vana ant	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 United States	480 272,691	105.3 25,511.8	219.4 93.6	119.8 26,324.6	249.6 96.5	

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

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: Michigan and U.S. Motor-Fuel Use: 2000 ¹	
(Millions of gallons)	

		Gasol	ine		Special fuel				
-	Highway use		Nonhighway use		(mainly diesel)		Total use		
- Vehicle ownership	Michigan	United States	Michigan	United States	Michigan	United States	Michigan	United States	
Private and commercial	4,839	126,735	115	2,876	917	33,377	5,871	162,988	
Public use	66	2,149	3	96	N	Ν	69	2,245	
Total	4,905	128,884	118	2,972	917	33,377	5,940	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 motorfuel 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: Michigan Air Quality Nonattainment Areas for Carbon Monoxide (CO)

County	Area	Nonattainment in year	Redesignation to attainment	Classification	Part or whole county	Population (2000)
Macomb	Detroit	95 96 97 98 99	8/30/99	Not classified	Part	276,877
Oakland	Detroit	95 96 97 98 99	8/30/99	Not classified	Part	432,046
Wayne	Detroit	95 96 97 98 99	8/30/99	Not classified	Part	737,896

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 parts per million (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: Michigan Air Qualit	y Nonattainment Areas for Ozone	≥ (O ₃)
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County	Area	Nonattainment in year	Redesignation to attainment	Classification	Part or whole county	Population (2000)
Allegan	Allegan	95 96 97 98 99 00	1/16/01	Incomplete data	Whole	105,665
Bay	Saginaw-Bay City-Midland	95 96 97 98 99 00	1/16/01	Incomplete data	Whole	110,157
Genesee	Flint	95 96 97 98 99 00	1/16/01	Section 185A	Whole	436,141
Kent	Grand Rapids	95	6/21/96	Moderate	Whole	574,335
Midland	Saginaw-Bay City-Midland	95 96 97 98 99 00	1/16/01	Incomplete data	Whole	82,874
Muskegon	Muskegon	95 96 97 98 99 00	10/18/00	Moderate	Whole	170,200
Saginaw	Saginaw-Bay City-Midland	95 96 97 98 99 00	1/16/01	Incomplete data	Whole	210,039

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; Severe-15 = design value of 0.180 up to 0.190 ppm and has 15 years to reach attainment; Severe-15 = design value of 0.180 up to 0.190 ppm and has 15 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 up to 0.180 up to 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: Michigan Air Qualit	y Nonattainment Areas for Particulate Matter (PM-10)

			Redesignation to		Part or	Population
County	Area	Nonattainment in year	attainment	Classification	whole county	(2000)
Wayne	Wayne	92 93 94 95 96	10/4/1996	Moderate	Part	951,270

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

Total length	Barrier cost	
(meters)	(\$ 1998)	
0	0	
9,338	2,742,486	
48,593	15,130,670	
1,989	653,497	
777,160	487,177,331	
104,377	45,351,408	
46,049	28,335,802	
1,262	242,013	
0	0	
70,991	62,276,735	
33,530	20,247,589	
3,103	1,743,452	
200	583,002	
97,803	70,985,221	
18,568	20,297,106	
7,857	3,215,640	
2,103	2,082,034	
8,249	5,306,199	
12,077	5,974,212	
561	292,861	
99,587	153,227,923	
10,250	5,259,055	
	60,139,968	
=	62,694,176	
	02,074,170	
-	4,179,360	
	4,1,7,000	
	4,026,138	
•	10,855,220	
	5,785,519	
	210,429,029	
	9,306,885	
	116,448,616	
	24,702,615	
	0	
	68,064,386	
	4,229,909	
•	30,075,899	
	88,259,488	
0	0	
	1,713,629	
0	0	
	20,574,450	
	39,635,228	
	24,841,367	
	356,344	
	143,003,313	
	32,296,683	
•	170,529	
	28,768,150	
•	100,271	
	1,931,107,534	
2,011,953	1,931,107,534	
	(meters) 0 9,338 48,593 1,989 777,160 104,377 46,049 1,262 0 70,991 33,530 3,103 200 97,803 18,568 7,857 2,103 8,249 12,077 561 99,587 10,250 67,071 101,811 0 6,113 0 5,060 17,847 6,392 142,055 21,196 110,698 45,977 0 138,197 13,186 72,552 83,526 0 2,665	

Table 7-8: Highway Noise Barriers: 1999

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 oneweek 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, 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 longterm), as well as by type of debt and, to a limited extent, by purpose. Assets also are put into uniform categories, grouped by type of holding, with holdings for insurance trust systems grouped separately from general government.

The share of government sector financial totals contributed by a state government or by local governments differs materially from one state to another. Users can review the *Government Finance and Employment* *Classification Manual* for additional information regarding the financial categories. The financial amounts in the tables and files are statistical in nature and do not represent accounting statements or conditions.

The local government statistics are developed from a sample survey. Therefore, the local totals, as well as state and local aggregates, are considered estimated amounts subject to sampling error. State government finance data are not subject to sampling. Consequently, state-local aggregates for individual states are more reliable (on a relative standard error basis) than the local government estimates they include.

Additional information:

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

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

Internet: http://www.census.gov

Hazardous materials incidents data

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

Fatalities and injuries are counted only if directly caused by a hazardous material. For example, a truck operator killed by impact forces during a motor vehicle crash would not be counted as a hazardous-material fatality.

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 tractorsemitrailer combination as a single unit; others register the tractor and the semitrailer separately. Some states register buses with trucks or automobiles, while many states do not report house and light utility trailers separately from commercial trailers or semitrailers. Some states do not require registration of car or light utility trailers. In some instances, FHWA has supplemented the data supplied by the states with information obtained from other sources.

States also provide driver licensing data to the FHWA. Although efforts are made to minimize license duplication, drivers who move from one state to another are sometimes counted in both states until the license from the previous state of residence expires. Problems with the data also arise from the fact that: 1) some individuals obtain their drivers licenses in states other than those of legal residence; 2) some individuals fraudulently obtain multiple licenses; 3) not all individuals who drive are licensed; and 4) the purging of expired licenses or licenses from deceased individuals is not performed on a continual basis.

Additional information:

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

Print source: USDOT, Federal Highway Administration, *Highway Statistics*. Washington, DC: Annual issues.

Internet: http://www.fhwa.dot.gov/ohim/ index.html

Highway safety data

Fatalities: Highway fatality data are extracted from the Fatality Analysis Reporting System (FARS), which is compiled by the U.S.

Department of Transportation (USDOT), National Highway Traffic Safety Administration (NHTSA). Data are gathered from a census of police accident reports (PARs), state vehicle registration files, state drivers licensing files, state highway department data, vital statistics, death certificates, coroner/medical examiner reports, hospital medical reports, and emergency medical service reports. A separate form is completed for each fatal crash. Blood alcohol concentration (BAC) is estimated when not known. Statistical procedures used for unknown data in FARS can be found in the NHTSA report, A Method for Estimating Posterior BAC Distributions for Persons Involved in Fatal Traffic Accidents, DOT HS 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 sample PARs and forward copies to a central contractor for coding into a standard GES system format. Documents such as police diagrams or supporting text provided by the officers might be further reviewed to complete a data entry. A NHTSA study of injuries from motor vehicle crashes estimated the total count of nonfatal injuries at over 5 million compared with the GES's estimate of 3.2 million in 1998.

Additional information:

Contact: USDOT, National Highway Traffic Safety Administration, National Center for Statistics and Analysis

Print source: USDOT, National Highway Traffic Safety Administration, *Traffic Safety Facts*. Washington, DC: Annual issues.

Internet: http://www.nhtsa.dot.gov

International visitors data

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

Additional information:

Contact: U.S. Department of Commerce (USDOC), International Trade Administration, Tourism Industries Office

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

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

Passenger border crossing data

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

Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Transportation Analysis

Internet: http://www.bts.gov

Railroad industry and shipments data

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

The primary source of data for Class I railroads is Schedule 700 of the R-1 Annual Report to the Surface Transportation Board (STB) by individual carriers (100 percent reporting) and the 2000 Carload Waybill Sample. The primary source of data for 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 transhipments in its detailed tables, that is, shipments entering or exiting the United States by way of U.S. Customs ports on the northern or southern borders, even when the actual origin or final destination of the goods was other than Canada or Mexico. Shipments that neither originate nor terminate in the United States (i.e., intransit shipments) are beyond the scope of this dataset because they are not considered U.S. international trade shipments.

Users should be aware that the trade data fields (such as value and commodity classification) are typically more rigorously reviewed than transportation data fields (i.e., mode of transportation and port of entry/exit). Users should also be aware that the use of foreign trade data to describe physical transportation flows might not be direct. For example, this dataset provides surface transportation information for individual Customs districts and ports on the northern and southern borders. However, because of filing procedures for trade documents, these ports may or may not reflect where goods physically crossed the border. This is because the filer of information may choose to file trade documents at one port, while shipments actually enter or exit at another port.

Import data are generally more accurate than export data. This is primarily due to the fact that Customs uses import documents for enforcement purposes, while it performs no similar function for exports.

Additional information:

Contact: USDOT, Bureau of Transportation Statistics, Office of Transportation Analysis

Internet: http://www.bts.gov

Transit operating, financial, and safety data

Transit data are from the National Transit Database (NTD) produced by the USDOT, Federal Transit Administration (FTA). Data are collected from transit agencies that receive Urbanized Area Formula Program funds. Transit operators that do not report to FTA are those that do not receive federal funding, typically private, small, and rural operators. FTA reviews and validates information submitted by individual transit agencies. Reliability may vary because some transit agencies cannot obtain accurate information or may interpret certain data definitions differently than intended.

In 2000, 592 agencies reported to the NTD. Of that total, 67 transit agencies received exemptions from detailed reporting because they operated 9 or fewer vehicles, and 7 were excluded because their data were incomplete. Thus, 518 individual reporters were included in the NTD accounting for 90 to 95 percent of transit passenger-miles.

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

Additional information:

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

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 multiestablishment companies. The Annual Company Organization Survey and quinquennial Economic Censuses provide individual establishment data for multilocation 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: 2,205 pounds (2,000 pounds divided 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.

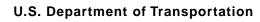
Trolley bus: Rubber-tired, electric transit vehicle, manually steered and propelled by a motor drawing current, normally through overhead wires, from a central power source.

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.







Bureau of Transportation Statistics