

RAILROAD SAFETY STATISTICS

A N N U A L R E P O R T 1 9 9 9



U.S. Department of Transportation
Federal Railroad Administration

August 2000

Railroad Safety Statistics Annual Report 1999

FOREWORD

The Federal Railroad Administration (FRA) has established an ultimate goal of A Zero Tolerance® for railroad-related accidents, injuries and fatalities. In pursuit of that goal, significant progress has been made, particularly over the past six years, in reducing the number of train collisions, derailments, highway-rail grade crossing incidents and injuries to railroad workers. These results have been achieved because of a collaborative effort involving the FRA, railroad management, rail labor, equipment suppliers and contractors, as well as other federal and state agencies whose mission involves ensuring railroad safety. Central to the success of this rail safety effort is the ability to understand the nature of rail-related accidents and to analyze trends in railroad safety.

The FRA's *Railroad Safety Statistics B Annual Report* is intended as a resource for the FRA's safety partners. It is also intended as a general reference source for individuals and organizations with an interest in rail safety issues. Statistical data, tables and charts are provided to depict the nature and cause of many rail-related accidents and incidents that occurred in 1998. Furthermore, selected historical data is included to provide a baseline for understanding the railroad industry's improving safety performance.

It is hoped that the information provided in this publication will provide insight into the most significant safety issues facing the rail industry and, in turn, lead to continued rail safety improvements. Only by continuing our understanding about how and why railroad accidents and incidents occur, can we hope to approach our goal of AZero Tolerance.®

This edition of the Railroad Safety Statistics compiles previous safety bulletins prepared by the Federal Railroad Administration (FRA). These include: the *Accident/Incident Bulletin*; the *Highway-Rail Crossing Accident/Incident And Inventory Bulletin*; and the *Trespasser Bulletin*. The consolidation of accident/incident statistics previously contained in other publications provides the reader with a single source for a comprehensive overview of railroad safety.

The completeness and accuracy of the information presented in this bulletin are primarily dependent upon the nation's railroad's data collection and reporting processes. The FRA conducts routine audits of these procedures, but does not have sufficient resources to perform comprehensive reviews of each railroad's reporting procedures. We extensively review and edit the reports we receive and make inquiry when information is incomplete or inconsistent.

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Railroads are required by law to submit accident/incident reports within thirty days after the month to which they pertain. They are also required to update their report if the original information is incomplete or inaccurate. Railroads have until April 15 of the following year to close out their records and submit any updates to complete their file.

It is not possible to identify reportable events that were omitted from a railroad's submission. Likewise, there may be instances where incorrectly reported information passes all reviews and is accepted. Although we attempt to be as vigilant as possible in both the editing and presentation of the accident/incident data reported, errors do occasionally occur.

Any questions, comments, or suggestions regarding the information contained in this publication should be brought to the attention of:

Federal Railroad Administration
Office of Public Affairs (Stop 5)
1120 Vermont Ave., NW
Washington, DC 20590

Phone number (202) 493-6024

<http://safetydata.fra.dot.gov/officeofsafety/>

FRA's Safety Website which provides additional information on various programs and safety statistics.

<http://www.dot.gov>

One DOT Website which links to all of its agencies and provide general information for each.

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CHAPTER 1

OVERVIEW OF ACCIDENTS/INCIDENTS AND RATES

Railroads began reporting accidents to the Federal Government following passage of the Reports Act of 1910. The current definitions describing reportable events were adopted in 1975, and have remained largely unchanged since then. A number of modifications to the record keeping and reporting requirements were put in place for 1997. These modifications did not redefine what was to be reported, but did expand the types of information being collected and the forms used for reporting. The changes made in 1997 were implemented for the purpose of collecting additional information necessary for safety analysis and to support the Federal Railroad Administration's (FRA) overall goal of hazard elimination and risk reduction on the Nation's railroads.

A railroad is required by Federal Railroad Administration (FRA) regulations at Title 49, Part 225 of the Code of Federal Regulations to use the current FRA Guide for Preparing Accident/Incident Reports ("Guide" or "reporting guide") when preparing its monthly report. The instructions and interpretations contained in this publication are provided to assist railroads in meeting this obligation

"Accident/Incident" is the term used to describe the entire list of reportable events. These include collisions, derailments, and other events involving the operation of on-track equipment and causing reportable damage above an established threshold; impacts between railroad on-track equipment and highway users at crossings; and all other incidents or exposures that cause a fatality or injury to any person, or an occupational illness to a railroad employee.

Accidents/incidents are divided into three major groups for reporting purposes. These correspond to the following FRA forms:

Train accidents. A safety-related event involving on-track rail equipment (both standing and moving), causing monetary damage to the rail equipment and track above a prescribed amount. Reported on form FRA F 6180.54, RAIL EQUIPMENT ACCIDENT/ INCIDENT REPORT. (The threshold for 1998 and 1999 was \$6,600)

Highway-rail grade crossing incidents. Any impact between a rail and highway user (both motor vehicles and other users of the crossing) at a designated crossing site, including walkways, sidewalks, etc., associated with the crossing. Reported on form FRA F 6180.57, HIGHWAY-RAIL GRADE CROSSING ACCIDENT/INCIDENT REPORT.

Other incidents. Any death, injury, or occupational illness of a railroad employee that is not the result of a "train accident" or "highway-rail incident." Reported on form FRA F 6180.55a, RAILROAD INJURY AND ILLNESS SUMMARY.

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A single form is usually sufficient to report most events; however, there are situations when multiple report forms are necessary. An example is a highway-rail crossing incident resulting in reportable injuries. An accident of this type would require the completion of both a Form FRA F 6180.57 and a Form FRA F 6180.55a. A Form FRA F 6180.54 must also be prepared if reportable on-track equipment and track damage in this accident exceeds the current monetary threshold for train accidents.

Because of overlap in the reporting requirements, some incidents may fall into multiple categories. The incident described above would be counted as a highway-rail incident, but it would also be included in the train accident total. Another example is a motorist hurt in a highway-rail incident after driving around gates at the crossing site. This individual is reported as a “trespasser” on form FRA F 6180.55a, but the event is classified as a highway-rail incident.

If there is an overlap in the information found in different chapters, when possible, a separate column or row total is provided, or counts are excluded when they are more appropriate to another chapter. In the example of the trespasser injured in a highway-rail incident, this injury appears in the highway-rail Chapter, but is excluded from the chapter on trespassing. The train accident counts in Chapter 5 include those highway-rail incidents causing reportable damage above the amount needed for reporting on form FRA F 6180-54. The user of this bulletin can exclude these, if desired, since the number of these are identified in most tables in this Chapter.

This bulletin provides overall national totals as well as specific area of safety concern. For example, Chapter 3 is a summary of all fatal and nonfatal casualties, regardless of the type of event causing them. Subsequent Chapters summarizing train accidents, highway-rail incidents, employee and trespassing casualties, provide additional information on the events causing these casualties.

The data is presented in the following general format. First, there is a graphic historical review of the major indicators of railroad safety since 1975. Following this, are overall totals for the 6-year period beginning with 1992, including summaries by railroad and states for this time frame. Next are a variety of tables and charts for the current year. The chapter for each major reporting area contains a description of the pertinent requirements and definitions associated with that specific accident/incident category.

Extensive consolidation of railroads has occurred over the years. In order to make a more valid comparison of major railroad systems, it was necessary to combine the information reported by predecessor railroads for the years prior to 1998. For example, data from railroads that made up the Southern Pacific Transportation System were merged into the Union Pacific counts.

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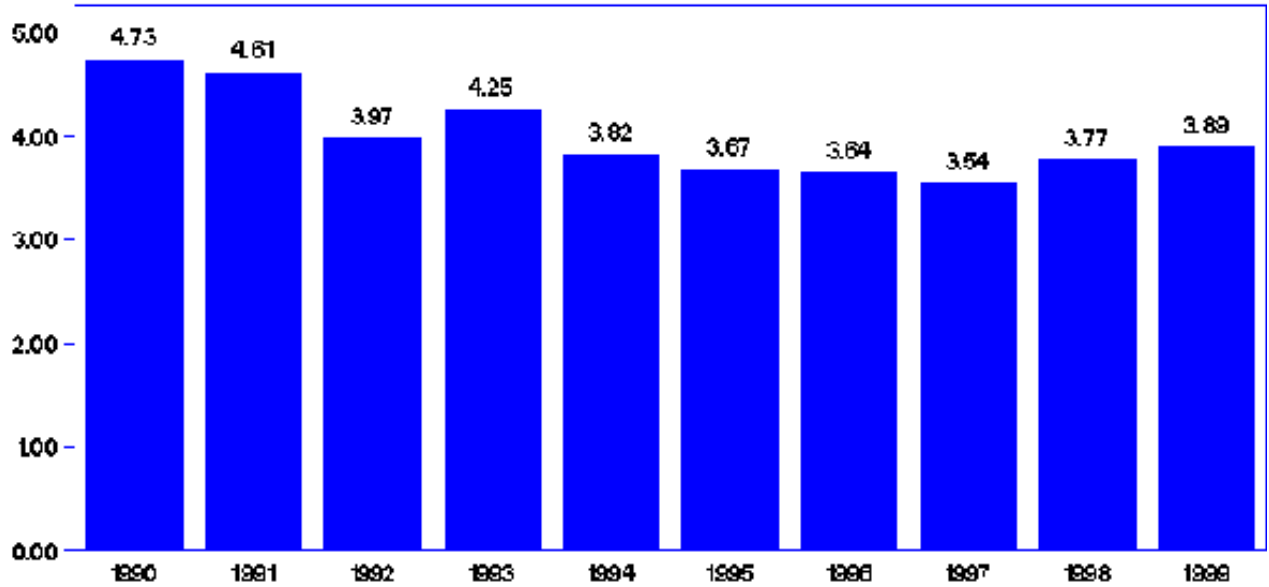
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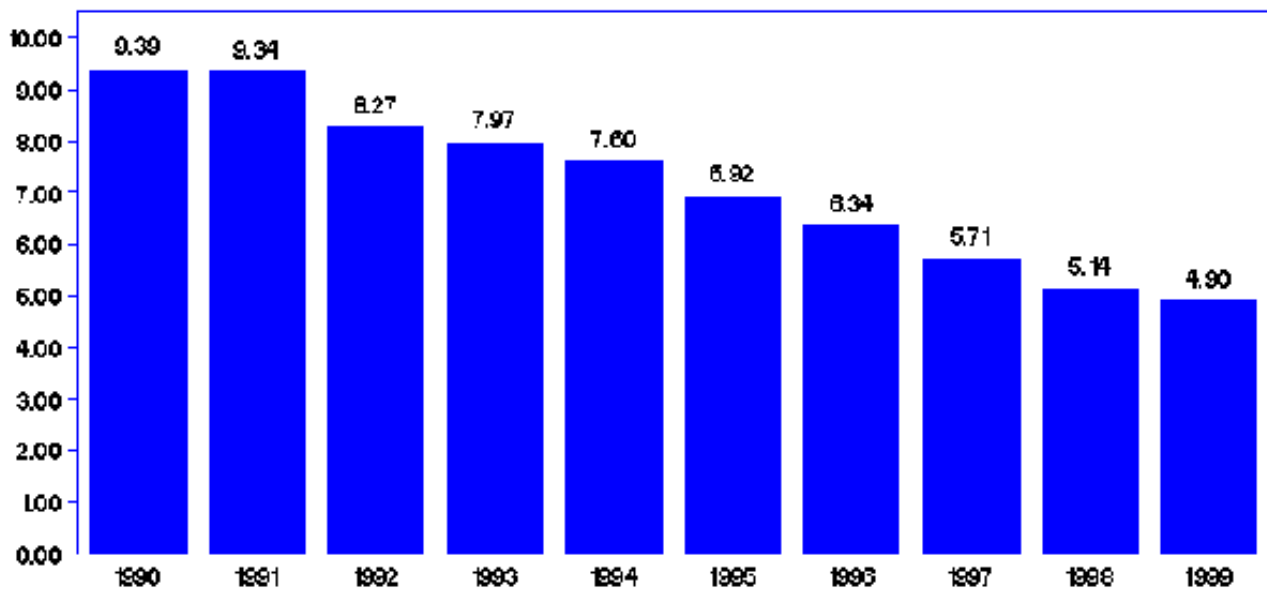
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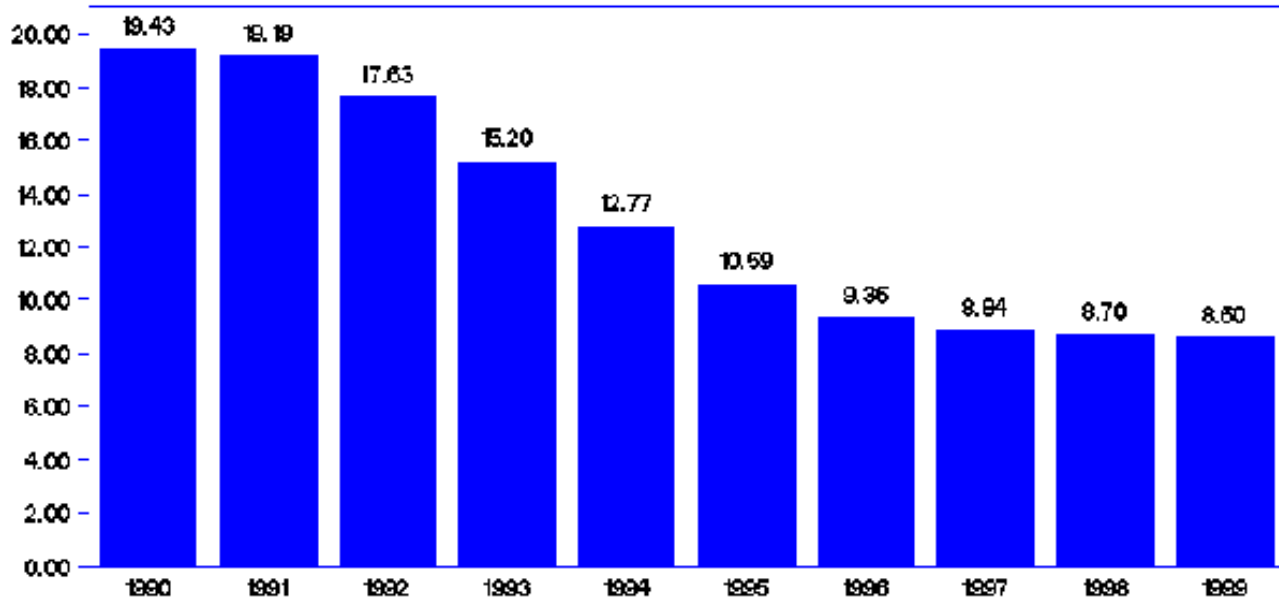
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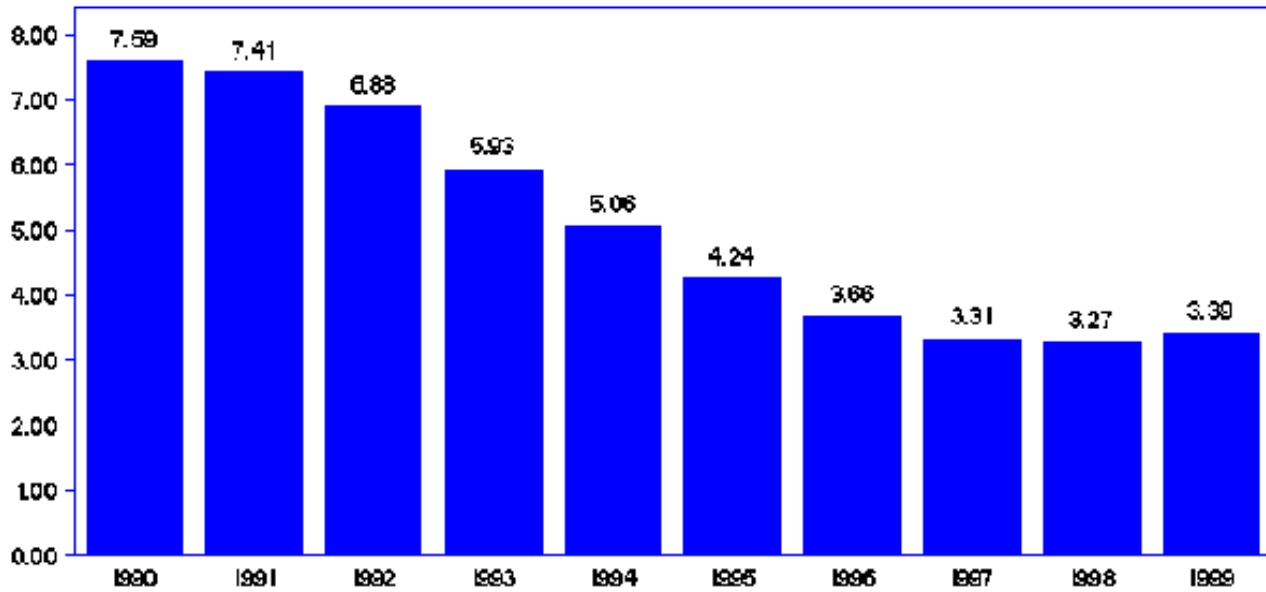
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TABLE 1-1 ACCIDENT/INCIDENT SUMMARY

Category	1994	1995	1996	1997	1998	1999	% chg from 1998	% chg from 1994
1- Railroads reporting	688	679	704	688	671	668	-0.4	-2.9
2-								
3- Total deaths	1,226	1,146	1,039	1,063	1,008	932	-7.5	-24.0
4- Employee on duty	31	34	33	37	27	31	14.8	-
5- Passengers on trains	5	-	12	6	4	14	250.0	180.0
6- Trespassers, all	682	660	620	646	644	572	-11.2	-16.1
7- Trespassers, not at HRC	529	494	471	533	536	479	-10.6	-9.5
8-								
9- Total nonfatal cases	16,812	14,440	12,558	11,767	11,459	11,700	2.1	-30.4
10- Employee on duty	13,080	10,777	9,199	8,295	8,398	8,622	2.7	-34.1
11- Passengers on trains	497	573	513	601	535	481	-10.1	-3.2
12- Trespassers, all	764	700	750	728	677	650	-4.0	-14.9
13- Trespassers, not at HRC	452	461	474	516	513	445	-13.3	-1.5
14-								
15- Railroad employees								
16- Days absent from work	492,404	344,035	305,918	244,383	325,127	344,747	6.0	-30.0
17- Average days absent	38	32	33	29	39	40	2.6	5.3
18- Days restricted at work	57,343	44,343	45,634	52,099	63,986	74,995	17.2	30.8
19-								
20- Train accidents(includes HRC)	2,669	2,619	2,584	2,560	2,745	2,924	6.5	9.6
21- Reportable damage (000)	180,551	199,347	221,127	225,723	248,292	268,078	8.0	48.5
22- Number of hazmat releases	36	27	34	31	43	42	-2.3	16.7
23-								
24- Train accidents without HRC	2,504	2,459	2,443	2,397	2,575	2,768	7.5	10.5
25- Number that were fatal	7	11	10	13	4	6	50.0	-14.3
26-								
27- Types Collisions	240	235	205	202	168	209	24.4	-12.9
28- Derailments	1,825	1,742	1,816	1,741	1,757	1,961	11.6	7.5
29- Other types	439	482	422	454	650	602	-7.4	37.1
30- Causes Human factor	911	944	783	855	971	1,031	6.2	13.2
31- Equipment defects	293	279	318	271	307	321	4.6	9.6
32- Track/signal defects	947	883	954	918	938	1,044	11.3	10.2
33- Other causes	353	353	388	353	359	372	3.6	5.4
34- Track Main	914	912	941	867	934	858	-8.1	-6.1
35- Yard	1,339	1,279	1,249	1,223	1,306	1,531	17.2	14.3
36-								
37- Total highway-rail incidents	4,979	4,633	4,257	3,865	3,508	3,489	-0.5	-29.9
38- Number that were fatal	512	456	413	376	363	340	-6.3	-33.6
39- Deaths	615	579	488	461	431	402	-6.7	-34.6
40- Nonfatal cases	1,961	1,894	1,610	1,540	1,303	1,396	7.1	-28.8
41- HRC motor vehicle incidents	4,746	4,416	4,054	3,749	3,375	3,349	-0.8	-29.4
42- Deaths	542	508	415	419	369	345	-6.5	-36.3
43- Nonfatal cases	1,885	1,825	1,545	1,494	1,257	1,338	6.4	-29.0
44-								
45- Other incidents	14,990	12,503	10,992	10,437	10,420	10,519	1.0	-29.8
46- Number that were fatal	585	544	517	568	559	509	-8.9	-13.0
47-								
48- Hours worked by EOD (000)	518,634	510,260	504,599	503,918	514,870	509,997	-0.9	-1.7
49- Train miles operated (000)	655,083	669,823	670,923	676,716	682,895	712,453	4.3	8.8
50- Revenue ton miles (billions)	1,201	1,306	1,356	1,349	1,377	1,433	4.1	19.4
51- Passengers transported (000)	393,600	385,825	397,394	408,619	439,958	464,885	5.7	18.1
52- Passenger miles (millions)	14,046	13,719	13,587	14,134	14,596	14,857	1.8	5.8
53- Public HRC crossings	166,035	163,917	162,426	160,395	158,560	157,598	-0.6	-5.1

TABLE 1-2 ACCIDENT/INCIDENT RATE SUMMARY

Category	1994	1995	1996	1997	1998	1999	% chg from 1998	% chg from 1994
1- Overall Accident/Incident Rate	19.15	16.60	15.05	14.14	13.78	13.72	-0.4	-28.4
2-								
3- Train Accidents, excludes HRC	3.82	3.67	3.64	3.54	3.77	3.89	3.2	1.8
4- Yard Track Rate	14.91	14.23	14.22	14.41	15.60	17.51	12.2	17.4
5- Other Track Rate	2.06	2.03	2.05	1.98	2.12	1.98	-6.6	-3.9
6-								
7- Highway-Rail Incident Rate	7.60	6.92	6.34	5.71	5.14	4.90	-4.7	-35.5
8-								
9- All Other Incidents Rate	12.77	10.59	9.35	8.84	8.70	8.60	-1.1	-32.7
10-								
11- RR Employee on Duty Rate	5.06	4.24	3.66	3.31	3.27	3.39	3.7	-33.0
12-								
13- Trespasser Rate	1.50	1.43	1.41	1.55	1.54	1.30	-15.6	-13.3
14-								
15- Passenger on Trains Rate	3.57	4.18	3.86	4.29	3.69	3.33	-9.8	-6.7
16-								
17- Passengers in Train Acc Rate	0.51	0.65	0.91	0.37	- 8	0.07	-12.5	-86.3

Overall accident/incident rate (line 1) is the total number of reportable incidents (train accidents, highway-rail, and other incidents) times one million divided by the sum of train miles operated and employee hours worked.

Train accident and highway-rail incident rates (lines 3 and 7) are the number of events per one million train miles operated.

The yard accident rate (line 4) is the number of accidents occurring on yard track per one million yard switching train miles operated.

The other track rate (line 5) is the number of accidents that did not occur on yard track per one million train miles, excluding yard switching train miles.

The employee on duty rate (line 11) is the total number of railroad employee casualties times 200,000 divided by the number of hours worked by employees.

Other incidents rate (line 9) is the number of other incidents times one million divided by the sum of train miles operated and employee hours worked.

The trespasser rate (line 13) is the total number of trespasser casualties, excluding those trespassers Fatal or injured in highway-rail incidents, per one million train miles operated.

The passenger on train rate (line 15) is the total number of passenger casualties in all accidents/incidents per 100,000,000 passenger miles. A passenger mile is the movement of one passenger for a distance of one mile.

The passenger in train accident rate (line 17) is the total number of passenger casualties in train accidents per 100,000,000 passenger miles.

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TABLE 1-3 SUMMARY BY TYPE INCIDENT AND TYPE PERSON

Train Accidents Excluding Highway-Rail Crossing (HRC) Incidents

	Deaths						Nonfatal Conditions					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
A - Worker on duty(rr empl)	8	10	14	11	3	7	144	189	158	113	112	106
B - Employee not on duty	-	1	-	-	-	-	26	9	1	12	-	7
C - Passenger on train	2	-	9	1	-	-	70	89	115	51	11	11
D - Nontrespasser	2	-	-	-	-	1	18	6	1	-	-	-
E - Trespasser	-	3	2	4	1	1	-	-	-	-	4	-
F - Worker on duty(contractor)	-	-	-	-	-	-	4	1	6	2	2	-
J - Nontrespasser, off rr prop	-	-	-	1	-	-	-	-	-	5	-	6
--Total...	12	14	25	17	4	9	262	294	281	183	129	130

Highway-Rail Crossing (HRC) Incidents

	Deaths						Nonfatal Conditions					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
A - Worker on duty(rr empl)	1	2	1	-	4	2	125	123	79	111	122	140
B - Employee not on duty	-	-	-	-	-	-	1	4	2	3	3	1
C - Passenger on train	-	-	-	-	2	11	84	30	24	43	19	43
D - Nontrespasser	461	411	338	348	317	294	1,438	1,497	1,229	1,154	985	995
E - Trespasser	153	166	149	113	108	93	312	239	276	212	164	205
F - Worker on duty(contractor)	-	-	-	-	-	-	1	1	-	-	1	-
G - Contractor(other)	-	-	-	-	-	1	-	-	-	1	-	-
I - Volunteer(other)	-	-	-	-	-	-	-	-	-	-	1	-
J - Nontrespasser, off rr prop	-	-	-	-	-	1	-	-	-	16	8	12
--Total...	615	579	488	461	431	402	1,961	1,894	1,610	1,540	1,303	1,396

Other Incidents, Excluding HRC

	Deaths						Nonfatal Conditions					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
A - Worker on duty(rr empl)	22	22	18	26	20	22	12,811	10,465	8,962	8,071	8,164	8,376
B - Employee not on duty	-	1	-	-	2	-	279	239	225	248	216	208
C - Passenger on train	3	-	3	5	2	3	343	454	374	507	505	427
D - Nontrespasser	42	32	27	14	7	7	457	366	430	363	216	312
E - Trespasser	529	491	469	529	535	478	452	461	474	516	509	445
F - Worker on duty(contractor)	3	7	9	6	2	2	247	267	202	211	234	172
G - Contractor(other)	-	-	-	5	3	9	-	-	-	120	143	212
H - Worker on duty(volunteer)	-	-	-	-	-	-	-	-	-	3	11	4
I - Volunteer(other)	-	-	-	-	-	-	-	-	-	3	2	1
J - Nontrespasser, off rr prop	-	-	-	-	2	-	-	-	-	2	27	17
--Total...	599	553	526	585	573	521	14,589	12,252	10,667	10,044	10,027	10,174

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TABLE 1-3 SUMMARY BY TYPE INCIDENT AND TYPE PERSON

GRAND TOTAL

	Deaths						Nonfatal Conditions					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
A - Worker on duty(rr empl)	31	34	33	37	27	31	13,080	10,777	9,199	8,295	8,398	8,622
B - Employee not on duty	-	2	-	-	2	-	306	252	228	263	219	216
C - Passenger on train	5	-	12	6	4	14	497	573	513	601	535	481
D - Nontrespasser	505	443	365	362	324	302	1,913	1,869	1,660	1,517	1,201	1,307
E - Trespasser	682	660	620	646	644	572	764	700	750	728	677	650
F - Worker on duty(contractor)	3	7	9	6	2	2	252	269	208	213	237	172
G - Contractor(other)	-	-	-	5	3	10	-	-	-	121	143	212
H - Worker on duty(volunteer)	-	-	-	-	-	-	-	-	-	3	11	4
I - Volunteer(other)	-	-	-	-	-	-	-	-	-	3	3	1
J - Nontrespasser, off rr prop	-	-	-	1	2	1	-	-	-	23	35	35
--Total...	1,226	1,146	1,039	1,063	1,008	932	16,812	14,440	12,558	11,767	11,459	11,700

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TABLE 1-4 TOTAL CASUALTIES BY RAILROAD

	Deaths						Nonfatal					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Alton & Southern RR	-	-	-	-	-	-	18	19	14	17	17	15
Alaska RR Corp.	3	1	1	2	1	-	38	47	52	72	59	62
Amtrak (Nat'l RR Passenger Corp.)	127	124	101	117	120	105	1,644	1,516	1,209	1,328	1,180	1,161
Bangor & Aroostook RR	-	-	-	-	1	-	32	35	37	37	47	28
Bessemer & Lake Erie RR Co.	2	-	-	1	-	-	7	16	12	15	21	6
Burlington Northern Santa Fe	198	215	174	180	209	130	2,041	1,678	1,208	1,174	1,412	1,495
Belt Rwy Co. Of Chicago	-	-	1	1	2	-	56	15	13	16	15	7
Consolidated Rail Corp.	95	79	53	59	37	20	1,430	972	813	627	507	225
Conrail Shared Assets	-	-	-	-	-	2	-	-	-	-	-	29
CSX Transportation	127	139	101	112	125	120	1,063	834	847	894	953	1,150
Delaware & Hudson Rwy Co.	7	4	1	5	-	3	44	47	46	39	30	49
Dakota, Minnesota & Eastern RR	-	1	1	1	-	1	27	34	29	23	25	32
Duluth, Missabe & Iron Range Rwy	2	-	-	-	-	-	45	47	66	53	43	25
Duluth, Winnipeg & Pacific Rwy	2	-	-	3	2	1	8	7	10	8	6	3
Elgin, Joliet & Eastern Rwy Co.	1	-	-	-	-	2	41	21	48	52	48	41
Florida East Coast Rwy Co.	13	18	23	19	10	16	84	65	73	68	62	52
Guilford Rail System	1	2	-	4	2	2	30	29	21	19	26	24
Grand Trunk Western RR Inc.	16	6	11	10	4	5	278	254	183	164	162	131
Gateway Western Rwy	1	2	3	1	2	1	13	15	21	11	13	20
Illinois Central RR Co.	14	8	19	17	18	16	256	211	208	183	165	186
Indiana Harbor Belt RR Co.	2	3	1	2	-	-	80	85	36	64	57	38
I & M Rail Link, LLC	-	-	-	2	2	6	-	-	-	25	65	49
Kansas City Southern Rwy Co.	12	19	26	27	29	23	187	184	166	176	198	142
Long Island Rail Road	10	17	9	18	10	6	880	743	745	706	569	534
Massachusetts Bay Transit Auth.	-	-	6	11	2	5	-	-	119	74	94	93
Metro North Commuter RR Co.	12	15	3	7	4	5	630	575	599	481	389	450
Montana Rail Link	4	2	5	5	-	3	52	64	74	49	18	24
Northern IN Commuter Trans. Dist	2	1	1	2	3	1	60	57	36	37	34	40
Northeast IL Reg Commuter Rail	9	9	7	7	6	8	278	234	265	189	206	232
New Jersey Transit Rail	20	31	20	23	24	18	418	203	188	118	94	140
Norfolk Southern Corp.	151	123	108	108	112	104	824	721	657	534	563	756
Paducah & Louisville Rwy Co.	-	1	1	-	1	-	29	28	22	18	8	10
Port Authority Trans Hudson	-	3	-	-	1	1	216	218	188	188	164	158
Peninsula Commuter(San Mateo Cnty	-	-	3	6	3	3	-	-	14	16	26	11
Port Terminal RR Association	1	1	-	-	1	1	15	13	10	9	8	6
Southern CA Regional Rail Auth.	4	6	5	8	6	2	-	10	4	29	16	15
Southeastern PA Trans. Authority	5	2	5	7	3	7	328	299	290	376	374	351
Soo Line RR Co.	11	9	11	7	6	7	497	480	411	258	200	203
Texas Mexican RR Co.	2	1	-	-	1	-	61	8	2	10	14	18
Terminal RR Assn Of St. Louis	1	-	-	-	-	-	4	11	19	10	2	10
Union Pacific RR Co.	331	272	294	258	240	278	3,228	2,806	2,207	2,101	2,192	2,356
Union RR Co. (Pittsburgh)	-	-	-	-	-	-	26	19	28	15	30	34
Wisconsin Central Ltd.	10	11	4	7	6	6	202	223	169	182	129	132
Wheeling & Lake Erie Rwy Co.	2	-	1	2	-	1	31	22	22	19	8	14
Other Railroads	28	21	40	24	15	23	1,611	1,575	1,377	1,283	1,210	1,143
Total	1,226	1,146	1,039	1,063	1,008	932	16,812	14,440	12,558	11,767	11,459	11,700

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TABLE 1-5 TOTAL CASUALTIES BY STATE

	Deaths						Nonfatal						6 Year Total	
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	Kld	Nonf
AL	17	24	25	30	25	18	231	203	191	176	156	151	139	1,108
AK	3	1	2	2	1	-	50	64	72	97	83	84	9	450
AZ	19	17	22	24	19	15	164	164	107	169	121	148	116	873
AR	26	22	26	11	36	27	358	307	233	243	261	269	148	1,671
CA	119	106	96	109	114	114	946	793	731	724	795	770	658	4,759
CO	21	13	12	9	12	9	245	229	184	159	134	150	76	1,101
CT	6	7	3	8	4	10	204	156	159	136	130	166	38	951
DE	2	-	1	3	1	2	74	89	62	70	42	53	9	390
DC	1	1	-	-	1	-	109	93	80	82	75	78	3	517
FL	50	48	41	37	30	44	337	327	248	282	276	252	250	1,722
GA	26	29	27	24	31	20	259	228	189	199	221	216	157	1,312
ID	15	10	7	7	9	4	100	154	113	105	83	56	52	611
IL	97	91	76	73	70	93	1,444	1,303	1,059	926	942	1,084	500	6,758
IN	40	42	40	36	31	33	536	420	361	378	334	321	222	2,350
IA	23	13	14	15	6	20	395	319	254	227	198	201	91	1,594
KS	22	17	19	22	16	13	288	246	205	182	220	214	109	1,355
KY	20	21	13	22	11	5	176	179	175	140	173	174	92	1,017
LA	30	36	37	35	33	28	325	291	248	288	267	242	199	1,661
ME	-	-	-	1	2	-	56	56	53	71	77	49	3	362
MD	8	9	18	5	4	12	140	129	176	72	94	105	56	716
MA	14	12	12	19	5	12	199	221	215	153	155	187	74	1,130
MI	34	17	28	24	16	22	471	398	377	392	317	305	141	2,260
MN	22	24	21	15	22	24	508	436	399	307	314	315	128	2,279
MS	31	32	17	22	28	26	170	121	132	136	127	145	156	831
MO	25	31	30	24	34	18	378	312	241	212	236	287	162	1,666
MT	6	9	8	8	7	4	139	127	145	113	79	93	42	696
NE	28	12	14	16	15	14	386	319	220	197	263	295	99	1,680
NV	3	9	4	3	6	4	49	115	32	30	34	47	29	307
NH	-	-	1	-	1	-	7	15	10	5	14	12	2	63
NJ	26	35	25	29	31	21	774	533	481	407	325	380	167	2,900
NM	13	15	14	17	12	8	98	90	84	67	105	82	79	526
NY	47	48	27	41	29	25	2,001	1,696	1,621	1,453	1,210	1,237	217	9,218
NC	47	30	27	26	40	24	206	122	180	146	145	123	194	922
ND	5	9	5	2	8	3	117	98	101	81	68	72	32	537
OH	54	49	34	45	30	39	596	435	383	365	368	395	251	2,542
OK	21	18	28	30	19	22	198	154	130	134	135	108	138	859
OR	10	20	7	18	22	10	248	194	185	136	157	145	87	1,065
PA	35	30	19	30	17	20	1,068	854	756	778	743	663	151	4,862
RI	-	-	1	4	2	1	35	16	14	12	11	17	8	105
SC	25	16	18	21	23	16	138	141	99	104	98	80	119	660
SD	1	5	2	1	-	-	56	50	41	37	43	48	9	275
TN	18	22	20	20	25	17	192	192	130	135	141	153	122	943
TX	117	114	124	99	97	84	1,073	895	731	768	795	853	635	5,115
UT	20	10	14	6	6	7	105	107	92	87	84	87	63	562
VT	-	1	1	-	1	-	28	18	26	11	25	33	3	141
VA	24	16	18	12	13	10	214	187	143	139	160	143	93	986
WA	19	25	19	25	21	20	314	277	231	210	211	195	129	1,438
WV	9	7	8	12	7	2	107	87	78	64	83	84	45	503
WI	19	20	9	19	11	9	396	388	300	283	237	219	87	1,823
WY	8	3	5	2	4	3	104	92	81	79	94	114	25	564
Tot	1,226	1,146	1,039	1,063	1,008	932	16,812	14,440	12,558	11,767	11,459	11,700	6,414	78,736

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TABLE 1-6 TOTAL EMPLOYEE ON DUTY CASES BY RAILROAD

	1994		1995		1996		1997		1998		1999	
	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate
Alton & Southern RR	14	4.03	19	5.67	13	3.92	17	5.03	16	4.86	15	4.56
Alaska RR Corp.	37	7.24	36	7.58	45	8.66	63	11.45	54	9.28	51	7.92
Amtrak (Natl RR Passenger Corp.)	1,368	5.58	1,283	5.71	987	4.64	901	4.33	842	3.87	914	4.03
Bangor & Aroostook RR	30	9.04	33	10.02	36	11.16	36	11.90	48	14.56	25	7.78
Bessemer & Lake Erie RR Co.	8	2.48	16	4.95	12	3.70	8	2.14	16	3.54	5	1.05
Burlington Northern Santa Fe	1,626	3.69	1,185	2.68	879	2.01	789	1.74	1,014	2.20	1,031	2.39
Belt Rwy Co. Of Chicago	55	9.18	14	2.23	14	2.08	14	2.02	17	2.58	7	1.06
Consolidated Rail Corp.	1,239	5.13	836	3.74	671	3.13	518	2.58	419	2.05	194	2.20
Conrail Shared Assets	-	-	-	-	-	-	-	-	-	-	25	1.66
CSX Transportation	706	2.42	503	1.73	582	2.05	608	2.15	718	2.45	892	2.70
Delaware & Hudson Rwy Co.	34	4.55	40	5.65	43	7.14	31	5.27	28	4.29	44	5.19
Dakota, Minnesota & Eastern RR	19	7.00	25	9.07	22	6.17	21	5.83	23	6.93	29	8.54
Duluth, Missabe & Iron Range Rwy	41	6.61	47	6.91	65	9.32	50	6.93	42	5.88	23	3.34
Duluth, Winnipeg & Pacific Rwy	8	4.58	5	2.25	8	3.73	8	3.73	5	2.36	3	1.49
Elgin, Joliet & Eastern Rwy Co.	36	4.82	18	2.36	45	6.04	47	5.97	45	5.83	39	5.14
Florida East Coast Rwy Co.	37	3.77	39	4.11	45	4.94	39	4.43	29	3.20	30	3.46
Guilford Rail System	28	2.32	27	2.32	18	1.86	11	1.16	21	2.25	20	2.02
Grand Trunk Western RR Inc.	247	8.54	220	7.94	152	6.77	131	6.35	153	7.00	122	5.52
Gateway Western Rwy	11	4.60	16	5.69	17	6.11	5	2.01	12	4.92	19	7.37
Illinois Central RR Co.	171	4.42	139	3.45	136	3.53	111	2.91	105	2.80	118	3.10
Indiana Harbor Belt RR Co.	66	8.02	71	8.08	27	2.98	53	6.14	53	6.05	34	3.63
I & M Rail Link, LLC	-	-	-	-	-	-	17	3.15	40	5.40	39	5.62
Kansas City Southern Rwy Co.	100	3.71	84	3.01	89	3.33	79	3.01	95	3.49	86	3.08
Long Island Rail Road	693	11.27	584	10.12	508	8.90	451	7.72	408	6.88	396	6.68
Massachusetts Bay Transit Auth.	-	-	-	-	96	6.36	69	4.16	85	4.73	83	4.54
Metro North Commuter RR Co.	574	10.66	525	9.79	533	10.19	433	8.27	319	6.03	334	6.26
Montana Rail Link	48	5.17	58	5.71	67	5.97	40	3.46	12	1.15	20	2.07
Northern IN Commuter Trans. Dist	54	17.46	51	16.34	30	9.06	29	8.70	28	8.17	40	11.33
Northeast IL Reg Commuter Rail	116	4.91	123	5.14	134	5.59	110	4.59	127	5.12	93	3.61
New Jersey Transit Rail	239	6.51	86	2.35	88	2.29	89	2.44	85	2.33	130	3.37
Norfolk Southern Corp.	432	1.83	362	1.54	294	1.26	220	0.94	270	1.07	409	1.27
Paducah & Louisville Rwy Co.	26	8.22	25	8.37	20	7.11	11	4.07	6	2.07	9	2.87
Port Authority Trans Hudson	138	12.85	131	12.65	113	11.04	113	11.45	101	10.45	86	8.98
Peninsula Commuter(San Mateo Cnty	-	-	-	-	14	3.96	15	4.33	18	5.01	4	1.06
Port Terminal RR Association	15	3.73	11	3.14	6	1.88	5	1.55	6	1.78	4	1.25
Southern CA Regional Rail Auth.	-	-	6	3.40	3	1.35	12	3.66	8	2.71	8	2.97
Southeastern PA Trans. Authority	243	14.67	231	13.21	198	11.30	193	11.68	181	10.27	167	9.82
Soo Line RR Co.	451	10.79	434	10.09	369	9.06	229	6.53	167	4.96	181	5.74
Texas Mexican RR Co.	59	25.63	8	4.67	1	0.58	5	2.10	4	1.35	14	6.09
Terminal RR Assn Of St. Louis	5	1.72	10	3.65	15	5.37	4	1.47	1	0.36	7	2.40
Union Pacific RR Co.	2,572	4.71	2,099	3.86	1,561	2.91	1,545	2.89	1,680	3.16	1,797	3.49
Union RR Co. (Pittsburgh)	26	7.10	19	5.25	28	7.67	15	4.25	28	7.79	34	10.38
Wisconsin Central Ltd.	153	8.40	168	8.53	110	5.31	122	5.50	86	3.81	95	4.12
Wheeling & Lake Erie Rwy Co.	10	2.77	11	2.81	11	2.94	16	4.45	7	1.63	10	2.30
Other Railroads	1,376	11.36	1,213	10.12	1,127	9.23	1,049	8.45	1,003	8.04	967	7.63

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TABLE 1-7 TRAIN ACCIDENTS BY RAILROAD, EXCLUDING HRC

	1994		1995		1996		1997		1998		1999	
	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate	Cnt	Rate
Alton & Southern RR	14	18.81	9	11.94	6	8.18	4	5.55	4	5.37	13	17.26
Alaska RR Corp.	2	2.33	4	4.94	5	5.80	7	6.47	5	4.58	6	4.68
Amtrak (Nat'l RR Passenger Corp.)	79	1.83	68	1.78	88	2.60	84	2.27	89	2.51	85	2.35
Bangor & Aroostook RR	2	4.79	2	4.34	3	3.51	-	-	3	2.48	7	5.75
Bessemer & Lake Erie RR Co.	1	5.07	1	5.66	1	4.09	1	4.18	2	6.71	-	-
Burlington Northern Santa Fe	515	3.64	580	3.98	454	3.11	439	2.84	435	2.67	481	2.96
Belt Rwy Co. Of Chicago	67	179.3	49	125.8	59	126.7	39	77.48	29	63.18	44	94.23
Consolidated Rail Corp.	169	3.54	146	3.24	175	3.83	187	4.12	236	5.07	104	5.30
Conrail Shared Assets	-	-	-	-	-	-	-	-	-	-	17	10.65
CSX Transportation	133	1.65	134	1.61	163	1.95	257	3.07	310	3.71	423	4.02
Delaware & Hudson Rwy Co.	10	4.87	12	6.09	8	4.59	6	2.92	4	1.92	8	3.52
Dakota, Minnesota & Eastern RR	34	53.05	27	41.41	26	36.00	27	38.39	16	23.79	12	14.85
Duluth, Missabe & Iron Range Rwy	6	8.29	8	9.12	7	9.24	10	11.72	10	12.87	7	9.61
Duluth, Winnipeg & Pacific Rwy	-	-	5	7.53	4	6.12	1	1.38	4	5.77	2	2.92
Elgin, Joliet & Eastern Rwy Co.	10	17.53	12	20.29	15	24.41	11	18.34	14	20.84	15	22.21
Florida East Coast Rwy Co.	8	2.18	17	5.29	12	3.64	12	3.55	20	5.87	24	7.64
Guilford Rail System	6	5.59	2	1.87	2	1.88	3	2.74	5	4.37	7	6.71
Grand Trunk Western RR Inc.	53	10.29	46	8.95	32	5.85	25	4.42	21	3.91	21	4.05
Gateway Western Rwy	10	11.37	7	6.78	6	5.98	4	4.41	11	13.13	13	16.28
Illinois Central RR Co.	88	9.20	74	7.79	82	9.14	58	6.37	73	7.82	60	6.48
Indiana Harbor Belt RR Co.	19	14.76	27	18.39	9	5.87	25	16.01	27	17.27	37	21.90
I & M Rail Link, LLC	-	-	-	-	-	-	19	13.91	34	16.26	31	15.42
Kansas City Southern Rwy Co.	92	13.17	109	13.54	75	9.23	71	8.59	66	7.62	79	9.32
Long Island Rail Road	35	4.30	30	3.66	39	4.77	22	2.70	19	2.33	15	1.83
Massachusetts Bay Transit Auth.	-	-	-	-	-	-	1	0.37	-	-	2	0.55
Metro North Commuter RR Co.	33	4.48	23	2.94	23	3.09	20	2.62	33	4.23	28	3.62
Montana Rail Link	22	6.24	30	7.20	34	9.05	39	9.59	12	3.12	13	3.93
Northern IN Commuter Trans. Dist	4	4.85	1	1.20	-	-	2	2.40	6	7.17	3	3.45
Northeast IL Reg Commuter Rail	2	0.62	6	1.67	6	1.77	6	1.72	1	0.29	4	1.12
New Jersey Transit Rail	14	1.88	6	0.80	12	1.54	16	1.99	12	1.47	8	0.98
Norfolk Southern Corp.	100	1.70	94	1.51	151	2.37	170	2.64	149	2.19	238	2.91
Paducah & Louisville Rwy Co.	-	-	3	4.59	7	11.68	7	11.60	4	6.48	3	4.77
Port Authority Trans Hudson	2	1.19	5	2.53	-	-	-	-	-	-	1	0.50
Peninsula Commuter(San Mateo Cnty	-	-	-	-	-	-	-	-	-	-	-	-
Port Terminal RR Association	17	16.06	10	9.51	6	5.31	11	8.84	12	9.61	6	4.82
Southern CA Regional Rail Auth.	2	2.19	3	2.84	4	3.20	3	2.21	4	2.72	4	2.32
Southeastern PA Trans. Authority	4	0.81	4	0.79	9	1.78	16	3.12	16	3.08	8	1.51
Soo Line RR Co.	92	9.88	95	8.71	106	10.74	54	6.44	42	5.05	46	5.71
Texas Mexican RR Co.	2	8.88	1	4.96	2	7.03	3	5.13	5	4.44	12	10.74
Terminal RR Assn Of St. Louis	17	33.93	15	29.67	14	26.96	18	33.12	10	17.63	18	29.80
Union Pacific RR Co.	716	4.13	694	3.88	719	4.00	581	3.51	727	4.62	719	4.08
Union RR Co. (Pittsburgh)	3	19.49	4	26.95	9	58.90	1	6.71	1	6.01	4	26.96
Wisconsin Central Ltd.	60	14.60	67	13.79	50	9.92	36	7.13	23	4.38	35	6.70
Wheeling & Lake Erie Rwy Co.	4	6.80	8	14.55	1	1.79	7	14.93	-	-	1	1.90
Other Railroads	259	13.22	230	11.24	228	10.63	268	10.70	295	11.81	323	12.77

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TABLE 1-8 TRAIN ACCIDENTS BY STATE, EXCLUDING HRC

	1994		1995		1996		1997		1998		1999		6 Year Total	
	Cnt	%	Cnt	%	Cnt	%	Cnt	%	Cnt	%	Cnt	%	Cnt	%
AL	22	0.9	16	0.7	34	1.4	37	1.5	48	1.9	45	1.6	202	1.3
AK	2	0.1	4	0.2	5	0.2	7	0.3	5	0.2	6	0.2	29	0.2
AZ	22	0.9	37	1.5	22	0.9	21	0.9	18	0.7	25	0.9	145	1.0
AR	64	2.6	56	2.3	56	2.3	50	2.1	61	2.4	65	2.3	352	2.3
CA	129	5.2	112	4.6	127	5.2	105	4.4	135	5.2	154	5.6	762	5.0
CO	41	1.6	49	2.0	52	2.1	39	1.6	54	2.1	60	2.2	295	1.9
CT	33	1.3	16	0.7	13	0.5	12	0.5	24	0.9	30	1.1	128	0.8
DE	6	0.2	2	0.1	3	0.1	5	0.2	6	0.2	5	0.2	27	0.2
DC	9	0.4	4	0.2	8	0.3	5	0.2	7	0.3	9	0.3	42	0.3
FL	22	0.9	42	1.7	38	1.6	39	1.6	58	2.3	61	2.2	260	1.7
GA	35	1.4	28	1.1	43	1.8	64	2.7	64	2.5	80	2.9	314	2.1
ID	37	1.5	32	1.3	31	1.3	25	1.0	31	1.2	17	0.6	173	1.1
IL	266	10.6	248	10.1	258	10.6	251	10.5	189	7.3	288	10.4	1,500	9.9
IN	55	2.2	46	1.9	57	2.3	68	2.8	87	3.4	85	3.1	398	2.6
IA	68	2.7	83	3.4	79	3.2	89	3.7	94	3.7	86	3.1	499	3.3
KS	90	3.6	74	3.0	71	2.9	59	2.5	75	2.9	89	3.2	458	3.0
KY	27	1.1	22	0.9	39	1.6	56	2.3	58	2.3	54	2.0	256	1.7
LA	63	2.5	61	2.5	56	2.3	61	2.5	71	2.8	70	2.5	382	2.5
ME	5	0.2	4	0.2	6	0.2	4	0.2	10	0.4	15	0.5	44	0.3
MD	9	0.4	12	0.5	12	0.5	30	1.3	17	0.7	30	1.1	110	0.7
MA	11	0.4	12	0.5	10	0.4	11	0.5	12	0.5	18	0.7	74	0.5
MI	62	2.5	61	2.5	48	2.0	48	2.0	48	1.9	43	1.6	310	2.0
MN	97	3.9	92	3.7	92	3.8	65	2.7	60	2.3	85	3.1	491	3.2
MS	71	2.8	82	3.3	62	2.5	42	1.8	41	1.6	35	1.3	333	2.2
MO	79	3.2	79	3.2	77	3.2	46	1.9	57	2.2	73	2.6	411	2.7
MT	42	1.7	42	1.7	52	2.1	54	2.3	39	1.5	27	1.0	256	1.7
NE	88	3.5	96	3.9	79	3.2	77	3.2	82	3.2	75	2.7	497	3.3
NV	12	0.5	3	0.1	10	0.4	8	0.3	10	0.4	8	0.3	51	0.3
NH	3	0.1	2	0.1	-	-	-	-	2	0.1	1	-	8	0.1
NJ	31	1.2	20	0.8	18	0.7	28	1.2	27	1.0	36	1.3	160	1.1
NM	18	0.7	16	0.7	18	0.7	15	0.6	21	0.8	18	0.7	106	0.7
NY	92	3.7	105	4.3	113	4.6	96	4.0	102	4.0	105	3.8	613	4.0
NC	26	1.0	19	0.8	19	0.8	21	0.9	27	1.0	36	1.3	148	1.0
ND	38	1.5	34	1.4	33	1.4	28	1.2	28	1.1	23	0.8	184	1.2
OH	62	2.5	58	2.4	76	3.1	71	3.0	88	3.4	98	3.5	453	3.0
OK	44	1.8	50	2.0	37	1.5	32	1.3	52	2.0	47	1.7	262	1.7
OR	37	1.5	35	1.4	46	1.9	40	1.7	57	2.2	53	1.9	268	1.8
PA	108	4.3	86	3.5	88	3.6	102	4.3	115	4.5	103	3.7	602	4.0
RI	2	0.1	1	-	-	-	-	-	-	-	-	-	3	-
SC	8	0.3	18	0.7	17	0.7	22	0.9	24	0.9	30	1.1	119	0.8
SD	29	1.2	39	1.6	28	1.1	24	1.0	21	0.8	14	0.5	155	1.0
TN	50	2.0	44	1.8	42	1.7	63	2.6	56	2.2	68	2.5	323	2.1
TX	214	8.5	239	9.7	182	7.4	223	9.3	266	10.3	260	9.4	1,384	9.1
UT	34	1.4	19	0.8	35	1.4	21	0.9	38	1.5	33	1.2	180	1.2
VT	3	0.1	5	0.2	3	0.1	4	0.2	5	0.2	4	0.1	24	0.2
VA	29	1.2	31	1.3	54	2.2	46	1.9	44	1.7	48	1.7	252	1.7
WA	64	2.6	85	3.5	49	2.0	46	1.9	35	1.4	38	1.4	317	2.1
WV	16	0.6	19	0.8	28	1.1	23	1.0	25	1.0	28	1.0	139	0.9
WI	82	3.3	74	3.0	68	2.8	70	2.9	39	1.5	45	1.6	378	2.5
WY	47	1.9	45	1.8	49	2.0	44	1.8	42	1.6	42	1.5	269	1.8
Tot	2,504	100.0	2,459	100.0	2,443	100.0	2,397	100.0	2,575	100.0	2,768	100.0	15,146	100.0

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TABLE 1-9 CONSISTS TRANSPORTING HAZMAT, BY RAILROAD

	1994			1995			1996			1997			1998			1999		
	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls
ALS	4	-	-	1	1	-	3	2	-	1	1	-	-	-	-	-	-	-
ARR	1	1	1	1	1	-	-	-	-	1	1	-	1	1	-	2	2	2
ATK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BAR	2	2	-	1	-	-	2	-	-	-	-	-	-	-	-	3	2	1
BLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BNSF	139	55	7	157	61	7	132	57	5	122	54	3	144	73	6	210	91	10
BRC	13	10	-	12	3	-	12	7	-	10	7	-	2	1	-	13	5	1
CR	21	19	2	29	27	4	25	25	1	32	26	3	37	33	5	22	19	3
CRSH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-
CSX	29	19	2	31	21	3	47	28	5	62	33	4	99	43	9	110	53	4
DH	3	2	-	1	1	-	-	-	-	-	-	-	1	1	1	6	1	-
DME	1	1	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-
DMIR	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-
DWP	-	-	-	3	3	-	2	1	-	1	1	-	-	-	-	1	1	-
EJE	1	1	-	2	2	-	4	3	-	2	-	-	3	-	-	3	1	-
FEC	2	-	-	1	-	-	2	-	-	4	1	-	1	-	-	3	-	-
GRS	2	-	-	-	-	-	-	-	-	1	1	-	3	1	-	7	5	-
GTW	1	1	-	4	4	1	1	-	-	2	2	-	7	7	1	6	4	-
GWWR	2	2	1	1	1	-	5	4	-	1	1	1	4	1	-	2	2	-
IC	36	19	6	23	15	-	44	26	3	24	18	2	34	21	3	26	25	2
IHB	5	4	-	14	5	-	-	-	-	2	2	-	5	2	1	10	4	-
IMRL	-	-	-	-	-	-	-	-	-	8	3	-	11	2	1	12	6	2
KCS	12	11	1	9	2	-	2	1	1	12	4	2	9	3	1	21	10	2
LI	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MBTA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MNCW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MRL	8	4	1	12	5	1	14	5	1	14	8	-	6	2	-	11	7	2
NICD	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NIRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NJTR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NS	17	8	2	18	6	1	27	17	4	39	23	4	29	7	2	28	13	-
PAL	-	-	-	1	1	-	5	4	-	4	3	1	3	3	-	-	-	-
PATH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCMZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PTRA	6	6	-	4	4	1	-	-	-	2	1	-	7	6	-	-	-	-
SCAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SEPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SOO	17	1	1	31	15	1	16	10	1	11	4	-	9	5	2	15	4	-
TM	-	-	-	-	-	-	2	-	-	2	1	1	2	2	-	4	1	1
TRRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
UP	168	66	7	161	82	5	154	67	10	135	59	6	163	70	8	142	71	9
URR	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
WC	16	6	-	25	8	-	17	9	1	10	1	-	3	-	-	11	1	-
WE	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHE	50	31	5	49	37	3	44	25	2	38	22	4	43	32	3	43	23	3
Tot	558	271	36	596	308	27	562	292	34	540	277	31	628	317	43	716	356	42

Cnt = Number of Consists; Dmg = Damaged; Rls = Releases

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TABLE 1-10 CONSISTS TRANSPORTING HAZMAT, BY STATE

	1994			1995			1996			1997			1998			1999		
	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls	Cnt	Dmg	Rls
AL	15	9	1	6	4	1	14	8	-	15	6	-	18	5	-	15	5	-
AK	1	1	1	1	1	-	-	-	-	1	1	-	1	1	-	2	2	2
AZ	9	5	2	16	13	1	14	9	2	10	6	2	10	8	-	11	8	2
AR	17	5	-	13	6	-	23	7	-	7	3	1	15	8	1	18	8	-
CA	46	22	4	30	18	1	35	19	4	24	10	-	35	18	1	43	22	4
CO	6	2	-	9	6	-	12	4	1	4	2	-	17	7	-	16	3	-
CT	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	4	1	1
DE	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
DC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
FL	5	2	-	3	2	1	2	-	-	6	2	1	9	3	2	10	3	-
GA	7	4	1	10	3	-	8	4	1	12	5	-	11	3	-	6	3	1
ID	5	4	1	8	4	-	8	4	-	10	3	1	8	3	1	6	3	1
IL	45	25	2	72	24	2	69	35	2	52	31	3	46	28	5	68	33	5
IN	8	8	-	11	8	-	7	3	-	11	7	-	12	7	-	24	12	-
IA	6	3	1	21	9	-	14	9	2	23	11	1	15	5	1	23	8	2
KS	20	7	-	15	4	-	24	14	-	20	8	1	13	4	1	18	6	2
KY	7	4	-	3	1	-	16	10	1	18	13	1	15	8	-	17	9	-
LA	27	16	3	23	14	1	20	14	1	24	14	2	18	11	1	30	22	2
ME	3	3	-	1	-	-	3	-	-	2	2	-	3	2	-	9	6	1
MD	2	2	-	1	1	-	2	1	1	5	4	1	3	-	-	5	2	-
MA	3	-	-	2	2	-	-	-	-	3	1	1	2	-	-	4	2	-
MI	6	3	-	9	5	1	4	3	-	7	4	-	14	9	1	7	3	-
MN	20	5	1	16	11	-	11	6	1	11	3	-	17	7	-	20	7	-
MS	21	13	2	14	8	-	13	5	1	10	4	1	8	3	1	11	6	2
MO	13	6	1	21	9	3	13	6	-	12	9	-	13	5	1	25	10	1
MT	14	5	1	14	5	1	20	8	1	18	10	-	14	5	-	19	9	4
NE	16	8	1	25	14	1	12	3	1	8	1	-	21	10	1	16	7	1
NV	5	-	-	-	-	-	3	2	-	1	-	-	7	3	1	1	1	-
NH	1	-	-	2	1	-	1	-	-	-	-	-	1	1	-	1	1	-
NJ	6	5	-	3	3	-	1	1	-	5	2	-	6	6	2	7	7	-
NM	8	2	1	10	2	1	9	5	-	7	3	-	11	3	-	7	3	-
NY	7	6	-	7	5	2	7	7	1	5	5	2	7	6	1	17	10	1
NC	6	2	-	4	2	-	9	8	2	6	3	1	7	4	-	13	8	1
ND	5	2	1	6	3	1	7	2	-	2	1	-	6	3	1	6	5	-
OH	15	9	3	15	13	2	15	12	-	16	11	1	16	11	2	12	5	-
OK	14	5	-	20	9	2	10	5	-	4	2	1	12	7	-	14	6	-
OR	5	4	-	5	3	-	10	4	2	11	4	-	12	4	1	16	4	-
PA	12	8	2	12	12	1	10	8	-	14	11	-	20	14	3	14	9	2
RI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SC	1	1	-	3	2	-	6	5	1	4	1	-	9	6	2	11	6	-
SD	1	1	-	-	-	-	1	-	-	2	1	-	3	1	-	-	-	-
TN	15	7	2	13	6	-	18	11	2	23	13	2	32	9	3	26	16	1
TX	72	33	4	76	42	5	58	26	3	83	43	3	91	55	4	86	46	4
UT	12	5	-	6	1	-	5	2	-	6	5	1	10	6	-	5	4	1
VT	1	1	-	2	-	-	2	-	-	1	-	-	-	-	-	1	-	-
VA	-	-	-	3	1	-	6	5	1	5	3	1	7	3	1	6	1	-
WA	13	4	-	26	10	-	6	2	-	14	2	-	14	7	1	14	6	-
WV	-	-	-	7	6	-	3	1	-	2	1	1	4	2	2	3	3	-
WI	19	5	-	24	11	-	19	10	1	11	2	-	6	3	1	11	2	-
WY	18	9	1	8	4	-	12	4	2	3	2	1	9	3	1	17	12	1
Tot	558	271	36	596	308	27	562	292	34	540	277	31	628	317	43	716	356	42

Cnt = Number of Consists; Dmg = Damaged; Rls = Releases

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TABLE 1-11 TOTAL HIGHWAY-RAIL CROSSING INCIDENTS BY RAILROAD

	At Public Crossing						At Private Crossing					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Alton & Southern RR	3	1	1	-	1	-	-	-	-	-	-	-
Alaska RR Corp.	3	3	5	4	3	2	-	-	1	1	1	1
Amtrak (Nat'l RR Passenger Corp.)	147	138	132	150	145	158	25	16	18	26	25	23
Bangor & Aroostook RR	2	1	1	2	1	4	3	2	2	1	1	2
Bessemer & Lake Erie RR Co.	1	-	2	5	1	-	-	1	-	-	-	-
Burlington Northern Santa Fe	625	667	528	537	462	446	94	105	104	74	79	82
Belt Rwy Co. Of Chicago	2	5	-	2	1	1	-	-	-	-	-	-
Consolidated Rail Corp.	283	212	218	173	156	58	25	24	24	14	12	6
Conrail Shared Assets	-	-	-	-	-	11	-	-	-	-	-	2
CSX Transportation	494	553	446	432	378	383	46	43	35	37	43	42
Delaware & Hudson Rwy Co.	5	7	6	9	2	3	3	6	2	3	-	3
Dakota, Minnesota & Eastern RR	15	17	10	19	14	11	2	1	1	2	-	-
Duluth, Missabe & Iron Range Rwy	3	1	3	2	1	2	-	-	1	-	-	-
Duluth, Winnipeg & Pacific Rwy	1	1	2	4	2	2	-	-	-	-	-	-
Elgin, Joliet & Eastern Rwy Co.	3	9	7	3	6	6	2	6	2	2	2	1
Florida East Coast Rwy Co.	28	26	28	20	17	20	2	-	-	-	1	2
Guilford Rail System	7	5	9	13	5	4	1	3	-	2	-	-
Grand Trunk Western RR Inc.	57	47	43	38	13	22	3	3	-	2	1	2
Gateway Western Rwy	10	6	7	6	5	4	-	1	2	-	-	-
Illinois Central RR Co.	128	119	124	115	114	111	10	9	12	21	12	8
Indiana Harbor Belt RR Co.	17	17	12	10	10	10	-	1	2	4	-	3
I & M Rail Link, LLC	-	-	-	16	37	30	-	-	-	4	5	4
Kansas City Southern Rwy Co.	166	188	165	171	176	132	14	19	13	16	14	12
Long Island Rail Road	5	11	10	4	6	6	-	-	-	-	-	-
Massachusetts Bay Transit Auth.	-	-	1	4	3	2	-	-	-	1	-	-
Metro North Commuter RR Co.	3	4	7	2	5	2	3	-	2	1	1	1
Montana Rail Link	10	9	12	15	11	3	3	4	10	8	5	5
Northern IN Commuter Trans. Dist	9	7	10	13	9	6	1	1	-	-	3	-
Northeast IL Reg Commuter Rail	23	15	21	15	11	20	-	3	2	1	1	1
New Jersey Transit Rail	9	6	12	10	8	7	-	2	-	-	-	-
Norfolk Southern Corp.	667	608	500	446	432	497	82	83	68	62	61	67
Other Railroads	409	338	369	318	302	328	43	27	36	44	48	51
Paducah & Louisville Rwy Co.	4	4	4	9	11	6	-	1	-	2	1	-
Port Authority Trans Hudson	-	-	-	-	-	-	1	-	-	-	-	-
Peninsula Commuter(San Mateo Cnty	-	-	-	-	2	5	-	-	-	-	-	-
Port Terminal RR Association	3	5	4	4	3	-	9	4	1	1	2	1
Southern CA Regional Rail Auth.	4	12	10	8	8	8	-	-	-	1	-	2
Southeastern PA Trans. Authority	4	4	1	1	1	1	1	-	-	-	-	-
Soo Line RR Co.	84	73	77	49	45	43	6	12	8	6	4	8
Texas Mexican RR Co.	6	2	4	12	12	7	2	-	-	-	1	-
Terminal RR Assn Of St. Louis	3	1	2	-	-	-	-	-	-	-	-	-
Union Pacific RR Co.	1,126	919	871	680	590	656	87	96	115	103	91	69
Union RR Co. (Pittsburgh)	-	-	-	1	-	-	-	-	2	-	-	-
Wisconsin Central Ltd.	104	93	105	81	68	66	8	5	5	11	6	1
Wheeling & Lake Erie Rwy Co.	30	19	19	11	9	7	-	2	1	1	2	-
Total	4,503	4,153	3,788	3,414	3,086	3,090	476	480	469	451	422	399

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TABLE 1-12 TOTAL HIGHWAYRAIL CROSSING INCIDENTS BY STATE

	At Public Crossing						At Private Crossing						At Public Crossing			At Private Crossing		
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	Cnt	Kld	Nonf	Cnt	Kld	Nonf
AL	172	168	142	121	134	112	16	10	15	14	11	12	849	87	355	78	1	17
AK	3	3	5	4	3	2	-	-	1	1	1	1	20	4	11	4	-	-
AZ	24	34	25	25	32	30	7	4	5	2	3	3	170	18	54	24	1	5
AR	139	150	131	100	104	95	6	11	14	18	12	10	719	101	284	71	11	21
CA	183	169	172	133	159	175	33	31	29	26	31	29	991	144	308	179	29	80
CO	43	53	25	24	25	28	9	6	8	4	7	5	198	31	79	39	7	12
CT	4	6	9	4	8	6	6	-	3	2	2	2	37	2	14	15	-	8
DE	5	3	4	4	4	10	-	2	-	-	1	1	30	3	17	4	-	1
DC	-	-	2	-	-	-	-	-	-	-	1	-	2	-	-	1	-	-
FL	114	88	93	79	68	91	10	7	9	10	7	4	533	87	229	47	7	19
GA	148	147	136	124	119	125	13	13	19	14	21	11	799	74	270	91	7	32
ID	39	33	43	27	25	20	6	1	6	3	2	-	187	34	67	18	-	3
IL	308	268	210	191	177	178	29	27	22	22	22	24	1,332	239	646	146	13	36
IN	273	255	211	210	176	182	9	16	13	17	18	11	1,307	155	526	84	5	30
IA	157	118	114	90	90	92	2	5	9	16	14	7	661	54	260	53	7	14
KS	94	92	101	99	62	74	3	9	12	10	9	3	522	74	206	46	3	11
KY	80	87	69	49	59	49	17	16	8	16	14	13	393	29	160	84	5	26
LA	202	205	213	179	192	164	23	18	18	24	22	16	1,155	140	562	121	12	53
ME	5	6	6	10	7	5	3	5	2	2	1	2	39	-	14	15	-	2
MD	12	11	9	16	11	16	1	1	1	2	4	2	75	1	27	11	-	1
MA	16	13	19	14	3	9	4	1	3	4	2	1	74	6	34	15	-	1
MI	158	126	136	144	96	111	5	7	6	8	8	11	771	83	397	45	4	26
MN	138	139	132	110	108	92	11	13	25	6	8	10	719	80	267	73	5	14
MS	163	146	120	133	124	126	13	13	12	15	9	8	812	124	369	70	7	28
MO	115	113	107	89	72	88	10	15	20	23	15	11	584	84	225	94	8	25
MT	18	13	23	18	19	11	12	6	11	11	8	8	102	13	47	56	4	10
NE	86	71	54	62	49	55	6	15	9	6	10	9	377	61	121	55	3	5
NV	7	5	6	-	1	3	1	3	1	1	3	3	22	5	10	12	4	3
NH	2	4	1	2	2	6	1	1	1	-	-	-	17	-	3	3	1	-
NJ	34	20	27	33	16	21	3	4	4	1	1	3	151	31	43	16	1	10
NM	17	15	23	17	14	15	3	3	3	3	3	4	101	29	51	19	2	4
NY	37	42	31	27	25	24	10	10	5	10	4	7	186	26	63	46	6	11
NC	145	122	112	103	93	77	14	13	11	11	16	22	652	49	234	87	7	35
ND	20	34	30	19	20	15	2	4	3	2	3	2	138	20	55	16	1	5
OH	229	220	174	172	142	127	11	19	12	6	12	19	1,064	143	364	79	7	16
OK	116	108	75	109	60	77	10	5	5	8	6	7	545	102	277	41	2	16
OR	38	29	28	25	30	22	6	6	15	10	14	8	172	15	33	59	11	5
PA	73	70	64	58	58	49	17	10	10	9	5	9	372	29	109	60	4	18
RI	-	1	-	1	1	-	2	-	-	-	-	-	3	-	1	2	-	1
SC	87	99	83	72	75	61	5	12	4	2	3	3	477	47	223	29	3	2
SD	29	41	20	22	14	15	2	-	-	1	1	-	141	7	59	4	-	-
TN	99	91	113	78	90	87	9	10	10	10	14	3	558	58	162	56	8	10
TX	502	423	391	368	288	322	55	51	43	53	34	43	2,294	274	1,063	279	40	112
UT	26	30	31	25	23	18	2	3	4	2	1	1	153	48	47	13	-	3
VT	3	3	3	1	3	5	3	1	3	-	1	1	18	1	8	9	-	3
VA	56	57	50	37	36	35	26	19	20	19	15	20	271	15	78	119	8	40
WA	60	50	51	57	48	39	15	33	18	7	11	12	305	23	72	96	7	25
WV	41	33	17	19	21	19	16	7	5	6	2	12	150	9	33	48	5	10
WI	176	132	144	106	97	104	6	8	6	11	8	5	759	47	334	44	5	11
WY	7	7	3	4	3	3	3	6	6	3	2	1	27	6	9	21	3	4
Tot	4,503	4,153	3,788	3,414	3,086	3,090	476	480	469	451	422	399	22,034	2,712	8,880	2,697	264	824

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TABLE 1-13 HIGHWAY-RAIL CROSSING INCIDENTS CASUALTIES BY RAILROAD

	Deaths						Nonfatal					
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999
Alton & Southern RR	-	-	-	-	-	-	3	-	1	-	1	-
Alaska RR Corp.	3	-	-	1	-	-	3	5	-	-	2	1
Amtrak (Nat'l RR Passenger Corp.)	44	63	41	53	50	52	44	70	66	123	125	146
Bangor & Aroostook RR	-	-	-	-	-	-	2	2	1	-	-	2
Bessemer & Lake Erie RR Co.	-	-	-	1	-	-	-	-	-	5	1	-
Burlington Northern Santa Fe	118	128	107	85	96	59	285	280	197	209	183	237
Belt Rwy Co. Of Chicago	-	-	-	1	-	-	1	1	-	2	-	-
Consolidated Rail Corp.	46	36	25	23	14	8	93	52	97	58	39	19
Conrail Shared Assets	-	-	-	-	-	1	-	-	-	-	-	2
CSX Transportation	58	71	42	59	55	54	266	269	196	213	161	189
Delaware & Hudson Rwy Co.	1	2	-	2	-	1	6	4	2	6	-	4
Dakota, Minnesota & Eastern RR	-	1	1	-	-	-	8	11	6	1	2	3
Duluth, Missabe & Iron Range Rwy	2	-	-	-	-	-	2	-	1	1	1	2
Duluth, Winnipeg & Pacific Rwy	1	-	-	3	1	1	-	2	2	-	1	-
Elgin, Joliet & Eastern Rwy Co.	1	-	-	-	-	2	2	5	2	2	1	2
Florida East Coast Rwy Co.	3	6	5	5	1	5	16	7	10	9	8	12
Guilford Rail System	-	1	-	1	-	-	3	-	3	2	2	2
Grand Trunk Western RR Inc.	13	3	9	7	4	3	30	28	20	33	9	4
Gateway Western Rwy	1	-	3	-	1	-	2	1	-	4	1	1
Illinois Central RR Co.	8	7	11	13	13	10	61	60	67	66	51	64
Indiana Harbor Belt RR Co.	-	-	-	-	-	-	7	8	7	6	2	-
I & M Rail Link, LLC	-	-	-	2	2	2	-	-	-	8	26	11
Kansas City Southern Rwy Co.	8	13	24	22	25	15	88	98	69	82	88	57
Long Island Rail Road	2	4	3	3	2	1	-	2	6	2	3	2
Massachusetts Bay Transit Auth.	-	-	-	1	1	-	-	-	22	1	-	-
Metro North Commuter RR Co.	-	-	1	-	-	-	4	5	3	-	-	3
Montana Rail Link	3	1	3	1	-	2	1	3	5	8	6	3
Northern IN Commuter Trans. Dist	-	-	1	-	3	1	2	-	1	2	2	-
Northeast IL Reg Commuter Rail	3	4	2	2	1	2	84	4	13	9	8	6
New Jersey Transit Rail	2	5	2	7	5	4	4	-	2	1	2	1
Norfolk Southern Corp.	81	72	49	46	44	51	219	227	192	187	140	187
Paducah & Louisville Rwy Co.	-	-	-	-	-	-	-	2	-	6	1	1
Peninsula Commuter(San Mateo Cnty	-	-	-	-	-	1	-	-	-	-	1	6
Port Terminal RR Association	-	-	-	-	1	1	1	2	4	3	2	-
Southern CA Regional Rail Auth.	2	4	3	2	4	2	-	4	1	-	-	2
Southeastern PA Trans. Authority	-	-	-	1	-	-	1	1	1	3	-	1
Soo Line RR Co.	10	7	6	2	5	4	39	32	31	26	22	19
Texas Mexican RR Co.	1	-	-	-	1	-	2	-	-	4	9	3
Terminal RR Assn Of St. Louis	-	-	-	-	-	-	-	-	2	-	-	-
Union Pacific RR Co.	177	136	133	103	89	101	464	499	376	325	262	281
Wisconsin Central Ltd.	9	5	3	3	5	6	46	55	45	42	38	36
Wheeling & Lake Erie Rwy Co.	2	-	1	2	-	-	21	11	10	3	1	4
Other Railroads	16	10	13	10	8	13	151	144	149	88	102	83
Total	615	579	488	461	431	402	1,961	1,894	1,610	1,540	1,303	1,396

TABLE 1-14 TOTAL HIGHWAY-RAIL CROSSING INCIDENT CASUALTIES BY STATE

	Deaths						Nonfatal						6 Year Total	
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	Kld	Nonf
AL	12	16	18	19	11	12	78	86	70	58	46	34	88	372
AK	3	-	-	1	-	-	3	5	-	-	2	1	4	11
AZ	3	2	4	5	4	1	11	11	5	12	9	11	19	59
AR	21	22	20	10	24	15	66	73	39	44	45	37	112	304
CA	43	28	24	22	32	24	60	70	56	65	64	73	173	388
CO	13	11	5	2	4	3	12	32	13	6	13	15	38	91
CT	-	1	-	-	1	-	7	4	3	1	4	3	2	22
DE	1	-	-	1	-	1	4	1	2	2	3	6	3	18
FL	17	23	16	12	7	19	49	53	36	42	30	38	94	248
GA	13	17	19	12	13	7	57	68	44	57	35	41	81	302
ID	9	7	6	6	4	2	14	15	15	6	14	6	34	70
IL	54	48	39	27	30	54	189	139	88	85	67	114	252	682
IN	29	29	28	23	25	26	129	91	81	112	80	63	160	556
IA	19	9	8	12	3	10	56	67	38	55	30	28	61	274
KS	16	15	13	16	9	8	32	47	40	28	30	39	77	216
KY	10	7	3	5	5	4	42	48	24	26	20	26	34	186
LA	18	28	31	30	25	20	107	105	119	111	101	71	152	614
ME	-	-	-	-	-	-	4	3	2	2	3	2	-	16
MD	-	-	-	-	-	1	5	6	7	7	2	1	1	28
MA	-	1	-	2	1	2	3	1	27	1	-	3	6	35
MI	25	5	17	14	11	15	85	70	85	89	46	48	87	423
MN	18	19	14	7	14	13	65	32	48	32	47	57	85	281
MS	25	31	15	19	24	17	70	51	69	61	63	83	131	397
MO	13	22	19	15	14	9	46	56	36	33	25	54	92	250
MT	1	4	3	1	4	4	11	4	14	11	11	6	17	57
NE	20	8	9	9	11	7	23	28	21	13	19	23	64	127
NV	2	5	1	-	1	-	3	2	5	-	2	1	9	13
NH	-	-	1	-	-	-	-	2	-	-	-	1	1	3
NJ	6	5	2	9	5	5	10	3	15	14	4	7	32	53
NM	5	5	7	6	5	3	6	11	19	6	6	7	31	55
NY	6	9	4	7	2	4	14	14	14	14	6	12	32	74
NC	12	11	9	6	15	3	48	40	53	50	48	30	56	269
ND	2	7	4	1	6	1	12	18	13	7	7	3	21	60
OH	38	36	14	26	15	21	85	82	63	46	45	59	150	380
OK	17	15	22	24	12	14	70	64	38	56	39	26	104	293
OR	2	12	1	4	5	2	12	5	5	2	9	5	26	38
PA	8	12	3	5	1	4	23	13	25	26	21	19	33	127
RI	-	-	-	-	-	-	1	1	-	-	-	-	-	2
SC	10	6	6	14	6	8	37	63	39	27	32	27	50	225
SD	1	4	2	-	-	-	15	15	9	8	6	6	7	59
TN	14	13	9	12	14	4	28	32	26	24	26	36	66	172
TX	58	55	61	54	45	41	241	229	175	198	158	176	314	1,177
UT	17	7	11	3	5	5	6	15	7	8	6	8	48	50
VT	-	-	1	-	-	-	2	3	5	-	-	1	1	11
VA	7	6	4	2	2	2	16	22	22	15	17	26	23	118
WA	4	4	6	7	6	3	21	21	18	23	5	9	30	97
WV	4	1	2	4	2	1	9	10	6	4	5	9	14	43
WI	14	13	5	6	7	7	74	61	66	53	48	43	52	345
WY	5	-	2	1	1	-	-	2	5	-	4	2	9	13
Tot	615	579	488	461	431	402	1,961	1,894	1,610	1,540	1,303	1,396	2,976	9,704

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TABLE 1-15 TRESPASSER CASUALTIES BY RAILROAD, NOT AT HRC

	Deaths						Nonfatal						6 Year Total	
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	Kld	Nonf
ALS	-	-	-	-	-	-	1	-	-	-	-	-	-	1
ARR	-	1	1	-	1	-	-	1	2	-	-	-	3	3
ATK	80	59	56	57	67	51	12	6	14	32	30	25	370	119
BLE	1	-	-	-	-	-	-	-	-	-	-	-	1	-
BNSF	72	81	60	85	104	63	68	85	77	68	70	53	465	421
CR	10	9	4	33	23	6	16	19	5	38	30	9	85	117
CRSH	-	-	-	-	-	1	-	-	-	-	-	1	1	1
CSX	64	60	51	47	64	64	59	45	54	47	55	47	350	307
DH	6	2	1	2	-	2	4	3	1	2	2	2	13	14
DME	-	-	-	1	-	-	-	-	1	2	-	1	1	4
DWP	1	-	-	-	1	-	-	-	-	-	-	-	2	-
EJE	-	-	-	-	-	-	1	-	-	-	-	-	-	1
FEC	10	12	17	14	9	10	26	19	9	13	16	7	72	90
GRS	1	1	-	3	2	2	-	2	-	6	3	1	9	12
GTW	3	3	2	2	-	-	3	4	4	1	-	2	10	14
GWWR	-	-	-	1	1	1	-	-	1	1	-	-	3	2
IC	5	1	6	4	2	6	12	13	5	7	4	2	24	43
IHB	2	3	1	2	-	-	2	5	2	2	1	2	8	14
IMRL	-	-	-	-	-	2	-	-	-	-	2	2	2	4
KCS	4	6	2	4	4	5	2	5	8	6	11	3	25	35
LI	7	13	6	14	6	4	9	9	16	37	10	3	50	84
MBTA	-	-	6	9	1	5	-	-	3	-	1	1	21	5
MNCW	11	14	2	6	4	5	2	5	4	3	2	3	42	19
MRL	1	1	2	3	-	1	3	3	1	1	-	1	8	9
NICD	2	1	-	1	-	-	-	-	-	1	-	-	4	1
NIRC	6	5	5	5	4	5	6	3	4	2	9	10	30	34
NJTR	17	25	14	15	18	13	5	9	3	5	2	3	102	27
NS	66	49	57	54	63	47	57	57	67	56	58	50	336	345
PAL	-	1	1	-	1	-	3	1	1	1	1	-	3	7
PATH	-	1	-	-	-	-	-	-	-	1	2	-	1	3
PCMZ	-	-	3	6	3	2	-	-	-	1	6	1	14	8
PTRA	-	1	-	-	-	-	-	-	-	1	-	1	1	2
SCAX	2	2	2	6	2	-	-	2	-	1	1	-	14	4
SEPA	5	1	5	4	3	6	4	4	2	6	12	7	24	35
SOO	1	2	4	3	1	3	7	8	6	1	6	1	14	29
TM	1	1	-	-	-	-	-	-	1	1	1	1	2	4
TRRA	-	-	-	-	-	-	-	-	1	-	-	-	-	1
UP	138	125	152	139	146	165	130	121	159	155	151	192	865	908
WC	1	5	1	3	1	-	4	6	7	7	3	1	11	28
WE	-	-	-	-	-	1	-	-	2	-	-	-	1	2
OTHE	12	9	10	10	5	9	16	26	14	11	24	13	55	104
Tot	529	494	471	533	536	479	452	461	474	516	513	445	3,042	2,861

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TABLE 1-16 TRESPASSER CASUALTIES BY STATE, NOT AT HRC

	Deaths						Nonfatal						6 Year Total	
	1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	Kld	Nonf
AL	5	7	7	9	13	6	8	5	12	11	5	6	47	47
AK	-	1	1	-	1	-	-	1	2	-	1	-	3	4
AZ	15	14	16	18	15	14	11	9	9	3	10	15	92	57
AR	3	-	5	1	12	10	8	4	6	8	7	7	31	40
CA	73	73	68	81	79	86	37	43	45	38	56	44	460	263
CO	7	2	5	7	8	6	9	7	4	11	10	8	35	49
CT	6	6	3	7	3	10	1	1	4	2	1	2	35	11
DE	1	-	1	-	1	1	-	-	1	-	1	1	4	3
DC	1	1	-	-	1	-	-	-	-	1	1	-	3	2
FL	31	25	23	24	23	24	32	29	14	22	35	18	150	150
GA	10	12	8	11	16	11	14	14	18	9	17	12	68	84
ID	5	3	1	-	4	2	2	2	1	4	4	1	15	14
IL	40	36	32	44	34	32	34	38	30	28	24	29	218	183
IN	7	7	7	11	5	5	7	8	6	4	10	8	42	43
IA	4	4	4	2	3	6	6	4	6	7	6	4	23	33
KS	6	2	5	2	7	4	7	2	5	4	9	9	26	36
KY	10	12	8	17	5	1	7	12	14	7	12	9	53	61
LA	11	8	6	5	7	8	13	18	9	16	11	8	45	75
ME	-	-	-	1	1	-	-	2	-	6	-	-	2	8
MD	8	9	7	4	4	10	6	6	2	2	7	6	42	29
MA	12	8	11	16	4	10	3	3	4	3	8	3	61	24
MI	8	6	10	7	5	5	10	6	7	14	7	5	41	49
MN	4	5	4	6	8	10	9	9	5	3	10	9	37	45
MS	5	1	2	3	3	8	5	5	3	1	6	4	22	24
MO	12	7	10	6	19	7	5	8	9	7	7	13	61	49
MT	4	5	5	6	3	-	4	6	3	2	-	2	23	17
NE	4	2	5	4	2	4	2	3	6	4	4	5	21	24
NV	1	3	2	2	5	4	5	1	1	4	4	3	17	18
NH	-	-	-	-	1	-	-	-	-	-	6	-	1	6
NJ	17	25	16	18	23	14	9	12	4	9	3	5	113	42
NM	7	9	5	11	7	5	3	4	12	7	8	9	44	43
NY	29	33	16	32	25	18	15	22	20	54	23	16	153	150
NC	34	18	16	19	24	21	19	9	19	22	14	12	132	95
ND	3	2	1	1	1	2	1	3	3	-	2	1	10	10
OH	10	7	12	15	12	14	13	10	10	14	21	8	70	76
OK	4	2	6	6	7	7	4	2	13	11	5	9	32	44
OR	7	8	5	12	15	8	7	6	14	8	10	5	55	50
PA	14	11	14	21	16	15	12	16	8	26	28	15	91	105
RI	-	-	1	4	2	1	-	-	-	-	1	-	8	1
SC	13	9	12	5	17	8	9	3	6	9	6	6	64	39
SD	-	1	-	1	-	-	1	-	1	2	-	1	2	5
TN	4	9	11	8	10	12	6	10	9	11	5	4	54	45
TX	48	54	60	38	50	42	62	67	89	78	78	90	292	464
UT	3	3	3	3	1	2	-	5	5	5	1	1	15	17
VT	-	1	-	-	1	-	-	-	-	-	2	-	2	2
VA	16	9	14	9	10	8	3	10	8	8	3	10	66	42
WA	15	21	13	17	13	13	17	22	10	16	7	10	92	82
WV	4	6	3	7	5	1	11	6	9	5	6	8	26	45
WI	5	6	4	11	4	2	14	8	8	10	9	4	32	53
WY	3	1	3	1	1	2	1	-	-	-	2	-	11	3
Tot	529	494	471	533	536	479	452	461	474	516	513	445	3,042	2,861

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CHAPTER 2

CURRENT YEAR SUMMARY OF ACCIDENTS/INCIDENTS AND RATES

The Federal Railroad Administration's (FRA) regulations on reporting railroad accidents/ incidents are found primarily in Title 49 of the Code of Federal Regulations (CFR), Part 225 (49 CFR Part 225). The purpose of the regulations in Part 225 is to provide FRA with accurate information concerning the hazards and risks that exist on the Nation's railroads. FRA needs this information to effectively carry out its regulatory and enforcement responsibilities under the Federal railroad safety statutes. FRA also uses this information for determining comparative trends of railroad safety and to develop hazard elimination and risk reduction programs that focus on preventing railroad injuries and accidents. Issuance of these regulations preempts States from prescribing accident/incident reporting requirements. Any State may, however, require railroads to submit to it copies of reports filed with FRA under Part 225 for accidents/incidents that occur in that State.

These FRA accident/incident reporting requirements apply to all railroads except--

1. A railroad that operates freight trains only on track inside an installation which is not part of the general railroad system of transportation or that owns no track except for track that is inside an installation that is not part of the general railroad system of transportation and used for freight operations.
2. Rail mass transit operations in an urban area that are not connected with the general railroad system of transportation.
3. A railroad that exclusively hauls passengers inside an installation that is insular or that owns no track except for track used exclusively for the hauling of passengers inside an installation that is insular. An operation is not considered insular if one or more of the following exists on its line:
 - a. A public highway-rail grade crossing that is in use;
 - b. An at-grade rail crossing that is in use;
 - c. A bridge over a public road or waters used for commercial navigation; or
 - d. A common corridor with a railroad, i.e., its operations are within 30 feet of those of any railroad.

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Part 225 covers any and all activities of a railroad related to the performance of its rail transportation business. "Railroad transportation" means any form of non-highway ground transportation that run on rails or electro-magnetic guide ways, including (1) commuter or other short-haul railroad passenger service in a metropolitan or suburban area, as well as any commuter railroad service that was operated by the Consolidated Rail Corporation as of January 1, 1979, and (2) high speed ground transportation systems that connect metropolitan areas, without regard to whether they use new technologies not associated with traditional railroads. Such term does not include rapid transit operations within an urban area that are not connected to the general railroad system of transportation.

Approximately 700 railroads currently submit accident/incident reports. It is not possible to display the safety record of each railroad in this publication. Consequently, the listing of individual railroads has been limited to those defined by the Surface Transportation Board (STB) to be Class 1 railroads, and other railroads reporting annual employees worked in excess of 400,000.

Railroads have been assigned to 1 of 3 groups in this bulletin. Group 1 corresponds to the railroads that have defined as Class 1; Group 2 includes railroads that reported at least 400,000 hours worked; and, Group 3 contains all other railroads.

In order to conserve space, most tables display the reporting code assigned to a railroad. Please see Table 2-8 for a listing of the code and railroad name.

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CHAPTER 2

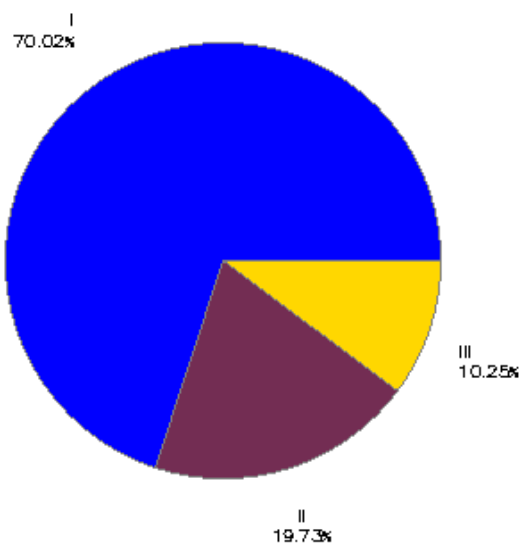
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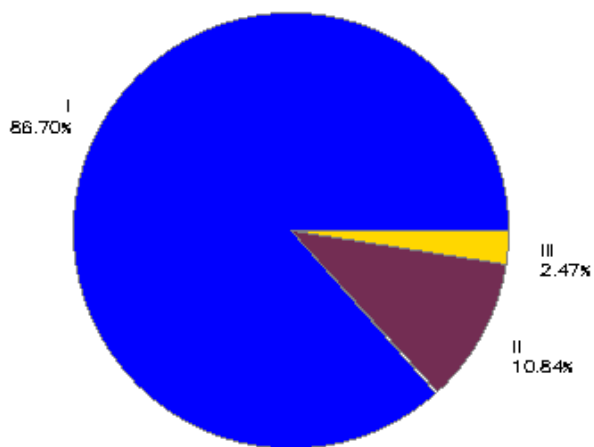
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2-1 ACCIDENTS/INCIDENTS BY RAILROAD GROUPS, 1999

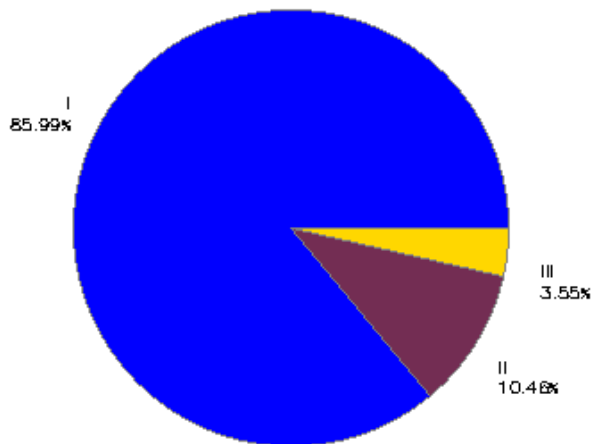


2-2 FATALITIES BY RAILROAD GROUPS, 1999

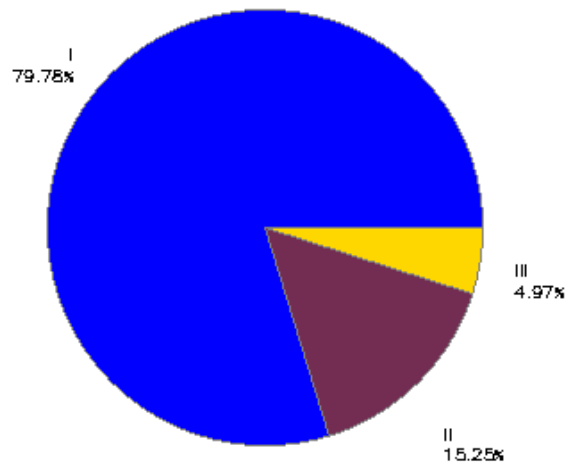


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2-3 TRAIN MILES BY RAILROAD GROUPS, 1999



2-4 EMPLOYEE HOURS BY RAILROAD GROUPS, 1999



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TABLE 2-1 ACCIDENTS/INCIDENTS, BY MONTH, 1999

	Total			Train Accidents			HRC Incidents			Other Incidents		
	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf
Jan	1,579	65	1,059	248	2	4	357	27	103	974	36	952
Feb	1,259	69	835	234	-	7	248	25	85	777	44	743
Mar	1,386	78	1,023	223	-	12	290	36	159	873	42	852
Apr	1,307	70	927	233	-	11	230	30	99	844	40	817
May	1,407	95	969	232	-	8	267	31	101	908	64	860
Jun	1,473	80	1,035	226	-	3	334	33	150	913	47	882
Jul	1,529	88	1,086	268	1	16	297	30	148	964	57	922
Aug	1,522	92	1,045	244	3	5	311	43	103	967	46	937
Sep	1,397	75	974	242	1	39	301	39	103	854	35	832
Oct	1,344	72	962	211	-	16	272	37	111	861	35	835
Nov	1,327	81	939	194	2	3	293	43	116	840	36	820
Dec	1,246	67	846	213	-	6	289	28	118	744	39	722
Total	16,776	932	11,700	2,768	9	130	3,489	402	1,396	10,519	521	10,174

Cnt = the count of accidents. Deaths = the number of deaths. Nonf = the number of nonfatal injuries

TABLE 2-2 ACCIDENT/INCIDENT RATES, BY MONTH, 1999

	Total Rate	Train Acc Rate	EOD Rate	HRC Rate	Other Events	Tres Rate	Psgr Rate	Psgr Train Rate	Yard Track Rate	Other Track Rate
Jan	15.83	4.36	3.45	6.27	9.77	1.09	6.17	0.59	18.11	2.37
Feb	13.25	4.22	3.16	4.48	8.18	1.19	2.53	0.64	20.12	2.05
Mar	13.19	3.69	3.25	4.80	8.31	1.39	6.62	1.57	17.04	1.83
Apr	13.08	4.06	3.22	4.00	8.45	1.45	3.08	2.08	16.49	2.32
May	13.78	3.92	3.35	4.51	8.89	1.74	3.13	0.59	19.58	1.80
Jun	14.50	3.87	3.54	5.72	8.99	1.46	2.68	0.29	14.97	2.17
Jul	14.69	4.42	3.74	4.89	9.26	1.70	2.56	0.99	20.13	2.23
Aug	14.46	3.96	3.73	5.05	9.19	1.35	2.91	0.70	16.96	2.14
Sep	13.66	4.03	3.48	5.02	8.35	1.08	3.60	0.59	19.24	1.93
Oct	12.58	3.36	3.27	4.33	8.06	1.02	2.40	0.57	16.42	1.54
Nov	13.13	3.23	3.39	4.88	8.31	1.13	2.78	0.74	16.32	1.42
Dec	12.53	3.58	3.11	4.86	7.48	0.97	2.05	1.13	15.14	1.99
Total	13.72	3.89	3.39	4.90	8.60	1.30	3.33	0.87	17.51	1.98

See following page for description of rates.

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Total accident/incident rate (column 1) is the total number of reportable incidents (train accidents, highway-rail, and other incidents) times one million divided by the sum of train miles operated and employee hours worked.

Train accident and highway-rail incident rates (column 2 and 4) are the number of events per one million train miles operated.

The yard accident rate (column 9) is the number of accidents occurring on yard track per one million yard switching train miles operated.

The other track rate (line 5) is the number of accidents that did not occur on yard track per one million train miles, excluding yard switching train miles.

The employee on duty rate (column 3) is the total number of railroad employee casualties times 200,000 divided by the number of hours worked by employees.

Other events rate (column 5) is the number of other incidents times one million divided by the sum of train miles operated and employee hours worked.

The trespasser rate (column 6) is the total number of trespasser casualties, excluding those trespassers fatal or injured in highway-rail incidents, per one million train miles operated.

The passenger on train rate (column 7) is the total number of passenger casualties per 100,000,000 passenger miles. A passenger mile is the movement of one passenger for a distance of one mile.

The passenger train accident rate (column 8) is the number of accidents involving passenger trains per one million passenger train miles operated.

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TABLE 2-3 ACCIDENTS/INCIDENTS BY RAILROAD GROUPS, 1999

	Total			Train Accidents			HRC Incidents			Other Incidents		
	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf
I	11,747	808	7,805	2,112	6	101	2,825	357	1,203	6,810	445	6,501
II	3,310	101	2,752	374	3	20	285	32	110	2,651	66	2,622
III	1,719	23	1,143	282	-	9	379	13	83	1,058	10	1,051
All	16,776	932	11,700	2,768	9	130	3,489	402	1,396	10,519	521	10,174

TABLE 2-4 OPERATIONAL DATA BY RAILROAD GROUPS, 1999

	Train Miles	Freight Train Miles	Passenger Train Miles	Yard Switching Train Miles	Other Train Miles	Employee Hours	Passengers Carried
I	612,637,951	504,948,124	37,446,799	70,124,585	118,443	406,881,173	60,187,456
II	74,530,935	22,966,231	41,505,505	9,920,178	139,021	77,784,294	387,208,508
III	25,283,839	14,208,474	3,468,830	7,414,235	192,300	25,331,975	17,488,873
All	712,452,725	542,122,829	82,421,134	87,458,998	449,764	509,997,442	464,884,837

TABLE 2-5 ACCIDENT/INCIDENT RATES BY RAILROAD GROUPS, 1999

	Total Rate	Train Acc Rate	EOD Rate	HRC Rate	Other Events	Tres Rate	Psgr Rate	Psgr Train Rate	Yard Rate	Other Track Rate
I	11.52	3.45	2.82	4.61	6.68	1.30	2.31	0.93	17.50	1.63
II	21.73	5.02	4.99	3.82	17.40	1.45	4.31	0.75	21.27	2.52
III	33.96	11.15	7.63	14.99	20.90	0.87	2.04	1.73	12.54	10.58
Tot	13.72	3.89	3.39	4.90	8.60	1.30	3.33	0.87	17.51	1.98

Railroads have been assigned to 1 of 3 groups in this bulletin. Group 1 corresponds to the railroads that have been defined as Class 1; Group 2 includes railroads that reported at least 400,000 hours worked; and, Group 3 contains all other railroads.

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TABLE 2-6 ACCIDENTS/INCIDENTS BY RAILROAD, 1999

Grp- RR	Total			Train Accidents			HRC Incidents			Other Incidents			
	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	
1	ATK	1,265	105	1,161	85	-	41	181	52	146	999	53	974
	BNSF	2,303	130	1,495	481	-	13	528	59	237	1,294	71	1,245
	CR	378	20	225	104	2	6	64	8	19	210	10	200
	CSX	1,835	120	1,150	423	-	12	425	54	189	987	66	949
	GTW	172	5	131	21	-	-	24	3	4	127	2	127
	IC	304	16	186	60	-	3	119	10	64	125	6	119
	KCS	313	23	142	79	2	1	144	15	57	90	6	84
	NS	1,407	104	756	238	-	1	564	51	187	605	53	568
	SOO	282	7	203	46	-	2	51	4	19	185	3	182
	UP	3,632	278	2,356	719	2	22	725	101	281	2,188	175	2,053
2	ALS	28	-	15	13	-	-	-	-	-	15	-	15
	ARR	70	-	62	6	-	-	3	-	1	61	-	61
	BAR	39	-	28	7	-	-	6	-	2	26	-	26
	BLE	6	-	6	-	-	-	-	-	-	6	-	6
	BRC	52	-	7	44	-	-	1	-	-	7	-	7
	CRSH	57	2	29	17	-	1	13	1	2	27	1	26
	DH	59	3	49	8	-	-	6	1	4	45	2	45
	DME	53	1	32	12	-	-	11	-	3	30	1	29
	DMIR	32	-	25	7	-	-	2	-	2	23	-	23
	DWP	7	1	3	2	-	-	2	1	-	3	-	3
	EJE	61	2	41	15	-	-	7	2	2	39	-	39
	FEC	94	16	52	24	-	2	22	5	12	48	11	38
	GRS	34	2	24	7	-	-	4	-	2	23	2	22
	GWWR	34	1	20	13	-	3	4	-	1	17	1	16
	IHB	87	-	38	37	-	-	13	-	-	37	-	38
	IMRL	101	6	49	31	2	3	34	2	11	36	2	35
	LI	543	6	534	15	-	2	6	1	2	522	5	530
	MBTA	102	5	93	2	-	-	2	-	-	98	5	93
	MNCW	481	5	450	28	-	-	3	-	3	450	5	447
	MRL	42	3	24	13	-	-	8	2	3	21	1	21
	NICD	49	1	40	3	-	-	6	1	-	40	-	40
	NIRC	249	8	232	4	1	1	21	2	6	224	5	225
	NJTR	160	18	140	8	-	-	7	4	1	145	14	139
	PAL	17	-	10	3	-	1	6	-	1	8	-	8
	PATH	160	1	158	1	-	-	-	-	-	159	1	158
	PCMZ	12	3	11	-	-	-	5	1	6	7	2	5
	PTRA	13	1	6	6	-	-	1	1	-	6	-	6
	SCAX	26	2	15	4	-	1	10	2	2	12	-	12
	SEPA	366	7	351	8	-	-	1	-	1	357	7	350
	TM	32	-	18	12	-	1	7	-	3	13	-	14
	TRRA	28	-	10	18	-	-	-	-	-	10	-	10
	URR	38	-	34	4	-	-	-	-	-	34	-	34
	WC	193	6	132	35	-	5	67	6	36	91	-	91
	WE	19	1	14	1	-	-	7	-	4	11	1	10
3	GRP3	1,760	23	1,143	323	-	9	379	13	83	1,058	10	1,051

Highway-Rail Counts Are Excluded From Other Categories

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TABLE 2-7 ACCIDENT/INCIDENT RATES BY RAILROAD, 1999

Grp- RR	Total Rate	Train Acc Rate	EOD Rate	HRC Rate	Other Events	Tres Rate	Psgr Rate	Psgr Train Rate	Yard Rate	Other Track Rate	
1	ATK	15.51	2.35	4.03	5.01	12.25	2.10	1.97	1.00	17.78	1.41
	BNSF	9.26	2.96	2.39	3.25	5.20	0.71	2.87	-	15.33	1.67
	CR	10.14	5.30	2.20	3.26	5.63	0.76	-	-	22.13	1.79
	CSX	10.72	4.02	2.70	4.04	5.76	1.05	-	6.13	16.80	1.72
	GTW	17.90	4.05	5.52	4.62	13.22	0.39	-	-	9.99	1.85
	IC	18.01	6.48	3.10	12.85	7.41	0.86	-	-	173.37	2.65
	KCS	22.27	9.32	3.08	16.98	6.40	0.94	-	-	31.08	5.87
	NS	9.61	2.91	1.27	6.90	4.13	1.19	-	-	10.72	1.38
	SOO	19.63	5.71	5.74	6.33	12.88	0.50	-	-	10.86	4.08
	UP	12.99	4.08	3.49	4.11	7.83	2.02	5.29	-	27.37	1.89
2	ALS	19.83	17.26	4.56	-	10.62	-	-	-	14.60	-
	ARR	27.24	4.68	7.92	2.34	23.74	-	34.11	-	4.88	4.59
	BAR	20.97	5.75	7.78	4.93	13.98	-	-	-	52.88	3.44
	BLE	4.81	-	1.05	-	4.81	-	-	-	-	-
	BRC	29.19	94.23	1.06	2.14	3.93	-	-	-	100.05	68.86
	CRSH	12.36	10.65	1.66	8.14	5.85	1.25	-	-	11.03	9.18
	DH	14.86	3.52	5.19	2.64	11.33	1.76	-	-	21.32	0.51
	DME	35.63	14.85	8.54	13.61	20.17	1.24	-	-	34.70	12.47
	DMIR	15.19	9.61	3.34	2.75	10.92	-	-	-	25.40	6.55
	DWP	6.44	2.92	1.49	2.92	2.76	-	-	-	-	2.98
	EJE	27.81	22.21	5.14	10.37	17.78	-	-	-	30.36	17.00
	FEC	19.29	7.64	3.46	7.01	9.85	5.41	-	-	21.51	4.65
	GRS	11.25	6.71	2.02	3.83	7.61	2.87	-	-	4.65	7.24
	GWWR	25.87	16.28	7.37	5.01	12.94	1.25	-	-	46.98	3.54
	IHB	24.41	21.90	3.63	7.69	10.38	1.18	-	-	-	2.37
	IMRL	29.71	15.42	5.62	16.91	10.59	1.99	-	-	29.07	12.93
	LI	27.09	1.83	6.68	0.73	26.04	0.86	2.55	0.24	-	0.37
	MBTA	13.94	0.55	4.54	0.55	13.39	1.64	1.51	-	-	-
	MNCW	26.14	3.62	6.26	0.39	24.46	1.04	1.87	2.20	-	3.11
	MRL	8.01	3.93	2.07	2.42	4.01	0.60	-	-	17.39	1.75
	NICD	31.11	3.45	11.33	6.91	25.40	-	-	1.33	-	2.30
	NIRC	28.52	1.12	3.61	5.86	25.65	4.19	11.11	0.29	12.27	0.86
	NJTR	10.08	0.98	3.37	0.86	9.13	1.96	0.18	0.39	5.57	0.77
	PAL	13.55	4.77	2.87	9.55	6.38	-	-	-	-	6.16
	PATH	40.84	0.50	8.98	-	40.58	-	6.47	-	-	0.57
	PCMZ	6.56	-	1.06	4.67	3.83	2.80	2.14	-	-	-
	PTRA	6.90	4.82	1.25	0.80	3.19	0.80	-	-	3.21	-
	SCAX	11.50	2.32	2.97	5.80	5.31	-	0.80	0.58	-	1.74
	SEPA	42.14	1.51	9.82	0.19	41.10	2.46	31.38	1.14	-	1.14
	TM	20.29	10.74	6.09	6.26	8.24	0.89	-	-	3.83	12.84
	TRRA	23.60	29.80	2.40	-	8.43	-	-	-	16.55	-
	URR	47.29	26.96	10.38	-	42.31	-	-	-	20.22	-
	WC	19.63	6.70	4.12	12.83	9.26	0.19	-	-	18.11	3.25
	WE	13.64	1.90	2.30	13.32	7.89	1.90	-	-	-	2.32
3	GRP3	34.77	12.77	7.63	14.99	20.90	0.87	2.04	1.73	14.57	12.03

Highway-Rail Counts Are Excluded From Other Categories

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TABLE 2-8 RAILROAD RANKINGS, 1999

Group 1

RR	Train Miles	Hours	Total Rate	Train Acc Rate	EOD Rate	HRC Rate	Other Events	Tres Rate
ATK - Amtrak (Natl RR Passenger Corp.)	5	5	6	1	8	6	8	10
BNSF - Burlington Northern Santa Fe	2	2	1	3	3	1	2	3
CR - Consolidated Rail Corp.	6	6	3	7	2	2	3	4
CSX - CSX Transportation	3	3	4	4	4	3	4	7
GTW - Grand Trunk Western RR Inc.	10	10	7	5	9	5	10	1
IC - Illinois Central RR Co.	7	7	8	9	6	9	6	5
KCS - Kansas City Southern Rwy Co.	8	9	10	10	5	10	5	6
NS - Norfolk Southern Corp.	4	4	2	2	1	8	1	8
SOO - Soo Line RR Co.	9	8	9	8	10	7	9	2
UP - Union Pacific RR Co.	1	1	5	6	7	4	7	9

Group 2

RR	Train Miles	Hours	Total Rate	Train Acc Rate	EOD Rate	HRC Rate	Other Events	Tres Rate
ALS - Alton & Southern RR	25	25	17	29	20	1	19	1
ARR - Alaska RR Corp.	16	19	25	16	29	13	27	1
BAR - Bangor & Aroostook RR	18	27	19	19	28	20	24	1
BLE - Bessemer & Lake Erie RR Co.	33	20	1	1	1	1	6	1
BRC - Belt Rwy Co. Of Chicago	32	18	28	34	3	12	4	1
CRSH - Conrail Shared Assets	15	8	9	24	6	28	8	24
DH - Delaware & Hudson Rwy Co.	10	14	13	13	22	15	21	26
DME - Dakota, Minnesota & Eastern RR	23	24	31	26	30	33	26	22
DMIR - Duluth, Missabe & Iron Range Rwy	26	17	14	23	13	16	20	1
DWP - Duluth, Winnipeg & Pacific Rwy	27	34	2	11	5	17	1	1
EJE - Elgin, Joliet & Eastern Rwy Co.	28	15	26	31	21	30	25	1
FEC - Florida East Coast Rwy Co.	9	13	15	22	15	26	16	34
GRS - Guilford Rail System	21	9	7	21	7	18	10	32
GWWR - Gateway Western Rwy	24	32	22	28	27	21	22	23
IHB - Indiana Harbor Belt RR Co.	14	12	21	30	17	27	17	21
IMRL - I & M Rail Link, LLC	11	16	29	27	23	34	18	29
LI - Long Island Rail Road	1	1	24	8	26	9	31	18
MBTA - Massachusetts Bay Transit Auth.	6	6	12	4	19	8	23	25
MNCW - Metro North Commuter RR Co.	3	2	23	14	25	7	28	20
MRL - Montana Rail Link	8	10	5	15	8	14	5	16
NICD - Northern IN Commuter Trans. Dist	22	23	30	12	34	25	29	1
NIRC - Northeast IL Reg Commuter Rail	7	4	27	6	16	23	30	33
NJTR - New Jersey Transit Rail	2	3	6	5	14	11	14	28
PAL - Paducah & Louisville Rwy Co.	29	29	10	17	11	29	9	1
PATH - Port Authority Trans Hudson	12	11	32	3	31	1	32	1
PCMZ - Peninsula Commuter(San Mateo Cnty	20	22	3	1	2	19	3	31
PTRA - Port Terminal RR Association	17	28	4	18	4	10	2	17
SCAX - Southern CA Regional Rail Auth.	13	31	8	10	12	22	7	1
SEPA - Southeastern PA Trans. Authority	4	7	33	7	32	6	33	30
TM - Texas Mexican RR Co.	19	33	18	25	24	24	12	19
TRRA - Terminal RR Assn Of St. Louis	30	30	20	33	10	1	13	1
URR - Union RR Co. (Pittsburgh)	34	26	34	32	33	1	34	1
WC - Wisconsin Central Ltd.	5	5	16	20	18	31	15	15
WE - Wheeling & Lake Erie Rwy Co.	31	21	11	9	9	32	11	27

Rates are ranked from lowest to highest, train miles and employee hours are ranked most to least.

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TABLE 2-9 OPERATIONAL DATA, BY RAILROAD, 1999

RR	Total Train Miles		Employee Hours Worked		Freight Train Miles	Passenger Train Miles	Yard Switching Miles	Other Train Miles	Psgrs Carried	Psgr Miles Millions
	Cnt	%	Cnt	%						
ALS	753,210	0.11	658,569	0.13	-	-	753,210	-	-	-
ARR	1,282,020	0.18	1,287,525	0.25	680,777	184,357	410,109	6,777	651,507	21
ATK	36,160,704	5.08	45,399,073	8.90	-	34,080,000	2,080,704	-	21,544,160	5,289
BAR	1,217,853	0.17	642,355	0.13	1,161,119	-	56,734	-	-	-
BLE	294,863	0.04	952,441	0.19	278,411	-	16,452	-	-	-
BNSF	162,394,739	22.79	86,295,209	16.92	146,159,926	909,548	15,325,265	-	14,302,622	313
BRC	466,955	0.07	1,314,704	0.26	87,133	-	379,822	-	-	-
CR	19,616,230	2.75	17,664,157	3.46	16,119,990	-	3,389,370	106,870	-	-
CRSH	1,596,288	0.22	3,015,761	0.59	326,622	-	1,269,666	-	-	-
CSX	105,277,723	14.78	65,971,591	12.94	89,039,121	163,176	16,075,426	-	-	-
DH	2,274,959	0.32	1,695,183	0.33	1,946,641	-	328,318	-	-	-
DME	808,032	0.11	679,523	0.13	721,567	-	86,465	-	-	-
DMIR	728,366	0.10	1,378,269	0.27	610,260	-	118,106	-	-	-
DWP	685,217	0.10	401,509	0.08	671,232	-	13,985	-	-	-
EJE	675,224	0.09	1,517,992	0.30	411,747	-	263,477	-	-	-
FEC	3,140,446	0.44	1,731,855	0.34	2,582,656	-	557,790	-	-	-
GRS	1,043,774	0.15	1,978,064	0.39	828,843	-	214,931	-	-	-
GTW	5,190,349	0.73	4,418,149	0.87	3,788,641	-	1,401,708	-	-	-
GWWR	798,618	0.11	515,478	0.10	564,492	-	234,126	-	-	-
IC	9,261,463	1.30	7,613,504	1.49	9,046,860	-	207,650	6,953	-	-
IHB	1,689,526	0.24	1,873,911	0.37	1,689,526	-	-	-	-	-
IMRL	2,010,433	0.28	1,388,943	0.27	1,700,832	1	309,600	-	-	-
KCS	8,478,654	1.19	5,578,704	1.09	7,320,348	-	1,158,306	-	-	-
LI	8,183,500	1.15	11,862,514	2.33	-	8,183,500	-	-	82,113,322	2,239
MBTA	3,664,654	0.51	3,654,683	0.72	-	3,664,654	-	-	33,778,555	463
MNCW	7,728,021	1.08	10,672,931	2.09	-	7,728,021	-	-	67,171,138	1,920
MRL	3,309,941	0.46	1,930,626	0.38	2,838,381	11,531	460,029	-	4,113	1
NICD	868,788	0.12	706,229	0.14	114,628	754,160	-	-	3,766,259	110
NIRC	3,581,845	0.50	5,150,166	1.01	-	3,500,325	81,520	-	36,704,930	774
NJTR	8,157,509	1.14	7,723,182	1.51	-	7,679,652	358,894	118,963	53,143,256	1,095
NS	81,767,299	11.48	64,567,578	12.66	68,339,875	-	13,427,424	-	-	-
PAL	628,468	0.09	626,128	0.12	487,015	-	141,453	-	-	-
PATH	2,002,020	0.28	1,916,074	0.38	-	1,740,888	261,132	-	67,354,061	309
PCMZ	1,070,247	0.15	757,972	0.15	-	1,032,831	37,416	-	8,980,589	187
PTRA	1,245,468	0.17	637,541	0.13	-	-	1,245,468	-	-	-
SCAX	1,722,850	0.24	538,027	0.11	-	1,722,850	-	-	7,294,882	249
SEPA	5,285,881	0.74	3,399,732	0.67	-	5,285,881	-	-	26,243,742	357
SOO	8,059,333	1.13	6,304,785	1.24	6,125,113	-	1,934,220	-	-	-
TM	1,117,571	0.16	459,601	0.09	856,799	-	260,772	-	-	-
TRRA	604,127	0.08	582,289	0.11	-	-	604,127	-	-	-
UP	176,431,457	24.76	103,068,423	20.21	159,008,250	2,294,075	15,124,512	4,620	24,340,674	548
URR	148,373	0.02	655,264	0.13	-	-	148,373	-	-	-
WC	5,220,555	0.73	4,611,279	0.90	3,975,894	16,854	1,214,526	13,281	2,154	-
WE	525,333	0.07	867,974	0.17	431,656	-	93,677	-	-	-
GRP3	25,283,839	3.55	25,331,975	4.97	14,208,474	3,468,830	7,414,235	192,300	17,488,873	982
Tot	712,452,725	100.0	509,997,442	100.0	542,122,829	82,421,134	87,458,998	449,764	464,884,837	14,857

A passenger mile is the movement of a passenger for a distance of one mile.

TABLE 2-10 OPERATIONAL DATA, BY MONTH, 1999

Mon	Total Train Miles		Employee Hours Worked		Freight Train Miles	Passenger Train Miles	Yard Switching Miles	Other Train Miles	Psgrs Carried	Psgr Miles Millions
	Cnt	%	Cnt	%						
Jan	56,930,809	7.99	42,809,084	8.39	42,932,229	6,787,608	7,176,930	34,042	35,065,184	1,085
Feb	55,410,644	7.78	39,597,057	7.76	42,433,209	6,245,034	6,661,016	71,385	33,764,647	1,029
Mar	60,446,793	8.48	44,606,457	8.75	45,952,467	7,016,061	7,394,852	83,413	40,044,686	1,208
Apr	57,429,879	8.06	42,506,376	8.33	43,616,822	6,722,741	7,034,775	55,541	39,619,005	1,233
May	59,240,022	8.31	42,850,535	8.40	45,354,370	6,794,071	7,048,084	43,497	38,373,720	1,215
Jun	58,389,812	8.20	43,187,803	8.47	43,680,297	6,940,352	7,750,742	18,421	40,870,551	1,341
Jul	60,678,749	8.52	43,394,271	8.51	46,175,735	7,077,130	7,402,857	23,027	40,196,501	1,448
Aug	61,641,194	8.65	43,622,425	8.55	46,892,477	7,176,452	7,547,093	25,172	40,329,204	1,445
Sep	60,014,928	8.42	42,286,213	8.29	45,930,224	6,744,430	7,277,296	62,978	38,706,299	1,195
Oct	62,794,344	8.81	44,080,753	8.64	48,038,841	7,066,682	7,672,249	16,572	40,013,252	1,248
Nov	59,988,170	8.42	41,085,526	8.06	45,884,355	6,798,446	7,293,792	11,577	38,319,813	1,187
Dec	59,487,381	8.35	39,970,942	7.84	45,231,803	7,052,127	7,199,312	4,139	39,581,975	1,222
Tot	712,452,725	100.0	509,997,442	100.0	542,122,829	82,421,134	87,458,998	449,764	464,884,837	14,857

TABLE 2-11 SUMMARY OF ACCIDENTS/INCIDENTS BY STATE, 1999

	Total			Train Accidents			HRC Incidents			Other Incidents		
	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf	Cnt	Deaths	Nonf
AL	291	18	151	45	-	1	124	12	34	122	6	116
AK	92	-	84	6	-	-	3	-	1	83	-	83
AZ	205	15	148	25	-	-	33	1	11	147	14	137
AR	408	27	269	65	1	3	105	15	37	238	11	229
CA	1,118	114	770	154	-	16	204	24	73	760	90	681
CO	234	9	150	60	-	-	33	3	15	141	6	135
CT	206	10	166	30	-	-	8	-	3	168	10	163
DE	63	2	53	5	-	-	11	1	6	47	1	47
DC	84	-	78	9	-	-	-	-	-	75	-	78
FL	383	44	252	61	-	6	95	19	38	227	25	208
GA	398	20	216	80	-	3	136	7	41	182	13	172
ID	89	4	56	17	-	-	20	2	6	52	2	50
IL	1,470	93	1,084	288	1	10	202	54	114	980	38	960
IN	541	33	321	85	-	1	193	26	63	263	7	257
IA	354	20	201	86	4	4	99	10	28	169	6	169
KS	342	13	214	89	-	2	77	8	39	176	5	173
KY	257	5	174	54	-	3	62	4	26	141	1	145
LA	426	28	242	70	-	3	180	20	71	176	8	168
ME	69	-	49	15	-	-	7	-	2	47	-	47
MD	136	12	105	30	-	25	18	1	1	88	11	79
MA	218	12	187	18	-	-	10	2	3	190	10	184
MI	422	22	305	43	-	-	122	15	48	257	7	257
MN	452	24	315	85	-	3	102	13	57	265	11	255
MS	239	26	145	35	1	-	134	17	83	70	8	62
MO	408	18	287	73	-	3	99	9	54	236	9	230
MT	132	4	93	27	-	-	19	4	6	86	-	87
NE	412	14	295	75	-	1	64	7	23	273	7	271
NV	63	4	47	8	-	1	6	-	1	49	4	45
NH	18	-	12	1	-	-	6	-	1	11	-	11
NJ	438	21	380	36	-	1	24	5	7	378	16	372
NM	116	8	82	18	-	-	19	3	7	79	5	75
NY	1,351	25	1,237	105	-	7	31	4	12	1,215	21	1,218
NC	242	24	123	36	-	3	99	3	30	107	21	90
ND	110	3	72	23	-	1	17	1	3	70	2	68
OH	581	39	395	98	2	5	146	21	59	337	16	331
OK	216	22	108	47	-	1	84	14	26	85	8	81
OR	229	10	145	53	-	2	30	2	5	146	8	138
PA	810	20	663	103	-	2	58	4	19	649	16	642
RI	18	1	17	-	-	-	-	-	-	18	1	17
SC	154	16	80	30	-	-	64	8	27	60	8	53
SD	71	-	48	14	-	-	15	-	6	42	-	42
TN	287	17	153	68	-	1	90	4	36	129	13	116
TX	1,317	84	853	260	-	11	365	41	176	692	43	666
UT	133	7	87	33	-	-	19	5	8	81	2	79
VT	42	-	33	4	-	-	6	-	1	32	-	32
VA	224	10	143	48	-	1	55	2	26	121	8	116
WA	287	20	195	38	-	4	51	3	9	198	17	182
WV	134	2	84	28	-	-	31	1	9	75	1	75
WI	327	9	219	45	-	5	109	7	43	173	2	171
WY	159	3	114	42	-	1	4	-	2	113	3	111
ALL	16,776	932	11,700	2,768	9	130	3,489	402	1,396	10,519	521	10,174

Highway-Rail counts are excluded from other categories

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CHAPTER 3

CASUALTY REPORTING

Any event connected with the operation of a railroad that results in one or more of the following consequences must be reported on Form FRA F 6180.55a:

1. Death of a person within 365 calendar days of the accident/ incident;
2. Injury to a person, other than a railroad employee, that requires medical treatment;
3. Injury to a railroad employee that requires medical treatment or results in restriction of work for one or more work days, the loss of one or more work days, termination of employment, transfer to another job, or loss of consciousness; or
4. Any occupational illness of a railroad employee.

A railroad need not report the following:

1. Casualties at highway-rail crossing sites that do not involve the presence or operation of on-track rail equipment, or the presence of railroad employees engaged in the operation of a railroad;
2. Casualties in or about living quarters that are not on the railroad premises and that do not arise from the operation of a railroad;
3. Suicides, as determined by a coroner or other public authority;
4. Attempted suicides.

The distinction between medical treatment and first aid depends not only on the treatment provided, but also on the severity of the injury being treated. First aid is:

1. Limited to one-time treatment and subsequent observation; and
2. Involves treatment of only minor injuries, not emergency treatment of serious injuries. An injury is not minor if:

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- a. It must be treated only by a physician or licensed medical personnel;
- b. It impairs bodily function (i.e., normal use of senses, limbs, etc.);
- c. It results in damage to the physical structure of a non-superficial nature (e.g. fractures); or
- d. It involves complications requiring follow-up medical treatment.

One-time treatment of an injury should not be used as the sole basis for classifying a treatment or procedure as first aid. Medical treatment can, and often is, given on a one-time basis, e.g., the suturing of a wound. The procedures used and the skills required to treat an injury, as well as the seriousness of the injury, are all factors that must be considered when determining the type of treatment rendered.

Likewise, medical treatment cannot be determined solely on the basis of who treats a case. First aid treatment can be given by a physician, and medical treatment, by someone other than a physician.

The following are examples of typical medical treatment that are reportable:

Closure of a wound with suture (stitch), staple, Steristrip, butterfly, or the like.

The application of a cast or other professional means of immobilizing an injured part of the body, regardless of how long the cast, sling, splint, or the like, is actually worn.

Injection. Any application of medication through the use of a syringe, except a tetanus shot.

Bruise. The treatment of a bruise by drainage of blood.

Debridement. Surgical debridement, that is, the removal of dead or damaged skin.

Treatment of a burn. The treatment of a second-or third-degree burn is almost always medical treatment if the size of the affected area cannot be covered with a quarter.

Prescription medication. Any prescription medication prescribed or provided for a condition that is intended for subsequent use. A single dose taken orally or applied externally on the initial visit is considered to be first aid and is not reportable. (See definition of prescription medication.)

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Eye Injury. Removal of any object embedded in the eye, or the application of a patch or a bandage.

X-Ray. An X-Ray that is positive.

Whirlpool treatment. Any injury that requires more than one whirlpool treatment.

Multiple treatments. Any injury that results in additional treatment by a physician or other medical professional on a second or subsequent visit. This does not include a routine examination of the progress of an injury or instances where bandages or other dressings are replaced.

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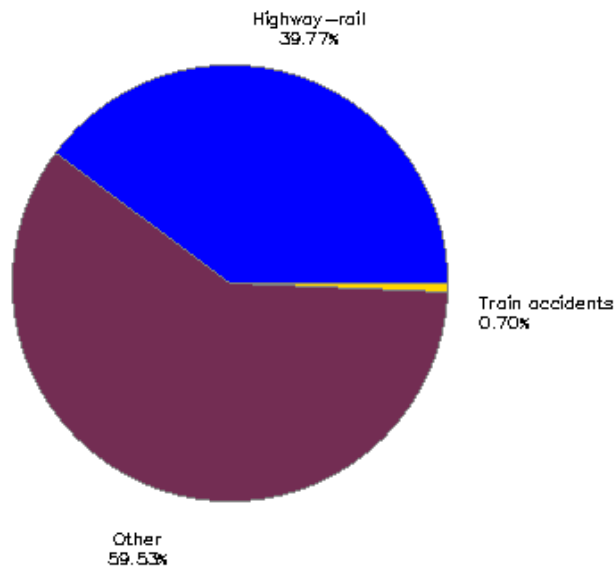
CHAPTER 3

CASUALTY REPORTING

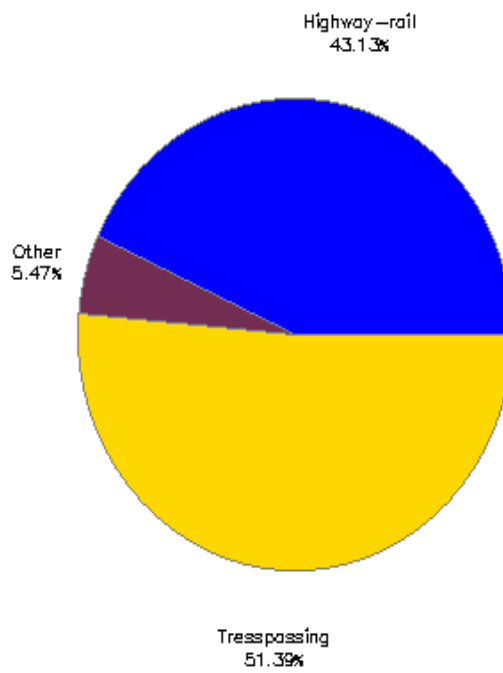
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3-1 FATAL ACCIDENTS/INCIDENTS, 1999



3-2 WHERE FATALITIES OCCURRED, 1999



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TABLE 3-1 CASUALTIES BY TYPE PERSON AND PRIMARY EVENT, 1999

	Total Incidents		Casualties		Train Accs w/o HRC		HRC Incs		Other Events	
	Fatal	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf
A - Worker on duty(rr employee)	29	8,343	31	8,622	7	106	2	140	22	8,376
B - Employee not on duty	-	201	-	216	-	7	-	1	-	208
C - Passenger on train	4	425	14	481	-	11	11	43	3	427
D - Nontrespasser	254	1,027	302	1,307	1	-	294	995	7	312
E - Trespasser	558	575	572	650	1	-	93	205	478	445
F - Worker on duty(contractor)	2	170	2	172	-	-	-	-	2	172
G - Contractor(other)	7	208	10	212	-	-	1	-	9	212
H - Worker on duty(volunteer)	-	4	-	4	-	-	-	-	-	4
I - Volunteer(other)	-	1	-	1	-	-	-	-	-	1
J - Nontrespasser, off rr property	1	23	1	35	-	6	1	12	-	17
-- Total..	855	10,977	932	11,700	9	130	402	1,396	521	10,174

The counts under column titled 'Total Incidents' are the number of incidents that resulted in a fatality or a nonfatal condition.

HRC = highway-rail crossing. Ftl = fatality. Nonf = nonfatal injury or occupational illness of a railroad employee. W/O = without. Incs = incidents.

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TABLE 3-2 FATALITIES BY TYPE PERSON KILLED AND RAILROAD, 1999

	Total	%	A	C	D	E	F	G	J
ATK	105	11.3	-	13	17	75	-	-	-
BNSF	130	13.9	3	-	51	71	-	5	-
CR	20	2.1	5	-	7	8	-	-	-
CRSH	2	0.2	-	-	1	1	-	-	-
CSX	120	12.9	-	-	43	76	-	1	-
DH	3	0.3	-	-	1	2	-	-	-
DME	1	0.1	1	-	-	-	-	-	-
DWP	1	0.1	-	-	1	-	-	-	-
EJE	2	0.2	-	-	2	-	-	-	-
FEC	16	1.7	-	-	2	13	-	1	-
GRS	2	0.2	-	-	-	2	-	-	-
GTW	5	0.5	2	-	3	-	-	-	-
GWWR	1	0.1	-	-	-	1	-	-	-
IC	16	1.7	-	-	10	6	-	-	-
IMRL	6	0.6	2	-	2	2	-	-	-
KCS	23	2.5	3	-	14	6	-	-	-
LI	6	0.6	1	-	-	5	-	-	-
MBTA	5	0.5	-	-	-	5	-	-	-
MNCW	5	0.5	-	-	-	5	-	-	-
MRL	3	0.3	-	-	2	1	-	-	-
NICD	1	0.1	-	-	1	-	-	-	-
NIRC	8	0.9	1	-	-	7	-	-	-
NJTR	18	1.9	-	1	-	17	-	-	-
NS	104	11.2	3	-	41	56	2	2	-
PATH	1	0.1	-	-	1	-	-	-	-
PCMZ	3	0.3	-	-	-	3	-	-	-
PTRA	1	0.1	-	-	1	-	-	-	-
SCAX	2	0.2	-	-	-	2	-	-	-
SEPA	7	0.8	-	-	1	6	-	-	-
SOO	7	0.8	-	-	2	5	-	-	-
UP	278	29.8	9	-	82	186	-	1	-
WC	6	0.6	-	-	6	-	-	-	-
WE	1	0.1	-	-	-	1	-	-	-
GRP3	23	2.5	1	-	11	10	-	-	1
All	932	100	31	14	302	572	2	10	1

A - Worker on duty(rr employee)

C - Passenger on train

E - Trespasser

G - Contractor(other)

I - Volunteer(other)

B - Employee not on duty

D - Nontrespasser

F - Worker on duty(contractor)

H - Worker on duty(volunteer)

J - Nontrespasser, off rr property

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TABLE 3-3 FATALITIES BY TYPE PERSON AND STATE, 1999

	Total	%	A	C	D	E	F	G	J
AL = Alabama	18	1.9	-	-	11	7	-	-	-
AR = Arkansas	27	2.9	2	-	15	10	-	-	-
AZ = Arizona	15	1.6	-	-	-	15	-	-	-
CA = California	114	12.2	2	1	10	101	-	-	-
CO = Colorado	9	1.0	-	-	3	6	-	-	-
CT = Connecticut	10	1.1	-	-	-	10	-	-	-
DE = Delaware	2	0.2	-	-	1	1	-	-	-
FL = Florida	44	4.7	-	-	6	37	-	1	-
GA = Georgia	20	2.1	-	-	4	14	2	-	-
IA = Iowa	20	2.1	4	-	8	8	-	-	-
ID = Idaho	4	0.4	-	-	1	3	-	-	-
IL = Illinois	93	10.0	2	11	33	42	-	5	-
IN = Indiana	33	3.5	1	-	22	10	-	-	-
KS = Kansas	13	1.4	1	-	8	4	-	-	-
KY = Kentucky	5	0.5	-	-	4	1	-	-	-
LA = Louisiana	28	3.0	-	-	19	9	-	-	-
MA = Massachusetts	12	1.3	-	-	2	10	-	-	-
MD = Maryland	12	1.3	-	-	1	11	-	-	-
MI = Michigan	22	2.4	2	-	11	9	-	-	-
MN = Minnesota	24	2.6	1	-	13	10	-	-	-
MO = Missouri	18	1.9	1	-	5	11	-	1	-
MS = Mississippi	26	2.8	1	-	17	8	-	-	-
MT = Montana	4	0.4	-	-	4	-	-	-	-
NC = North Carolina	24	2.6	-	-	3	21	-	-	-
ND = North Dakota	3	0.3	-	-	1	2	-	-	-
NE = Nebraska	14	1.5	3	-	4	7	-	-	-
NJ = New Jersey	21	2.3	1	1	-	19	-	-	-
NM = New Mexico	8	0.9	-	-	3	5	-	-	-
NV = Nevada	4	0.4	-	-	-	4	-	-	-
NY = New York	25	2.7	2	-	4	19	-	-	-
OH = Ohio	39	4.2	4	-	15	20	-	-	-
OK = Oklahoma	22	2.4	1	-	12	9	-	-	-
OR = Oregon	10	1.1	-	-	1	8	-	-	1
PA = Pennsylvania	20	2.1	-	-	4	16	-	-	-
RI = Rhode Island	1	0.1	-	-	-	1	-	-	-
SC = South Carolina	16	1.7	-	-	5	11	-	-	-
TN = Tennessee	17	1.8	-	-	4	12	-	1	-
TX = Texas	84	9.0	-	-	36	47	-	1	-
UT = Utah	7	0.8	-	-	4	3	-	-	-
VA = Virginia	10	1.1	-	-	2	8	-	-	-
WA = Washington	20	2.1	2	1	1	15	-	1	-
WI = Wisconsin	9	1.0	-	-	5	4	-	-	-
WV = West Virginia	2	0.2	-	-	-	2	-	-	-
WY = Wyoming	3	0.3	1	-	-	2	-	-	-
All	932	100	31	14	302	572	2	10	1

A - Worker on duty(rr employee) B - Employee not on duty
 C - Passenger on train D - Nontrespasser
 E - Trespasser F - Worker on duty(contractor)
 G - Contractor(other) H - Worker on duty(volunteer)
 I - Volunteer(other) J - Nontrespasser, off rr property

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TABLE 3-4 NONFATAL CONDITIONS BY TYPE PERSON AND RAILROAD, 1999

	Total	%	A	B	C	D	E	F	G	H	I	J
ALS	15	0.1	15	-	-	-	-	-	-	-	-	-
ARR	62	0.5	51	-	7	-	-	4	-	-	-	-
ATK	1,161	9.9	914	40	91	49	53	4	9	-	-	1
BAR	28	0.2	25	1	-	2	-	-	-	-	-	-
BLE	6	0.1	5	-	-	-	-	1	-	-	-	-
BNSF	1,495	12.8	1,028	53	9	208	81	21	95	-	-	-
BRC	7	0.1	7	-	-	-	-	-	-	-	-	-
CR	225	1.9	189	9	-	10	11	6	-	-	-	-
CRSH	29	0.2	25	-	-	2	2	-	-	-	-	-
CSX	1,150	9.8	892	23	-	157	76	1	1	-	-	-
DH	49	0.4	44	-	-	2	2	1	-	-	-	-
DME	32	0.3	28	-	-	3	1	-	-	-	-	-
DMIR	25	0.2	23	-	-	-	2	-	-	-	-	-
DWP	3	-	3	-	-	-	-	-	-	-	-	-
EJE	41	0.4	39	-	-	1	-	-	-	-	-	1
FEC	52	0.4	30	-	-	5	14	2	1	-	-	-
GRS	24	0.2	20	-	-	-	3	-	1	-	-	-
GTW	131	1.1	120	2	-	3	3	-	-	-	-	3
GWWR	20	0.2	19	-	-	-	1	-	-	-	-	-
IC	186	1.6	118	-	-	60	2	-	6	-	-	-
IHB	38	0.3	34	1	-	1	2	-	-	-	-	-
IMRL	49	0.4	37	-	-	10	2	-	-	-	-	-
KCS	142	1.2	83	-	-	52	3	-	4	-	-	-
LI	534	4.6	395	11	57	52	4	4	2	-	-	9
MBTA	93	0.8	83	1	7	1	1	-	-	-	-	-
MNCW	450	3.8	334	11	36	38	3	25	3	-	-	-
MRL	24	0.2	20	-	-	3	1	-	-	-	-	-
NICD	40	0.3	40	-	-	-	-	-	-	-	-	-
NIRC	232	2.0	92	3	86	28	16	4	-	-	-	3
NJTR	140	1.2	130	4	1	1	4	-	-	-	-	-
NS	756	6.5	406	19	-	161	74	33	61	-	-	2
PAL	10	0.1	9	-	-	-	1	-	-	-	-	-
PATH	158	1.4	86	2	20	42	-	-	6	2	-	-
PCMZ	11	0.1	4	-	4	-	3	-	-	-	-	-
PTRA	6	0.1	4	-	-	-	1	1	-	-	-	-
SCAX	15	0.1	8	-	2	-	2	3	-	-	-	-
SEPA	351	3.0	167	-	112	63	8	-	-	-	-	1
SOO	203	1.7	181	1	-	17	3	-	1	-	-	-
TM	18	0.2	14	-	-	3	1	-	-	-	-	-
TRRA	10	0.1	7	-	-	-	-	1	2	-	-	-
UP	2,356	20.1	1,788	26	29	235	239	21	12	-	-	6
URR	34	0.3	34	-	-	-	-	-	-	-	-	-
WC	132	1.1	95	-	-	36	1	-	-	-	-	-
WE	14	0.1	10	-	-	-	4	-	-	-	-	-
GRP3	1,143	9.8	966	9	20	62	26	40	8	2	1	9
All	11700	100	8,622	216	481	1,307	650	172	212	4	1	35

A - Worker on duty(rr employee) B - Employee not on duty
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TABLE 3-5 NONFATAL CONDITIONS BY TYPE PERSON AND STATE, 1999

	Total	%	A	B	C	D	E	F	G	H	I	J
AK = Alaska	84	0.7	69	1	9	1	-	4	-	-	-	-
AL = Alabama	151	1.3	102	1	1	26	12	3	6	-	-	-
AR = Arkansas	269	2.3	221	4	-	31	10	1	2	-	-	-
AZ = Arizona	148	1.3	109	3	5	9	21	-	1	-	-	-
CA = California	770	6.6	592	15	24	35	69	10	25	-	-	-
CO = Colorado	150	1.3	119	2	2	13	10	-	4	-	-	-
CT = Connecticut	166	1.4	135	4	15	7	2	3	-	-	-	-
DC = Dist Of Columbia	78	0.7	66	4	2	3	-	1	2	-	-	-
DE = Delaware	53	0.5	43	1	2	5	2	-	-	-	-	-
FL = Florida	252	2.2	174	5	3	13	43	9	4	-	-	1
GA = Georgia	216	1.8	154	1	1	31	19	6	4	-	-	-
IA = Iowa	201	1.7	165	4	-	25	5	-	2	-	-	-
ID = Idaho	56	0.5	43	2	-	6	1	4	-	-	-	-
IL = Illinois	1,084	9.3	680	27	158	82	47	17	70	-	-	3
IN = Indiana	321	2.7	245	2	1	53	15	2	2	-	-	1
KS = Kansas	214	1.8	156	2	-	32	15	1	6	1	-	1
KY = Kentucky	174	1.5	130	2	-	24	13	2	3	-	-	-
LA = Louisiana	242	2.1	153	1	2	61	11	7	4	-	-	3
MA = Massachusetts	187	1.6	167	4	8	2	5	1	-	-	-	-
MD = Maryland	105	0.9	88	1	9	1	6	-	-	-	-	-
ME = Maine	49	0.4	44	1	1	2	-	-	1	-	-	-
MI = Michigan	305	2.6	231	5	-	37	13	10	4	-	-	5
MN = Minnesota	315	2.7	244	6	-	49	13	1	2	-	-	-
MO = Missouri	287	2.5	205	6	-	52	17	4	3	-	-	-
MS = Mississippi	145	1.2	63	-	1	76	4	-	1	-	-	-
MT = Montana	93	0.8	80	2	2	6	2	-	1	-	-	-
NC = North Carolina	123	1.1	66	5	2	30	14	2	3	-	1	-
ND = North Dakota	72	0.6	68	1	-	1	1	1	-	-	-	-
NE = Nebraska	295	2.5	259	6	-	20	8	-	2	-	-	-
NH = New Hampshire	12	0.1	11	-	-	1	-	-	-	-	-	-
NJ = New Jersey	380	3.2	295	8	19	42	6	6	2	2	-	-
NM = New Mexico	82	0.7	57	2	-	8	9	5	1	-	-	-
NV = Nevada	47	0.4	41	1	-	-	4	1	-	-	-	-
NY = New York	1,237	10.6	944	30	91	102	21	28	12	-	-	9
OH = Ohio	395	3.4	314	10	2	42	18	5	3	1	-	-
OK = Oklahoma	108	0.9	63	8	-	25	10	2	-	-	-	-
OR = Oregon	145	1.2	122	3	-	8	6	3	3	-	-	-
PA = Pennsylvania	663	5.7	447	7	108	80	18	2	-	-	-	1
RI = Rhode Island	17	0.1	16	-	-	1	-	-	-	-	-	-
SC = South Carolina	80	0.7	39	3	3	23	10	1	-	-	-	1
SD = South Dakota	48	0.4	39	2	-	6	1	-	-	-	-	-
TN = Tennessee	153	1.3	96	4	-	34	6	4	9	-	-	-
TX = Texas	853	7.3	561	11	2	125	116	14	19	-	-	5
UT = Utah	87	0.7	78	-	-	5	3	-	-	-	-	1
VA = Virginia	143	1.2	100	3	1	13	19	4	-	-	-	3
VT = Vermont	33	0.3	30	-	1	-	-	1	-	-	-	1
WA = Washington	195	1.7	162	1	4	8	11	1	8	-	-	-
WI = Wisconsin	219	1.9	169	1	1	42	4	1	1	-	-	-
WV = West Virginia	84	0.7	63	-	1	7	10	1	2	-	-	-
WY = Wyoming	114	1.0	104	4	-	2	-	4	-	-	-	-
All	11700	100	8,622	216	481	1,307	650	172	212	4	1	35

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 E - Trespasser F - Worker on duty(contractor)
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 I - Volunteer(other) J - Nontrespasser, off rr property

TABLE 3-6 REPORTABLE CONDITIONS, ALL TYPE PERSONS, 1999

Condition	Cnt	%	Type of Person *									
			A	B	C	D	E	F	G	H	I	J
Bruise/contusion	2,030	16.1	1,345	32	155	297	117	32	46	-	-	6
Occ. Illness	154	1.2	141	4	-	2	1	1	4	-	1	-
Occ. illness,FATAL****	1	-	-	-	-	-	-	-	1	-	-	-
Sprain/Str., other	139	1.1	97	8	12	16	6	-	-	-	-	-
Sprain/Str.,arm/hand	442	3.5	405	5	11	7	-	7	6	1	-	-
Sprain/Str.,leg/foot	1,347	10.7	1,198	39	48	24	4	12	22	-	-	-
Sprain/Str.,head/face	328	2.6	247	14	9	36	8	2	6	-	-	6
Sprain/Str.,torso	2,530	20.0	2,333	42	33	49	13	21	35	1	-	3
Cut/abrasion	1,499	11.9	1,000	22	88	223	90	43	29	1	-	3
Puncture wound	160	1.3	138	8	1	3	3	3	4	-	-	-
Electric shock/burn	45	0.4	38	-	-	1	1	3	2	-	-	-
Other burn	89	0.7	82	1	1	2	-	1	2	-	-	-
Dislocation	108	0.9	86	3	3	5	5	4	1	-	-	1
Fracture,arm/hand	458	3.6	357	5	16	32	19	14	15	-	-	-
Fracture,fingers	2	-	2	-	-	-	-	-	-	-	-	-
Fracture,leg/foot	408	3.2	218	13	23	63	65	8	17	-	-	1
Fracture,head/face	62	0.5	22	-	3	16	16	2	3	-	-	-
Fracture,torso	170	1.3	87	4	18	44	8	1	7	1	-	-
Fracture,multiple	24	0.2	3	-	4	10	7	-	-	-	-	-
Fracture,other	9	0.1	3	-	-	3	3	-	-	-	-	-
Dental related	35	0.3	29	-	1	4	-	-	1	-	-	-
Amputation,arm/hand	46	0.4	21	1	-	-	17	4	3	-	-	-
Amputation,leg/foot	88	0.7	12	-	1	2	73	-	-	-	-	-
Amputation,head/face	1	-	1	-	-	-	-	-	-	-	-	-
Amputation,other	1	-	-	-	-	-	1	-	-	-	-	-
Fatality	931	7.4	31	-	14	302	572	2	9	-	-	1
Object in eye	209	1.7	194	5	2	-	-	6	2	-	-	-
Hernia	73	0.6	72	-	-	-	-	-	1	-	-	-
Concussion	65	0.5	18	2	6	29	6	2	2	-	-	-
Nervous shock	8	0.1	5	-	1	1	1	-	-	-	-	-
Internal injury	83	0.7	16	-	-	45	20	-	-	-	-	2
Skin reaction	59	0.5	54	1	-	-	-	-	1	-	-	3
One-time exp. to noise	21	0.2	17	-	1	-	-	-	-	-	-	3
Unspecified injury	908	7.2	289	7	41	393	166	5	3	-	-	4
One-time exp.-fumes	99	0.8	92	-	3	-	-	1	-	-	-	3
All	12,632	100	8,653	216	495	1,609	1,222	174	222	4	1	36

A - Worker on duty(rr employee) B - Employee not on duty
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 I - Volunteer(other) J - Nontrespasser, off rr property

**TABLE 3-7 TOTAL CASUALTIES BY AGE OF INDIVIDUAL, 1999
AND TYPE OF PERSON**

Age		Total		Type of Person *										
		Cnt	%	A	B	C	D	E	F	G	H	I	J	
Kld	Unk	76	0.6	-	-	11	11	54	-	-	-	-	-	-
	1-5	12	0.1	-	-	-	8	4	-	-	-	-	-	-
	6-10	8	0.1	-	-	-	3	5	-	-	-	-	-	-
	11-15	27	0.2	-	-	-	11	16	-	-	-	-	-	-
	16-20	91	0.7	-	-	-	37	53	1	-	-	-	-	-
	21-25	115	0.9	2	-	1	33	78	-	1	-	-	-	-
	26-30	74	0.6	1	-	-	18	55	-	-	-	-	-	-
	31-35	65	0.5	1	-	-	18	44	-	1	-	-	-	1
	36-40	100	0.8	3	-	-	20	74	1	2	-	-	-	-
	41-45	102	0.8	4	-	1	32	65	-	-	-	-	-	-
	46-50	63	0.5	5	-	-	19	38	-	1	-	-	-	-
	51-55	47	0.4	6	-	-	17	21	-	3	-	-	-	-
	56-60	31	0.2	8	-	-	14	7	-	2	-	-	-	-
	61-65	25	0.2	1	-	-	17	7	-	-	-	-	-	-
	66-70	23	0.2	-	-	-	10	13	-	-	-	-	-	-
	> 70	73	0.6	-	-	1	34	38	-	-	-	-	-	-
	Total	932	7.4	31	-	14	302	572	2	10	-	-	-	1
Nonf	Unk	274	2.2	5	-	109	86	55	4	9	-	-	6	
	1-5	43	0.3	-	-	10	24	8	1	-	-	-	-	
	6-10	59	0.5	-	-	5	38	15	-	-	-	-	1	
	11-15	87	0.7	-	-	3	44	38	-	-	-	-	2	
	16-20	367	2.9	84	-	13	160	88	9	6	-	-	7	
	21-25	876	6.9	504	10	27	159	102	33	41	-	-	-	
	26-30	1,254	9.9	933	20	30	134	74	23	39	-	-	1	
	31-35	1,239	9.8	956	24	35	113	57	22	28	1	-	3	
	36-40	1,334	10.6	1,058	26	46	90	58	28	26	-	1	1	
	41-45	1,795	14.2	1,542	24	29	101	49	16	28	1	-	5	
	46-50	1,755	13.9	1,521	45	43	85	25	16	15	-	-	5	
	51-55	1,311	10.4	1,133	38	21	72	27	11	9	-	-	-	
	56-60	777	6.2	653	20	31	51	12	5	4	1	-	-	
	61-65	293	2.3	213	9	23	30	11	3	3	-	-	1	
	66-70	75	0.6	16	-	14	36	6	1	-	1	-	1	
	> 70	161	1.3	4	-	42	84	25	-	4	-	-	2	
	Total	11,700	92.6	8,622	216	481	1,307	650	172	212	4	1	35	
Total	12,632	100.0	8,653	216	495	1,609	1,222	174	222	4	1	36		

A - Worker on duty(rr employee) B - Employee not on duty
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 I - Volunteer(other) J - Nontrespasser, off rr property

TABLE 3-8 TOTAL CASUALTIES BY MONTH AND TYPE PERSON, 1999

Condition		Total	Type of Person *									
			Cnt	A	B	C	D	E	F	G	H	I
Kld	Jan	65	4	-	-	23	34	-	4	-	-	-
	Feb	69	2	-	-	20	47	-	-	-	-	-
	Mar	78	3	-	11	17	45	1	1	-	-	-
	Apr	70	2	-	-	19	47	1	1	-	-	-
	May	95	2	-	-	20	72	-	1	-	-	-
	Jun	80	2	-	-	26	52	-	-	-	-	-
	Jul	88	5	-	-	21	60	-	2	-	-	-
	Aug	92	2	-	-	36	53	-	1	-	-	-
	Sep	75	4	-	1	29	40	-	-	-	-	1
	Oct	72	-	-	-	29	43	-	-	-	-	-
	Nov	81	5	-	-	38	38	-	-	-	-	-
	Dec	67	-	-	2	24	41	-	-	-	-	-
	Total	932	31	-	14	302	572	2	10	-	-	1
Nonf	Jan	1,059	734	33	67	122	55	15	27	-	-	6
	Feb	835	624	14	26	91	42	17	17	-	-	4
	Mar	1,023	721	26	69	112	60	19	14	-	-	2
	Apr	927	683	15	38	72	80	18	16	-	-	5
	May	969	716	16	38	99	54	17	26	1	-	2
	Jun	1,035	762	18	36	138	56	12	11	2	-	-
	Jul	1,086	806	12	37	129	68	11	17	-	1	5
	Aug	1,045	811	20	42	86	54	11	19	-	-	2
	Sep	974	732	15	42	105	52	15	13	-	-	-
	Oct	962	720	24	30	114	42	14	12	1	-	5
	Nov	939	692	10	33	116	52	12	24	-	-	-
	Dec	846	621	13	23	123	35	11	16	-	-	4
	Total	11,700	8,622	216	481	1,307	650	172	212	4	1	35
Total	12,632	8,653	216	495	1,609	1,222	174	222	4	1	36	

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**TABLE 3-9 TOTAL CASUALTIES BY TIME OF DAY, 1999
AND TYPE OF PERSON**

Time	Total		Type of Person *										
	Cnt	%	A	B	C	D	E	F	G	H	I	J	
AM	1	342	2.7	255	1	2	25	55	1	3	-	-	-
	2	381	3.0	267	3	6	28	72	3	2	-	-	-
	3	253	2.0	192	1	-	15	39	1	3	-	-	2
	4	237	1.9	171	10	1	17	33	3	2	-	-	-
	5	268	2.1	188	11	2	23	40	1	3	-	-	-
	6	332	2.6	193	27	21	49	32	3	4	-	-	3
	7	566	4.5	315	24	52	116	36	7	16	-	-	-
	8	852	6.7	609	5	54	101	47	17	18	1	-	-
	9	804	6.4	624	9	29	73	36	17	14	1	-	1
	10	954	7.6	762	6	13	86	53	17	17	-	-	-
	11	994	7.9	764	11	30	106	51	15	14	1	-	2
	12	307	2.4	218	5	5	19	50	2	5	-	-	3
Total	6,290	49.8	4,558	113	215	658	544	87	101	3	-	11	
PM	1	791	6.3	555	6	18	127	54	16	9	-	-	6
	2	740	5.9	549	12	19	93	39	9	16	-	1	2
	3	600	4.7	382	12	22	95	54	14	15	1	-	5
	4	577	4.6	370	10	29	89	55	12	11	-	-	1
	5	577	4.6	325	8	59	107	63	3	10	-	-	2
	6	487	3.9	298	8	25	81	58	7	8	-	-	2
	7	452	3.6	276	9	11	80	63	6	7	-	-	-
	8	401	3.2	245	9	9	71	56	2	8	-	-	1
	9	418	3.3	242	7	53	42	62	-	10	-	-	2
	10	338	2.7	206	6	7	39	67	5	8	-	-	-
	11	333	2.6	213	7	3	30	65	4	9	-	-	2
	12	628	5.0	434	9	25	97	42	9	10	-	-	2
Total	6,342	50.2	4,095	103	280	951	678	87	121	1	1	25	
Total	12,632	100	8,653	216	495	1,609	1,222	174	222	4	1	36	

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CHAPTER 4

EMPLOYEE ON DUTY CASUALTIES

The work environment is the physical location, equipment, materials processed or used, and activities of a railroad employee associated with his or her work, whether on or off the railroad's property. There are no stated exclusions of place or circumstance. All activities of a Worker on Duty--Employee (Class A) while in the work environment are presumed to be work-related for accident/incident reporting purposes.

An employee is in the work environment:

1. While engaged in work activity or apprenticeship/vocational training required by the employer.
2. While on break, in the rest room, or in storage areas when located on the employer's premises.
3. While performing work for pay or compensation at home, pursuant to the employer's instructions, if the injury or illness is directly related to the performance of work rather than the general home environment or setting.
4. While traveling on business, including to and from customer contacts. Employees in travel status (i.e., traveling on company business) should be considered engaged in work-related activities during all of their time spent in the "interest of their company". This includes, but is not limited to, travel to and from customer contacts, conducting job tasks, and entertaining or being entertained for the purpose of transacting, discussing, or promoting business.
5. While employee is engaged in work activity where a vehicle is considered the work environment (e.g., truck, taxi).
6. While at conferences where attendance is expected or required by the employer.
7. Some workplaces provide living quarters for employees on their premises. In these workplaces, injuries or illnesses are presumed to be work-related if the employee is on-duty or engaged in a work activity. The injury or illness is also considered work-related if the employee was harmed as a result of a serious workplace accident such as a chemical release, fire, explosion, derailment, collision, or building collapse. All other injuries and illnesses occurring during off-duty hours while in living quarters are considered non-work-related. The worker should be classified as an "employee not on duty" in these cases if a reportable condition occurs.

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Employees present in the work environment, but for reasons unconnected with their employment, generally are not reportable as Worker on Duty--Employee (Class A) should they be injured. These individuals are more appropriately classified as employees not on duty, non-trespassers on railroad property, passengers on train, etc., and if hurt should be identified as such. The following are examples:

1. Injuries or illnesses that occur to employees present at their employer's establishment as a member of the general public rather than as a worker.
2. Injuries or illnesses that are solely the result of employees doing personal tasks (unrelated to their employment) at the establishment outside of normal working hours.
3. Injuries or illnesses occurring on company parking lots and access roads while employees are arriving at or leaving work.
4. An injury or illness solely associated with participation in voluntary community or civic projects, e.g., Operation Lifesaver presentations; unless the employee was under pay status.

Injury/Illness Distinction. The distinction between occupational illnesses and injuries is based primarily on the event or exposure that precipitated the employee's condition. Injuries are generally the result of instantaneous events; for example, an employee is struck by an object and sustains a cut or a bruise. Illnesses, on the other hand, are usually the result of an exposure that occurs over time; such as hearing impairment caused by working in a noisy environment. Exceptions to this general rule are muscular sprains, strains, or soreness, occurring after work activity for which no single movement or event can be isolated as the primary causal factor. Physical conditions of this type are to be recorded as injuries when the condition is attributable to activity of limited duration--typically no more than a single work shift.

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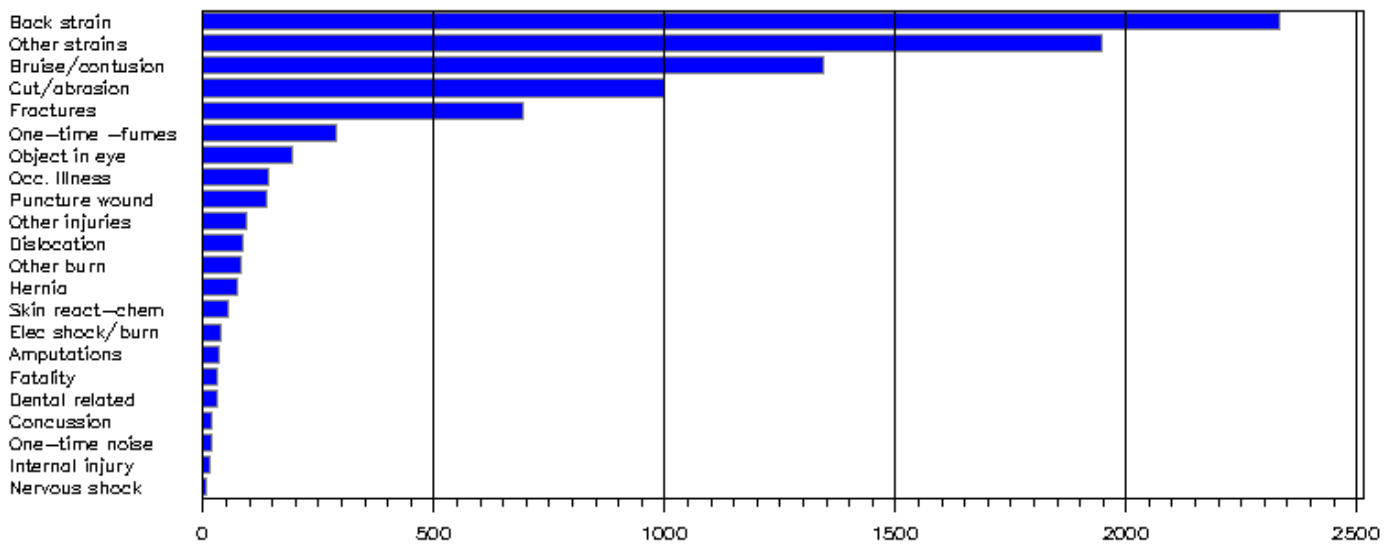
EMPLOYEE ON DUTY CASUALTIES

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4-1 EMPLOYEE ON DUTY CASES, 1999



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TABLE 4-1 REPORTABLE CONDITIONS TO RR EMPLOYEES ON DUTY, 1999

Condition	Total		Days Absent			Absent Cases		Term./Trans.	Days Restricted			Hazmat Exp.
	Cnt	%	Cnt	%	Avg.	Cnt	%	Cnt	Cnt	%	Avg.	Cnt
Bruise/contusion	1,345	15.5	52,108	15.1	39	951	16.5	6	9,086	12.1	7	-
Occ. Illness	141	1.6	3,777	1.1	27	91	1.6	-	2,257	3.0	16	2
Sprain/Str., other	97	1.1	3,863	1.1	40	79	1.4	-	217	0.3	2	-
Sprain/Str., arm/hand	405	4.7	11,226	3.3	28	240	4.2	-	5,324	7.1	13	-
Sprain/Str., leg/foot	1,198	13.8	52,388	15.2	44	932	16.1	3	12,720	17.0	11	-
Sprain/Str., head/face	247	2.9	13,423	3.9	54	182	3.1	-	2,755	3.7	11	-
Sprain/Str., torso	2,333	27.0	125,469	36.4	54	1,771	30.6	7	25,748	34.4	11	-
Cut/abrasion	1,000	11.6	14,024	4.1	14	395	6.8	3	3,982	5.3	4	-
Puncture wound	138	1.6	1,572	0.5	11	42	0.7	-	224	0.3	2	-
Electric shock/burn	38	0.4	583	0.2	15	26	0.4	-	21	-	1	-
Other burn	82	0.9	1,495	0.4	18	38	0.7	-	264	0.4	3	1
Dislocation	86	1.0	5,148	1.5	60	65	1.1	-	1,115	1.5	13	-
Fracture, arm/hand	357	4.1	11,023	3.2	31	198	3.4	3	5,510	7.4	15	-
Fracture, fingers	2	-	23	-	12	1	-	-	-	-	-	-
Fracture, leg/foot	218	2.5	16,201	4.7	74	183	3.2	1	2,593	3.5	12	-
Fracture, head/face	22	0.3	797	0.2	36	17	0.3	-	89	0.1	4	-
Fracture, torso	87	1.0	5,815	1.7	67	72	1.2	1	776	1.0	9	-
Fracture, multiple	3	-	523	0.2	174	3	0.1	-	-	-	-	-
Fracture, other	3	-	283	0.1	94	3	0.1	-	30	-	10	-
Dental related	29	0.3	240	0.1	8	7	0.1	-	5	-	-	-
Amputation, arm/hand	21	0.2	2,359	0.7	112	18	0.3	2	256	0.3	12	-
Amputation, leg/foot	12	0.1	2,118	0.6	177	12	0.2	1	5	-	-	-
Amputation, head/face	1	-	13	-	13	1	-	-	-	-	-	-
Fatality	31	0.4	-	-	-	-	-	-	-	-	-	-
Object in eye	194	2.2	360	0.1	2	61	1.1	-	173	0.2	1	-
Hernia	72	0.8	2,722	0.8	38	66	1.1	1	480	0.6	7	-
Concussion	18	0.2	1,249	0.4	69	16	0.3	-	134	0.2	7	1
Nervous shock	5	0.1	241	0.1	48	3	0.1	-	20	-	4	-
Internal injury	16	0.2	848	0.2	53	15	0.3	1	10	-	1	-
Skin reaction	54	0.6	778	0.2	14	32	0.6	-	31	-	1	20
One-time exp. to noise	17	0.2	483	0.1	28	14	0.2	-	7	-	-	-
Unspecified injury	289	3.3	11,681	3.4	40	174	3.0	-	1,065	1.4	4	-
One-time exp.-fumes	92	1.1	1,914	0.6	21	71	1.2	-	58	0.1	1	18
All	8,653	100	344,747	100	40	5,779	100	29	74,955	100	9	42

Cnt = count. % = percent of column total. Avg. = average. Term. = terminated. Trans. = transferred. Hazmat Exp. = condition was result of hazardous material exposure.

A day absent from work is any day (consecutive or not) following the date of injury or diagnosis of occupational illness that a railroad employee does not report to work for reasons connected with a reportable conditions.

A restricted work day is the inability of a railroad employee to perform all normally assigned duties of his or her regular job following a reportable condition. It includes temporary assignment to another job, being placed on restricted duties, or when the employee works less than full time at a regular job.

The count of ||Absent cases= is the number of cases that resulted in an employee being absent from work.

Safety Statistics Annual Report 1999

TABLE 4-2 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, BY RAILROAD, 1999

RR	Total		Deaths		Nonfatal		Days Absent			Absent Cases		Term./ Trans.	Days Restricted			Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%	Cnt	%	Avg.	Cnt	%	Cnt	Cnt	%	Avg.	Cnt
ALS	15	0.2	-	-	15	0.2	250	0.1	17	11	0.2	-	-	-	-	-
ARR	51	0.6	-	-	51	0.6	833	0.2	16	30	0.5	-	376	0.5	7	-
ATK	914	10.6	-	-	914	10.6	27,352	7.9	30	693	12.0	-	157	0.2	-	-
BAR	25	0.3	-	-	25	0.3	287	0.1	11	19	0.3	-	78	0.1	3	-
BLE	5	0.1	-	-	5	0.1	119	-	24	2	-	-	109	0.1	22	-
BNSF	1,031	11.9	3	9.7	1,028	11.9	34,576	10.0	34	546	9.4	-	40,967	54.7	40	6
BRC	7	0.1	-	-	7	0.1	122	-	17	5	0.1	-	14	-	2	-
CR	194	2.2	5	16.1	189	2.2	6,200	1.8	32	160	2.8	-	217	0.3	1	-
CRSH	25	0.3	-	-	25	0.3	3,682	1.1	147	24	0.4	-	-	-	-	-
CSX	892	10.3	-	-	892	10.3	68,907	20.0	77	739	12.8	1	455	0.6	1	2
DH	44	0.5	-	-	44	0.5	905	0.3	21	34	0.6	-	70	0.1	2	-
DME	29	0.3	1	3.2	28	0.3	449	0.1	15	15	0.3	-	198	0.3	7	-
DMIR	23	0.3	-	-	23	0.3	13	-	1	3	0.1	-	37	-	2	-
DWP	3	-	-	-	3	-	13	-	4	1	-	-	26	-	9	-
EJE	39	0.5	-	-	39	0.5	1,390	0.4	36	21	0.4	3	263	0.4	7	-
FEC	30	0.3	-	-	30	0.3	249	0.1	8	17	0.3	1	41	0.1	1	-
GRS	20	0.2	-	-	20	0.2	390	0.1	20	15	0.3	1	-	-	-	-
GTW	122	1.4	2	6.5	120	1.4	3,189	0.9	26	60	1.0	3	1,060	1.4	9	-
GWRR	19	0.2	-	-	19	0.2	97	-	5	6	0.1	-	138	0.2	7	-
IC	118	1.4	-	-	118	1.4	4,328	1.3	37	79	1.4	8	318	0.4	3	1
IHB	34	0.4	-	-	34	0.4	2,170	0.6	64	32	0.6	-	-	-	-	-
IMRL	39	0.5	2	6.5	37	0.4	1,465	0.4	38	29	0.5	1	173	0.2	4	-
KCS	86	1.0	3	9.7	83	1.0	1,505	0.4	18	45	0.8	-	476	0.6	6	4
LI	396	4.6	1	3.2	395	4.6	7,790	2.3	20	364	6.3	-	3,581	4.8	9	-
MBTA	83	1.0	-	-	83	1.0	2,699	0.8	33	52	0.9	-	6	-	-	-
MNCW	334	3.9	-	-	334	3.9	7,090	2.1	21	155	2.7	-	6,849	9.1	21	-
MRL	20	0.2	-	-	20	0.2	690	0.2	35	16	0.3	-	593	0.8	30	-
NICD	40	0.5	-	-	40	0.5	88	-	2	19	0.3	-	207	0.3	5	-
NIRC	93	1.1	1	3.2	92	1.1	3,141	0.9	34	70	1.2	2	249	0.3	3	-
NJTR	130	1.5	-	-	130	1.5	1,537	0.4	12	94	1.6	-	20	-	-	-
NS	409	4.7	3	9.7	406	4.7	29,885	8.7	73	293	5.1	-	833	1.1	2	6
PAL	9	0.1	-	-	9	0.1	510	0.1	57	7	0.1	-	5	-	1	-
PATH	86	1.0	-	-	86	1.0	1,770	0.5	21	83	1.4	-	255	0.3	3	-
PCMZ	4	-	-	-	4	-	12	-	3	2	-	-	-	-	-	-
PTRA	4	-	-	-	4	-	290	0.1	73	4	0.1	-	6	-	2	-
SCAX	8	0.1	-	-	8	0.1	46	-	6	4	0.1	-	7	-	1	-
SEPA	167	1.9	-	-	167	1.9	1,843	0.5	11	110	1.9	-	106	0.1	1	1
SOO	181	2.1	-	-	181	2.1	6,923	2.0	38	134	2.3	-	394	0.5	2	-
TM	14	0.2	-	-	14	0.2	442	0.1	32	13	0.2	-	95	0.1	7	1
TRRA	7	0.1	-	-	7	0.1	471	0.1	67	5	0.1	-	-	-	-	-
UP	1,797	20.8	9	29.0	1,788	20.7	109,175	31.7	61	1,197	20.7	-	9,785	13.1	5	10
URR	34	0.4	-	-	34	0.4	1,066	0.3	31	18	0.3	-	190	0.3	6	-
WC	95	1.1	-	-	95	1.1	2,058	0.6	22	61	1.1	-	1,198	1.6	13	-
WE	10	0.1	-	-	10	0.1	418	0.1	42	10	0.2	-	105	0.1	11	-
GRP3	967	11.2	1	3.2	966	11.2	8,312	2.4	9	482	8.3	9	5,298	7.1	5	11
ALL	8,653	100	31	100	8,622	100	344,747	100	40	5,779	100	29	74,955	100	9	42

Cnt = count. % = percent of column total. Ave = average. Term = terminated. Trans. = transferred.
 Hazmat Exp. = condition was a result of hazardous material exposure.

TABLE 4-3 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, BY STATE, 1999

	Total		Deaths		Nonfatal		Days Absent			Absent Cases		Term./Trans.	Days Restricted			Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%	Cnt	%	Avg.	Cnt	%	Cnt	Cnt	%	Avg.	Cnt
AL	102	1.2	-	-	102	1.2	6,177	1.8	61	69	1.2	-	609	0.8	6	1
AK	69	0.8	-	-	69	0.8	899	0.3	13	39	0.7	1	377	0.5	5	-
AZ	109	1.3	-	-	109	1.3	4,353	1.3	40	69	1.2	1	1,109	1.5	10	-
AR	223	2.6	2	6.5	221	2.6	14,457	4.2	65	144	2.5	-	1,343	1.8	6	-
CA	594	6.9	2	6.5	592	6.9	25,964	7.5	44	388	6.7	2	8,801	11.7	15	2
CO	119	1.4	-	-	119	1.4	3,277	1.0	28	65	1.1	-	1,670	2.2	14	-
CT	135	1.6	-	-	135	1.6	3,172	0.9	23	69	1.2	-	2,262	3.0	17	-
DE	43	0.5	-	-	43	0.5	1,088	0.3	25	23	0.4	-	22	-	1	-
DC	66	0.8	-	-	66	0.8	2,420	0.7	37	56	1.0	-	22	-	-	-
FL	174	2.0	-	-	174	2.0	9,851	2.9	57	129	2.2	1	165	0.2	1	1
GA	154	1.8	-	-	154	1.8	10,829	3.1	70	113	2.0	-	240	0.3	2	-
ID	43	0.5	-	-	43	0.5	1,771	0.5	41	26	0.4	-	315	0.4	7	-
IL	682	7.9	2	6.5	680	7.9	32,276	9.4	47	475	8.2	7	4,544	6.1	7	1
IN	246	2.8	1	3.2	245	2.8	8,952	2.6	36	168	2.9	1	598	0.8	2	1
IA	169	2.0	4	12.9	165	1.9	5,515	1.6	33	105	1.8	2	1,652	2.2	10	1
KS	157	1.8	1	3.2	156	1.8	5,156	1.5	33	84	1.5	-	2,849	3.8	18	1
KY	130	1.5	-	-	130	1.5	11,354	3.3	87	108	1.9	1	20	-	-	-
LA	153	1.8	-	-	153	1.8	6,938	2.0	45	101	1.7	1	746	1.0	5	13
ME	44	0.5	-	-	44	0.5	655	0.2	15	31	0.5	-	180	0.2	4	-
MD	88	1.0	-	-	88	1.0	4,435	1.3	50	71	1.2	-	26	-	-	-
MA	167	1.9	-	-	167	1.9	5,225	1.5	31	122	2.1	1	152	0.2	1	-
MI	233	2.7	2	6.5	231	2.7	7,746	2.2	33	129	2.2	3	1,348	1.8	6	-
MN	245	2.8	1	3.2	244	2.8	4,938	1.4	20	136	2.4	2	3,457	4.6	14	-
MS	64	0.7	1	3.2	63	0.7	2,111	0.6	33	38	0.7	2	731	1.0	11	-
MO	206	2.4	1	3.2	205	2.4	9,943	2.9	48	118	2.0	-	3,885	5.2	19	-
MT	80	0.9	-	-	80	0.9	4,065	1.2	51	48	0.8	-	2,678	3.6	33	1
NE	262	3.0	3	9.7	259	3.0	10,352	3.0	40	157	2.7	-	4,756	6.3	18	3
NV	41	0.5	-	-	41	0.5	1,644	0.5	40	27	0.5	-	301	0.4	7	-
NH	11	0.1	-	-	11	0.1	116	-	11	3	0.1	-	30	-	3	-
NJ	296	3.4	1	3.2	295	3.4	6,677	1.9	23	226	3.9	-	365	0.5	1	-
NM	57	0.7	-	-	57	0.7	1,615	0.5	28	28	0.5	-	1,216	1.6	21	2
NY	946	10.9	2	6.5	944	10.9	19,282	5.6	20	714	12.4	-	8,396	11.2	9	-
NC	66	0.8	-	-	66	0.8	4,157	1.2	63	53	0.9	-	31	-	-	-
ND	68	0.8	-	-	68	0.8	1,661	0.5	24	38	0.7	-	844	1.1	12	-
OH	318	3.7	4	12.9	314	3.6	17,564	5.1	55	253	4.4	-	415	0.6	1	-
OK	64	0.7	1	3.2	63	0.7	1,206	0.3	19	28	0.5	-	1,096	1.5	17	-
OR	122	1.4	-	-	122	1.4	4,286	1.2	35	79	1.4	-	897	1.2	7	-
PA	447	5.2	-	-	447	5.2	11,074	3.2	25	288	5.0	1	809	1.1	2	6
RI	16	0.2	-	-	16	0.2	266	0.1	17	14	0.2	-	7	-	-	-
SC	39	0.5	-	-	39	0.5	3,727	1.1	96	30	0.5	-	60	0.1	2	-
SD	39	0.5	-	-	39	0.5	875	0.3	22	22	0.4	-	725	1.0	19	-
TN	96	1.1	-	-	96	1.1	5,542	1.6	58	75	1.3	1	471	0.6	5	-
TX	561	6.5	-	-	561	6.5	34,634	10.0	62	380	6.6	2	5,362	7.2	10	5
UT	78	0.9	-	-	78	0.9	3,188	0.9	41	48	0.8	-	318	0.4	4	1
VT	30	0.3	-	-	30	0.3	209	0.1	7	16	0.3	-	137	0.2	5	-
VA	100	1.2	-	-	100	1.2	4,763	1.4	48	74	1.3	-	283	0.4	3	-
WA	164	1.9	2	6.5	162	1.9	5,197	1.5	32	100	1.7	-	3,515	4.7	21	2
WV	63	0.7	-	-	63	0.7	4,404	1.3	70	47	0.8	-	54	0.1	1	-
WI	169	2.0	-	-	169	2.0	3,950	1.1	23	97	1.7	-	3,102	4.1	18	1
WY	105	1.2	1	3.2	104	1.2	4,791	1.4	46	58	1.0	-	1,964	2.6	19	-
ALL	8,653	100	31	100	8,622	100	344,747	100	40	5,779	100	29	74,955	100	9	42

TABLE 4-4 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY BY EVENT, 1999

Event	Total		Days Absent		Absent Cases		Term. / Trans.	Days Restricted		Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%		Cnt	%	
Aggravated pre-existing condition	136	1.6	5,039	1.5	105	1.8	-	1,768	2.4	1
Apprehending/removing from property	12	0.1	40	-	7	0.1	-	111	0.1	-
Assaulted by other	64	0.7	1,743	0.5	44	0.8	-	528	0.7	-
Assaulted by coworker	18	0.2	962	0.3	13	0.2	-	1	-	-
Bitten/stung by bee, spider, other insect	71	0.8	56	-	14	0.2	-	115	0.2	-
Bitten by animal	7	0.1	61	-	2	-	-	54	0.1	-
Bodily function/sudden movement, e.g., sneez	211	2.4	8,115	2.4	136	2.4	-	2,478	3.3	-
Caught in/compressed by hand tools	63	0.7	702	0.2	20	0.3	-	505	0.7	-
Caught in/compressed by other machinery	76	0.9	1,447	0.4	31	0.5	1	1,281	1.7	-
Caught in/crushed by materials	105	1.2	1,411	0.4	49	0.8	3	1,011	1.3	-
Caught in/crushed in excavation, land slide	2	-	172	-	2	-	-	-	-	-
Caught in/compressed by powered hand tools	14	0.2	75	-	2	-	-	265	0.4	-
Cave in, slide, etc.	6	0.1	136	-	3	0.1	-	37	-	-
Climatic conditions, other (e.g., high wind	58	0.7	1,347	0.4	24	0.4	-	259	0.3	-
Climatic condition, exposure to environment	36	0.4	793	0.2	20	0.3	-	18	-	-
Collision - between on track equipment	120	1.4	7,110	2.1	96	1.7	-	1,719	2.3	-
Collision/impact - auto, truck, bus, van, e	224	2.6	10,903	3.2	164	2.8	-	1,933	2.6	-
Defective/malfunctioning equipment	160	1.8	8,670	2.5	113	2.0	2	3,264	4.4	-
Derailment	74	0.9	4,455	1.3	55	1.0	1	1,192	1.6	-
Electrical shock while operating welding e	1	-	230	0.1	1	-	-	20	-	-
Electrical shock due to contact with 3rd ra	8	0.1	69	-	6	0.1	-	-	-	-
Electrical shock, other (explain in narrati	12	0.1	217	0.1	10	0.2	-	5	-	-
Electrical shock from hand tool	10	0.1	187	0.1	7	0.1	-	-	-	-
Exposure to fumes - inhalation	110	1.3	2,001	0.6	85	1.5	-	81	0.1	30
Exposure to chemicals - external	58	0.7	1,055	0.3	24	0.4	-	50	0.1	9
Exposure to poisonous plants	12	0.1	12	-	4	0.1	-	18	-	-
Exposure to noise over time	1	-	9	-	1	-	-	-	-	-
Exposure to noise - single incident	15	0.2	528	0.2	13	0.2	-	17	-	-
Exposure to welding light	9	0.1	11	-	1	-	-	4	-	-
Highway-rail collision/impact	143	1.7	13,114	3.8	125	2.2	2	384	0.5	-
Horseplay, practical joke, etc.	13	0.2	508	0.1	10	0.2	-	128	0.2	-
Lost balance	409	4.7	21,391	6.2	307	5.3	-	4,268	5.7	-
Missed handhold, grabiron, step, etc.	99	1.1	3,875	1.1	70	1.2	-	1,297	1.7	-
Needle puncture/prick/stick	26	0.3	152	-	4	0.1	-	65	0.1	-
Other impacts - on track equipment	44	0.5	4,072	1.2	34	0.6	-	37	-	-
Overexertion	1,325	15.3	59,167	17.2	992	17.2	5	14,157	18.9	-
Pushed/shoved into/against	40	0.5	1,814	0.5	28	0.5	-	374	0.5	-
Pushed/shoved onto	15	0.2	674	0.2	8	0.1	-	49	0.1	-
Pushed/shoved from	5	0.1	343	0.1	4	0.1	-	5	-	-
Ran into on-track equipment	16	0.2	625	0.2	12	0.2	-	206	0.3	-
Ran into object/equipment	26	0.3	832	0.2	18	0.3	-	210	0.3	-
Repetitive motion - work processes	151	1.7	8,551	2.5	99	1.7	-	1,854	2.5	-
Repetitive motion - typing, keyboard, etc.	15	0.2	142	-	6	0.1	-	51	0.1	-
Repetitive motion - tools	46	0.5	1,794	0.5	27	0.5	-	394	0.5	-
Repetitive motion - other (describe in narr	11	0.1	337	0.1	8	0.1	-	78	0.1	-
Rubbed, abraded, etc.	34	0.4	119	-	7	0.1	-	87	0.1	-
Shot	4	-	42	-	2	-	-	-	-	-
Slack action, draft, compressive buff/coupl	68	0.8	4,089	1.2	55	1.0	-	870	1.2	-
Slipped, fell, stumbled, etc. due to irregular	334	3.9	17,244	5.0	275	4.8	1	3,997	5.3	-
Slipped, fell, stumbled, etc. due to climat	317	3.7	16,368	4.7	244	4.2	-	3,714	5.0	-

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TABLE 4-4 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY BY EVENT, 1999

(CONTINUED)

Event	Total		Days Absent		Absent Cases		Term. / Trans.	Days Restricted		Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%		Cnt	%	
Slipped, fell, stumbled, etc. on oil, grease, e	177	2.0	10413	3.0	143	2.5	2	774	1.0	-
Slipped, fell, stumbled, etc. due to object, ba	601	6.9	31092	9.0	428	7.4	2	6,028	8.0	-
Stabbing, knifing, etc.	22	0.3	233	0.1	5	0.1	-	17	-	-
Stepped on object	153	1.8	5,287	1.5	105	1.8	-	1,520	2.0	-
Struck by thrown or propelled object	158	1.8	1,723	0.5	64	1.1	-	398	0.5	-
Struck by object	532	6.1	10149	2.9	267	4.6	1	2,050	2.7	-
Struck by on-track equipment	65	0.8	5,136	1.5	48	0.8	-	606	0.8	-
Struck against object	351	4.1	7,557	2.2	190	3.3	1	2,482	3.3	-
Sudden release of air	35	0.4	770	0.2	16	0.3	-	293	0.4	1
Sudden/unexpected movement of material	148	1.7	5,766	1.7	87	1.5	1	1,637	2.2	-
Sudden/unexpected movement of on-track equ	126	1.5	6,742	2.0	99	1.7	-	1,521	2.0	-
Sudden/unexpected movement of vehicle	66	0.8	2,828	0.8	48	0.8	-	558	0.7	-
Sustained viewing	2	-	14	-	1	-	-	1	-	-
Caught, crushed, pinched, other	219	2.5	4,492	1.3	117	2.0	2	2,118	2.8	-
On track equipment, other incidents	37	0.4	1,651	0.5	30	0.5	-	275	0.4	-
Slipped, fell, stumbled, other	336	3.9	19164	5.6	262	4.5	3	1,923	2.6	-
Sudden, unexpected movement, other	180	2.1	6,440	1.9	119	2.1	-	1,116	1.5	-
Other (describe in narrative)	425	4.9	7,332	2.1	259	4.5	2	1,751	2.3	-
All	8,653	100	345E3	100	5,779	100	29	74,955	100	42

TABLE 4-5 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY BY LOCATION, 1999

Location	Total		Days Absent		Absent Cases		Term. / Trans.	Days Restricted		Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%		Cnt	%	
Main/branch	2,482	28.7	104,682	30.4	1,660	28.7	7	18,571	24.8	4
Yard	3,002	34.7	135,890	39.4	2,123	36.7	10	27,139	36.2	28
Siding	237	2.7	8,547	2.5	141	2.4	2	3,689	4.9	-
Industry	430	5.0	20,206	5.9	298	5.2	4	3,336	4.5	6
Repair	255	2.9	5,459	1.6	120	2.1	-	4,614	6.2	-
Break/lunch room	34	0.4	1,890	0.5	19	0.3	-	635	0.8	-
Freight terminal	27	0.3	2,075	0.6	22	0.4	-	109	0.1	-
Highway/roadway	248	2.9	9,861	2.9	173	3.0	-	1,824	2.4	1
Loading dock	42	0.5	1,767	0.5	30	0.5	-	557	0.7	-
Lodging facility	7	0.1	265	0.1	5	0.1	-	121	0.2	-
Office environment	222	2.6	5,037	1.5	134	2.3	-	1,144	1.5	-
Parking lot	79	0.9	2,153	0.6	49	0.8	-	1,007	1.3	-
Passenger terminal	386	4.5	9,570	2.8	283	4.9	1	1,603	2.1	-
Repair shop	886	10.2	28,710	8.3	543	9.4	4	8,726	11.6	3
Storage facility	97	1.1	2,154	0.6	53	0.9	-	759	1.0	-
Sidewalk/walkway	35	0.4	1,395	0.4	27	0.5	-	303	0.4	-
Other, (off site location	61	0.7	1,842	0.5	31	0.5	-	300	0.4	-
Other (explain in narrati	57	0.7	2,030	0.6	34	0.6	-	223	0.3	-
Other location (describe	66	0.8	1,214	0.4	34	0.6	1	295	0.4	-
All	8,653	100	344,747	100	5,779	100	29	74,955	100	42

TABLE 4-6 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY BY ACTIVITY, 1999

Activity	Total		Days Absent		Absent Cases		Term./ Trans.	Days Restricted		Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%		Cnt	%	
Adjusting coupler	37	0.4	2,592	0.8	27	0.5	1	88	0.1	-
Adjusting drawbar	27	0.3	1,302	0.4	21	0.4	1	143	0.2	-
Adjusting, other	78	0.9	1,816	0.5	37	0.6	-	878	1.2	-
Applying rail anchor/fastener	21	0.2	630	0.2	10	0.2	-	275	0.4	-
Bending, stooping	151	1.7	3,544	1.0	97	1.7	-	798	1.1	-
Carrying	71	0.8	2,252	0.7	40	0.7	2	1,277	1.7	-
Chaining, cabling car or locomotiv	11	0.1	287	0.1	6	0.1	-	267	0.4	-
Cleaning	155	1.8	4,065	1.2	109	1.9	1	913	1.2	-
Climbing over/on	152	1.8	6,487	1.9	107	1.9	-	1,122	1.5	-
Closing	133	1.5	2,568	0.7	74	1.3	2	573	0.8	-
Coupling electric cables	5	0.1	61	-	3	0.1	-	35	-	-
Coupling air hose	75	0.9	3,915	1.1	53	0.9	-	505	0.7	1
Crossing over	43	0.5	2,801	0.8	35	0.6	-	238	0.3	-
Crossing or crawling under	11	0.1	94	-	3	0.1	-	20	-	-
Crossing between	7	0.1	958	0.3	5	0.1	-	187	0.2	-
Cutting rail	15	0.2	828	0.2	10	0.2	-	138	0.2	-
Cutting vegetation	32	0.4	283	0.1	13	0.2	-	112	0.1	-
Cutting, other	75	0.9	397	0.1	23	0.4	1	273	0.4	-
Digging, excavating	33	0.4	611	0.2	19	0.3	-	266	0.4	-
Driving (motor vehicle, forklift,	165	1.9	5,249	1.5	105	1.8	-	1,383	1.8	1
Flagging	8	0.1	150	-	7	0.1	-	5	-	-
Fueling	17	0.2	888	0.3	16	0.3	-	387	0.5	-
Getting on	126	1.5	5,323	1.5	93	1.6	1	1,283	1.7	-
Getting off	320	3.7	16,066	4.7	235	4.1	-	3,591	4.8	-
Grinding	44	0.5	149	-	15	0.3	-	196	0.3	-
Handling baggage	13	0.2	985	0.3	11	0.2	-	-	-	-
Handling car parts	33	0.4	1,366	0.4	19	0.3	-	142	0.2	-
Handling material, general	96	1.1	2,041	0.6	56	1.0	-	1,229	1.6	-
Handling locomotive parts	34	0.4	761	0.2	17	0.3	-	333	0.4	-
Handling wheels/trucks	13	0.2	447	0.1	8	0.1	-	-	-	-
Handling, other	142	1.6	3,844	1.1	83	1.4	1	1,008	1.3	2
Handling other track material/supp	56	0.6	1,079	0.3	21	0.4	-	611	0.8	-
Handling poles	2	-	226	0.1	1	-	-	22	-	-
Handling tie plates	24	0.3	495	0.1	14	0.2	1	436	0.6	-
Handling ties	63	0.7	1,276	0.4	29	0.5	-	601	0.8	-
Handling rail	38	0.4	1,287	0.4	25	0.4	-	221	0.3	-
Inspecting	82	0.9	2,886	0.8	52	0.9	-	1,038	1.4	1
Installing	110	1.3	1,920	0.6	63	1.1	1	582	0.8	-
Jumping from	61	0.7	3,486	1.0	50	0.9	1	329	0.4	-
Jumping onto	5	0.1	558	0.2	4	0.1	-	-	-	-
Laying	9	0.1	343	0.1	6	0.1	-	9	-	-
Lifting other material	261	3.0	9,029	2.6	173	3.0	1	2,120	2.8	-
Lifting equipment (tools, parts, e	201	2.3	9,141	2.7	143	2.5	2	3,108	4.1	-
Lining switches	320	3.7	18,371	5.3	245	4.2	2	3,475	4.6	6
Lining, other	16	0.2	319	0.1	9	0.2	-	171	0.2	-
Loading/unloading	120	1.4	2,983	0.9	75	1.3	-	866	1.2	-
Maintaining	54	0.6	3,607	1.0	30	0.5	-	458	0.6	1
Opening	178	2.1	5,001	1.5	113	2.0	1	1,894	2.5	-
Opening/closing angle cock	38	0.4	988	0.3	26	0.4	-	173	0.2	-
Operating	306	3.5	17,646	5.1	231	4.0	1	2,887	3.9	1
Pulling pin lifter/operating uncou	76	0.9	3,341	1.0	60	1.0	-	1,030	1.4	2

TABLE 4-6 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY BY ACTIVITY, 1999

(Continued)

Activity	Total		Days Absent		Absent Cases		Term. / Trans.	Days Restricted		Hazmat Exp.
	Cnt	%	Cnt	%	Cnt	%	Cnt	Cnt	%	Cnt
Pulling	228	2.6	8,525	2.5	139	2.4	-	1,494	2.0	-
Pushing	96	1.1	3,268	0.9	57	1.0	-	1,424	1.9	-
Reaching	91	1.1	3,167	0.9	50	0.9	-	1,209	1.6	-
Removing rail anchors/fasteners	21	0.2	484	0.1	9	0.2	-	35	-	-
Repairing	200	2.3	5,129	1.5	97	1.7	-	2,208	2.9	1
Riding	461	5.3	27,570	8.0	357	6.2	3	3,094	4.1	4
Running	31	0.4	641	0.2	23	0.4	-	194	0.3	-
Sitting	259	3.0	12,981	3.8	193	3.3	-	3,568	4.8	3
Spiking (installation/removal)	109	1.3	3,136	0.9	48	0.8	-	596	0.8	-
Standing	358	4.1	14,801	4.3	234	4.0	-	1,875	2.5	1
Stepping up	141	1.6	6,795	2.0	111	1.9	-	1,367	1.8	-
Stepping down	376	4.3	16,055	4.7	276	4.8	-	3,920	5.2	-
Stepping over	86	1.0	2,791	0.8	55	1.0	-	772	1.0	-
Uncoupling air hose	24	0.3	660	0.2	16	0.3	-	110	0.1	-
Uncoupling electric cables	7	0.1	802	0.2	5	0.1	-	110	0.1	-
Using hand signals	1	-	7	-	1	-	-	-	-	-
Using hand tool	235	2.7	5,915	1.7	104	1.8	1	1,982	2.6	-
Using, other	32	0.4	313	0.1	15	0.3	-	127	0.2	-
Walking	1,347	15.6	63,993	18.6	1,010	17.5	3	10,454	13.9	16
Welding (includes field welding)	41	0.5	344	0.1	10	0.2	-	154	0.2	-
Handbrakes, applying	102	1.2	3,982	1.2	78	1.3	-	948	1.3	-
Handbrakes, releasing	50	0.6	2,259	0.7	38	0.7	1	667	0.9	-
Handbrakes, other	7	0.1	753	0.2	5	0.1	-	80	0.1	-
Derail, applying	4	-	78	-	3	0.1	-	30	-	-
Derail, removing	2	-	8	-	1	-	-	-	-	-
Derail, other	4	-	145	-	2	-	-	46	0.1	1
Other (Narrative must be provided)	177	2.0	3,403	1.0	115	2.0	1	795	1.1	1
All	8,653	100	344,747	100	5,779	100	29	74,955	100	42

TABLE 4-7 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, 1999

Executives, Officials, and Staff Assistants

	---Total---		---- Days ----	
	Kld	Nonf	Absent From Work	Restricted At Work
Executives, officials, and staff assistants (miscellaneous)	-	5	366	15
Executives and general officers	-	7	106	50
Corporate staff managers	-	8	21	7
Regional/division officers, assistants and staff assistants	-	9	163	-
Transportation officers/managers	-	9	326	7
--Total	-	38	982	79

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TABLE 4-7 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, 1999

Professional and Administrative

	---Total---		---- Days ----	
	Kld	Nonf	Absent From	Restricted
			Work	At Work
Professional and administrative (miscellaneous)	-	10	29	61
Professional	-	7	150	11
Subprofessionals	-	6	421	-
Auditors, traveling auditors or accountants	-	2	62	-
General and administrative supervisors	-	28	105	66
Sales and traffic representatives and agents	-	31	175	5
Freight and other claim agents and investigators	-	4	154	28
Lieutenants and sergeants of police	-	14	197	34
Police officers, watchmen, guards (except crossing & bridge)	-	42	767	16
Buyers, and sales agents	-	2	61	3
Clerical technicians and clerical specialists	-	12	419	2
Office machine and data equipment operators	-	8	300	276
Secretaries, stenographers, and typists	-	14	203	50
General/other clerks (except yd clerk and crew dispatcher)	-	106	2,914	462
Building and office attendants	-	41	728	669
Messengers and office persons	-	7	34	15
Motor vehicle operators	-	63	2,910	705
--Total	-	397	9,629	2,403

Maintenance of Way and Structures

	---Total---		---- Days ----	
	Kld	Nonf	Absent From	Restricted
			Work	At Work
Maintenance of way and structures (miscellaneous)	-	34	368	211
Supervisors, MOW, structures, communication & signls	-	36	744	115
MOW, structures, comm. & signals, & scale inspectors	-	35	717	241
Bridge and building gang foreman	-	37	535	373
Bridge and building carpenters	1	92	2,451	1,198
Bridge and building ironworkers	-	25	287	149
Bridge and building painters	-	4	139	-
Masons, bricklayers, plasterers, and plumbers	-	139	4,755	962
Bridge and building helpers and apprentices	-	31	1,075	480
Bridge/building gang and bridge/building dept laborers	-	63	1,546	1,413
Track gang foremen (extra gang work train laborers)	-	73	2,644	672
Gang or section foreman	-	154	5,394	1,490
Extra gang laborers	-	162	1,774	1,127
Section laborers	1	477	13,987	3,780
Machine operators	1	309	10,977	2,864
Gang foremen, communications and signals	1	37	969	765
Signalmen and signal maintainers	-	252	7,825	1,770
Linemen and groundmen and communications craftsman	-	68	662	1,025
Assistant signalmen and assistant signal maintainers	-	47	1,314	384
Signal helpers and signal maintainer helpers	-	13	137	290
Camp car cooks	-	5	82	49
--Total	4	2,093	58,382	19,358

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TABLE 4-7 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, 1999

Maintenance of Equipment and Stores

	---Total---		---- Days ----	
	Kld	Nonf	Absent From Work	Restricted At Work
Maintenance of equipment and stores (miscellaneous)	-	16	103	168
Supervisors and general foremen, maintenance of equipment	-	33	383	64
Supervisors and general foremen, materials and stores	-	2	-	-
Equipment, shop, electrical inspectors	-	6	32	5
Materials and supplies inspectors	-	2	3	-
Storekeeper	-	26	471	31
Gang foremen, maintenance of equipment	-	39	2,035	405
Blacksmiths	-	8	158	45
Boilermakers	-	20	691	213
Carmen (freight)	4	377	11,062	3,727
Carmen (other)	-	273	7,426	3,425
Electrical workers (A)	-	258	8,299	2,497
Electrical workers (B)	-	13	103	37
Electrical workers (C)	-	4	148	108
Machinists	1	325	11,117	4,854
Sheet metal workers	-	77	3,627	451
Skilled trades, helpers, maintenance of equipment and stores	-	60	690	700
Apprentices, maintenance of equipment and stores	-	12	340	10
Coach cleaners	-	142	3,921	884
Laborers: shops, enginehouses and power plants	1	197	6,690	1,813
Gang foremen, materials and stores	-	2	57	17
Equipment operators/general laborers, materials and stores	-	35	1,312	1,004
Stationary firemen	-	1	49	-
--Total	6	1,928	58,717	20,458

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TABLE 4-7 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, 1999

Transportation, Other Than Train and Engine

	---Total---		---- Days ----	
	Kld	Nonf	Absent From Work	Restricted At Work
Transportation, other than train and engine (miscellaneous)	-	8	364	-
Transportation supervisor and chief train dispatcher	-	3	103	59
Train dispatchers	-	9	324	49
Station, freight and passenger agents	-	11	213	7
Chief operators and wire chiefs	-	2	-	-
Clerk operators, towerman, train directors	-	15	705	5
Station masters & assts, super bag. agents, bag. agents, etc	-	1	8	-
Baggage, parcel room and station attendents	-	51	1,381	74
Gen/asst gnrl foremen,stations,warehouses,grain elev., docks	-	5	103	-
Gang foreman, stations, warehouses, grain elevators, docks	-	2	7	-
Grain elevator, and dock laborers	-	7	189	114
Station, and warehouse laborers	-	15	851	32
Truckers (station, warehouse and platforms)	-	2	5	-
Food and lodging manager, supervisors	-	2	73	-
Transportation and dining-service inspectors	-	1	-	-
Waiters and kitchen helpers (restaurant and dining car)	-	11	886	27
Chefs and cooks (restaurant and dining car)	-	39	1,364	30
Marine officers and workers and shore workers	-	2	130	-
Train attendants	-	117	5,470	44
Bridge operators and helpers	-	3	10	-
Yards clerks	-	21	720	247
Crew dispatchers	-	7	180	2
Yardmasters and assistant yardmasters	-	18	390	38
--Total	-	352	13,476	728

TABLE 4-7 REPORTABLE CONDITIONS TO EMPLOYEE ON DUTY, 1999

Transportation, Train and Engine

	---Total---		---- Days ----	
	Kld	Nonf	Absent From	Restricted
			Work	At Work
Transportation, train and engine (miscellaneous)	-	7	25	2
Switchtenders	-	14	1,011	156
Car retarder operators and ground service employees	-	8	284	27
Outside hostlers	-	16	787	153
Outside hostler helpers	-	10	316	36
Inside hostler	-	1	235	-
Road passenger conductors	1	302	8,212	1,531
Assistant road passenger conductors and ticket collectors	-	108	4,261	329
Road freight conductors (through freight)	6	569	39,008	6,982
Road freight conductors (local and way freight)	3	352	16,677	2,645
Road Passenger brakemen and flagmen	-	23	444	551
Road freight brakemen and flagmen (through freight)	2	123	8,351	1,132
Road freight brakemen and flagmen (local and way freight)	-	291	20,537	2,056
Yard conductors and yard foremen	3	524	26,633	4,286
Yard brakemen and yard helpers	2	509	24,133	5,129
Road passenger engineers and motormen	-	141	4,066	685
Road freight engineers (through freight)	3	427	29,404	3,075
Road freight engineers (local and way freight)	1	176	8,481	1,167
Yard engineers	-	198	10,294	1,929
Road passenger firemen and helpers	-	2	26	4
Road freight firemen and helpers (through freight)	-	12	253	54
Yard firemen and helpers	-	1	123	-
--Total	21	3,814	203,561	31,929

TABLE 4-8 OCCUPATIONAL ILLNESSES OF EMPLOYEE ON DUTY, 1999

Illness	Total		Kld	Nonf	Days Absent	Absent Cases	Term./ Trans.	Days Restri- cted	Hazmat Exp.
	Cnt	%							
Dermatitis	3	2.1	-	3	2	1	-	-	1
Rashes	14	9.9	-	14	8	3	-	8	-
Acute congestion, dust/gas/etc.	2	1.4	-	2	2	1	-	6	1
Misc. respiratory conditions	2	1.4	-	2	2	1	-	-	-
Heat/sun stroke	14	9.9	-	14	48	11	-	7	-
Heat exhaustion	16	11.3	-	16	260	5	-	-	-
Freezing/frostbite	2	1.4	-	2	280	2	-	-	-
Misc. disorders, physical agents	1	0.7	-	1	-	-	-	-	-
Synovitis	10	7.1	-	10	584	10	-	666	-
Tenosynovitis	9	6.4	-	9	394	7	-	163	-
Bursitis	1	0.7	-	1	1	1	-	-	-
Carpal tunnel syndrome	13	9.2	-	13	366	9	-	148	-
Misc. repeated trauma condition	21	14.9	-	21	886	13	-	1,248	-
Stress related syndromes	11	7.8	-	11	271	7	-	11	-
Misc. illnesses, unclassified	6	4.3	-	6	356	5	-	-	-
Emotional trauma/nervous shock	16	11.3	-	16	317	15	-	-	-
Total....	141	100	-	141	3,777	91	-	2,257	2

TABLE 4-9 OCCUPATIONAL ILLNESSES OF EMPLOYEE ON DUTY, BY RAILROAD, 1999

RR	Total		Kld	Nonf	Days Absent			Absent Cases		Term. / Trans.	Days Restricted			Hazmat Exp.
	Cnt	%			Cnt	%	Avg.	Cnt	%		Cnt	Cnt	%	
ARR	5	3.5	-	5	38	1.0	8	1	1.1	-	11	0.5	2	-
ATK	15	10.6	-	15	480	12.7	32	11	12.1	-	1	-	-	-
BNSF	28	19.9	-	28	1,481	39.2	53	21	23.1	-	1,722	76.3	62	-
CSX	9	6.4	-	9	502	13.3	56	4	4.4	-	-	-	-	-
DH	2	1.4	-	2	24	0.6	12	2	2.2	-	-	-	-	-
FEC	1	0.7	-	1	6	0.2	6	1	1.1	-	-	-	-	-
GTW	3	2.1	-	3	78	2.1	26	2	2.2	-	28	1.2	9	-
KCS	1	0.7	-	1	60	1.6	60	1	1.1	-	-	-	-	-
LI	7	5.0	-	7	58	1.5	8	6	6.6	-	7	0.3	1	-
MNCW	3	2.1	-	3	-	-	-	-	-	-	17	0.8	6	-
NIRC	4	2.8	-	4	143	3.8	36	2	2.2	-	-	-	-	-
NJTR	2	1.4	-	2	-	-	-	-	-	-	-	-	-	-
NS	4	2.8	-	4	213	5.6	53	1	1.1	-	-	-	-	-
PATH	9	6.4	-	9	86	2.3	10	9	9.9	-	-	-	-	-
SEPA	3	2.1	-	3	20	0.5	7	2	2.2	-	-	-	-	-
SOO	1	0.7	-	1	-	-	-	-	-	-	36	1.6	36	-
TM	1	0.7	-	1	2	0.1	2	1	1.1	-	-	-	-	1
UP	24	17.0	-	24	406	10.7	17	16	17.6	-	285	12.6	12	1
URR	1	0.7	-	1	-	-	-	-	-	-	-	-	-	-
WC	4	2.8	-	4	40	1.1	10	2	2.2	-	20	0.9	5	-
OTHE	14	9.9	-	14	140	3.7	10	9	9.9	-	130	5.8	9	-
Tot.	141	100	-	141	3,777	100	27	91	100	-	2,257	100	16	2

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CHAPTER 5

TRAIN ACCIDENTS

Collisions, derailments, fires, explosions, acts of God, or other events involving the operation of railroad on-track equipment (standing or moving) and causing reportable damages greater than the reporting threshold for the year in which the accident/incident occurred must be reported using Form FRA F 6180.54. The reporting threshold for calendar years 1992-1996 was \$6,300. The reporting threshold for calendar year 1997 was \$6,500, and in 1998 and 1999 it was \$6,600.

Reportable damage includes labor costs and all other costs to repair or replace in kind damaged on-track equipment, signals, track, track structures, or roadbed. Reportable damage does not include the cost of clearing a wreck; however, additional damage to the above listed items caused while clearing the wreck is to be included in your damage estimate.

Examples of other costs included in reportable damage are: (1) rental and/or operation of machinery such as cranes, bulldozers, including the services of contractors, to replace or repair the track right-of-way and associated structures; and (2) costs associated with the repair or replacement of roller bearings on units that were derailed or submerged in water. (Replacement costs include the labor costs resulting from a wheel set change out.)

If the property of more than one railroad is involved in an accident/incident, the reporting threshold is calculated by including the damages suffered by all of the railroads involved. When total reportable damage to all railroads directly involved in an accident/incident exceeds the reporting threshold, a report is required even though an individual railroad's damages were below the threshold.

The tables displaying train accidents counts by railroad are the number of events that a railroad was involved in, regardless of whether or not that railroad's operations were the primary reason the accident occurred. This is done because all railroads are required to report the extent of their involvement in the accident, regardless of whether or not there is agreement on the cause of the accident.

A form must be completed for each consist involved in an accident. The railroad responsible for the on-track equipment at the time of the accident, and only that railroad, will report the consist.

In joint operations, if the railroad having track maintenance responsibility did not also have on-track rail equipment involved, a report containing the track information must be forwarded.

Track information for accidents occurring on industry track of a non-reporting company is to be reported by the railroad operating the on-track equipment. Damages to industry track and on-track equipment are included in reportable damage.

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A railroad need not report the following:

1. Cars derailed on industry tracks by non-railroad employees or non-railroad employee vandalism, providing there is no involvement of railroad employees;
2. Damage to out-of-service cars resulting from high water or flooding, e.g., empties placed on storage or repair track. This exclusion does not apply if such cars are placed into a moving consist and as a result of this damage, a reportable rail equipment accident results.

An equipment consist is a train, locomotive(s), cut of cars, or a single car not coupled to another car or locomotive.

A car is:

- (1) any unit of on-track equipment designed to be hauled by locomotives, or
- (2) any unit of on-track work equipment such as a track motorcar, highway-rail vehicle, push car, crane, or ballast tamping machine.

Locomotive. A locomotive is a piece of on-track equipment, other than hi-rail or specialized maintenance equipment,

- (1) With one or more propelling motors designed for moving other equipment;
- (2) With one or more propelling motors designed to carry freight or passenger traffic, or both; or
- (3) Without propelling motors but with one or more control stands.

Motorcar. A self-propelled unit of equipment, designed to carry freight or passenger traffic. (Does not include track motor cars or similar work equipment.)

Train. For purposes of accident/incident reporting, a train is a locomotive or locomotives coupled with or without cars, and with or without markers displayed. This definition includes trains consisting entirely of self-propelled units designed to carry passengers, freight traffic, or both.

Yard switching trains. Those trains operated primarily within yards for the purpose of switching other equipment. Examples include the making up or breaking up of trains, service industrial tracks within yard limits, storing or classifying cars, and other similar operations.

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Note: Switching performed by a road crew that is incidental to the road operation is not included.

Work trains are non-revenue trains used for the administration and upkeep service of the railroad. Examples are: official trains; inspection trains; special trains running with company fire apparatus to save the railroad's property from destruction; trains that transport the railroad's employees to and from work when no transportation charge is made; construction and upkeep trains run in connection with maintenance and improvement work; and material and supply trains run in connection with operations.

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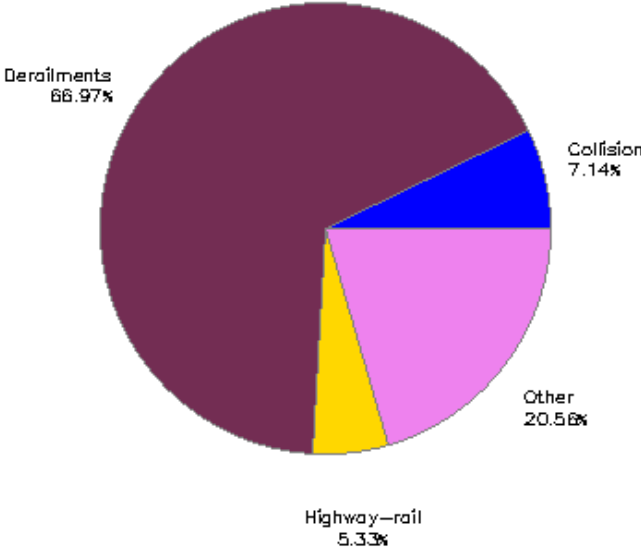
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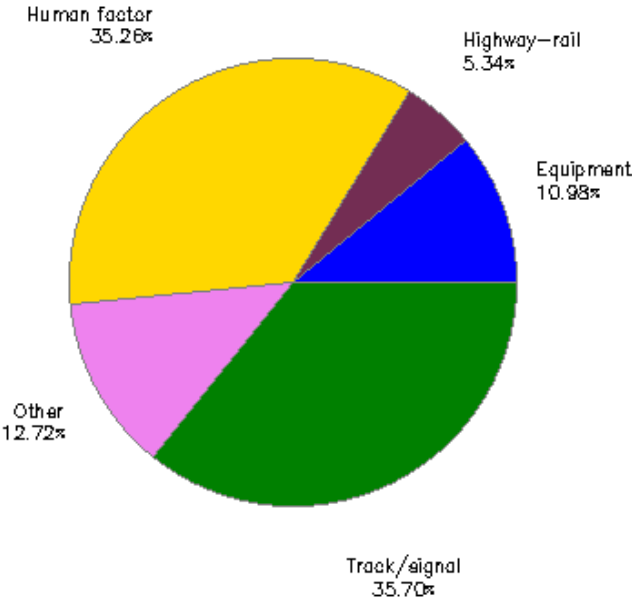
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5-1 TYPES OF ACCIDENTS, 1999



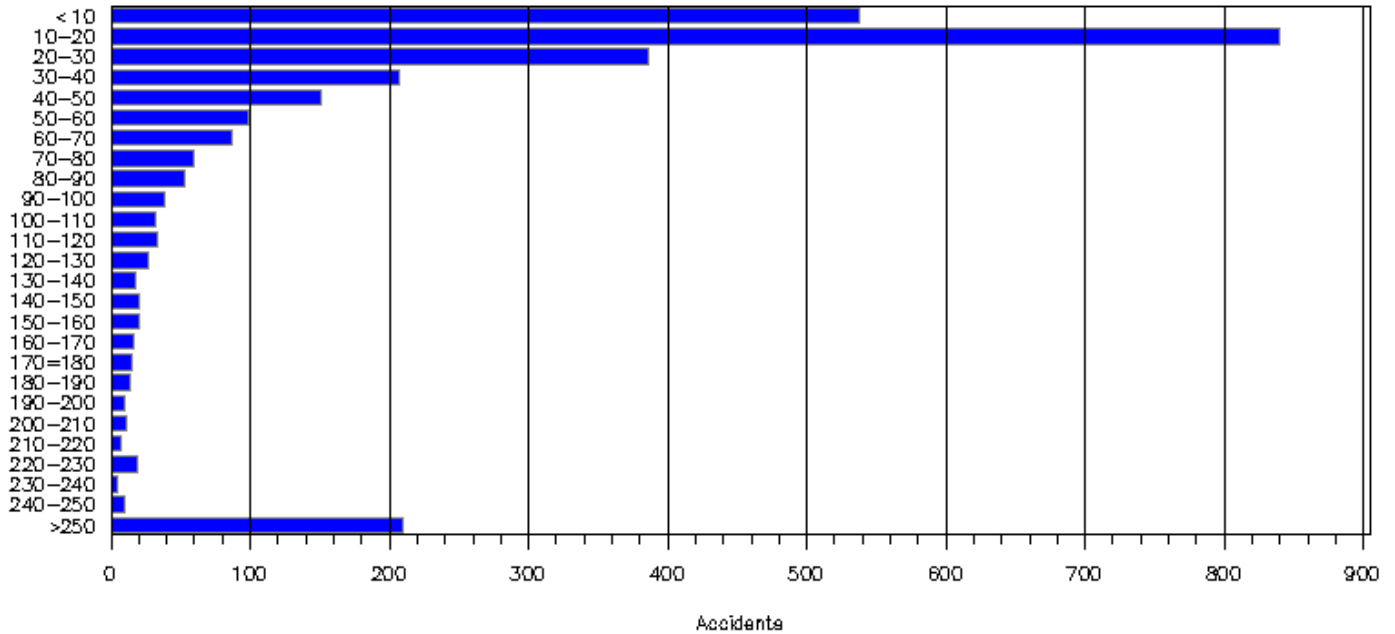
5-2 CAUSES OF ACCIDENTS, 1999



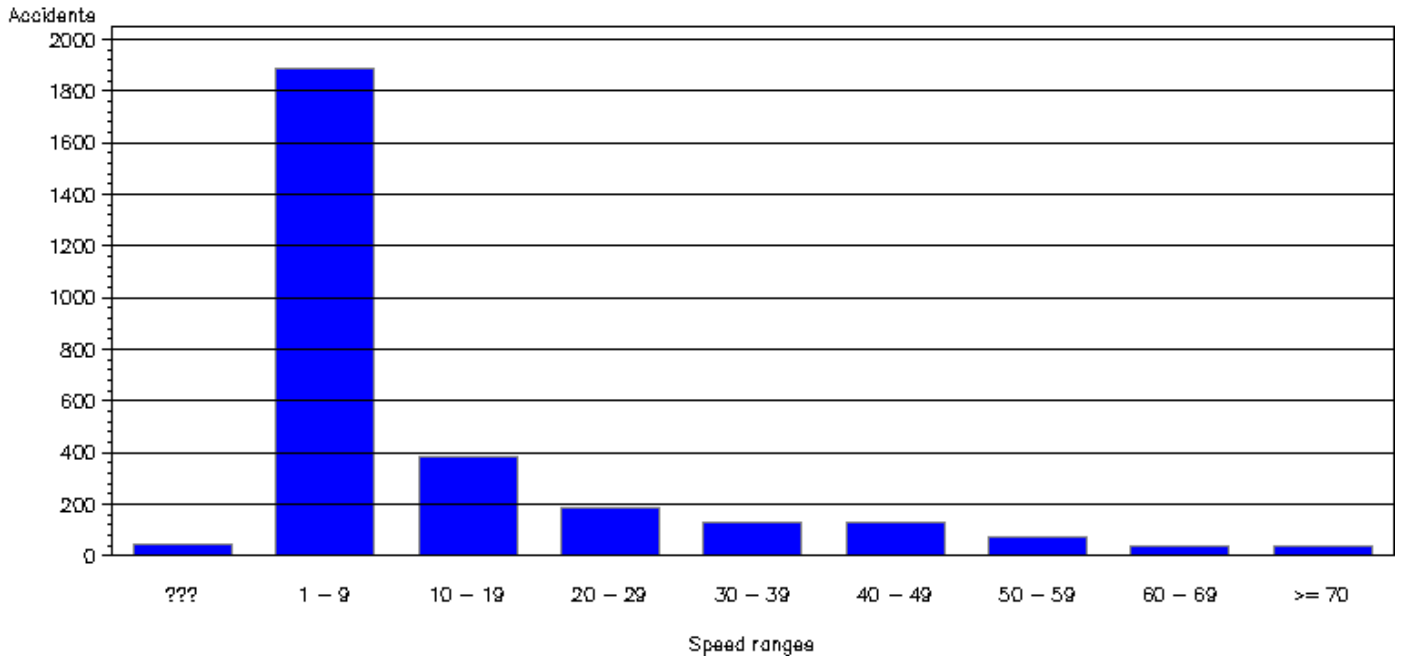
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5-3 DAMAGE RANGES IN TRAIN ACCIDENTS IN 10K's, 1999



5-4 HIGHEST SPEED IN TRAIN ACCIDENTS, 1999



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TABLE 5-1 TRAIN ACCIDENTS BY RR, TYPE AND MAJOR CAUSE, 1999

RR	Total		Type of Accident				Reportable Damage		Casualty		Causes					
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
ALS	13	0.4	-	4	-	9	209,477	0.1	-	-	-	-	8	1	2	2
ARR	6	0.2	-	3	-	3	1,490,975	0.6	-	-	1	-	2	2	-	1
ATK	116	3.6	3	46	31	36	20,816,334	7.8	21	133	5	31	23	18	1	38
BAR	7	0.2	-	7	-	-	267,578	0.1	-	-	-	-	1	1	-	5
BNSF	514	16.1	24	380	33	77	52,980,208	19.8	5	22	86	33	150	60	4	181
BRC	44	1.4	9	20	-	15	918,223	0.3	-	-	3	-	15	12	2	12
CR	108	3.4	3	57	4	44	12,984,271	4.8	3	13	10	4	54	17	3	20
CRSH	17	0.5	1	15	-	1	471,122	0.2	-	1	-	-	12	-	-	5
CSX	434	13.6	41	285	11	97	27,192,348	10.1	-	16	26	11	209	68	8	112
DH	9	0.3	-	8	1	-	524,978	0.2	1	2	1	1	4	-	-	3
DME	12	0.4	-	12	-	-	972,371	0.4	-	-	-	-	2	-	-	10
DMIR	7	0.2	-	7	-	-	338,678	0.1	-	-	-	-	3	-	-	4
DWP	2	0.1	-	2	-	-	354,125	0.1	-	-	2	-	-	-	-	-
EJE	16	0.5	-	14	1	1	242,711	0.1	2	-	1	1	4	-	-	10
FEC	24	0.8	-	23	-	1	1,874,837	0.7	-	2	3	-	2	3	-	16
GRS	7	0.2	-	6	-	1	695,223	0.3	-	-	2	-	-	1	-	4
GTW	22	0.7	1	15	1	5	2,044,946	0.8	-	-	2	1	13	2	1	3
GWR	14	0.4	3	8	1	2	1,309,939	0.5	-	4	1	1	6	-	-	6
IC	68	2.1	2	38	8	20	5,449,415	2.0	-	7	5	8	27	3	-	25
IHB	37	1.2	2	33	-	2	622,778	0.2	-	-	1	-	25	1	-	10
IMRL	31	1.0	6	21	-	4	4,543,231	1.7	2	3	2	-	16	1	-	12
KCS	84	2.6	3	56	5	20	5,724,014	2.1	3	5	2	5	30	13	-	34
LI	16	0.5	-	4	1	11	1,950,463	0.7	-	2	3	1	7	4	-	1
MBTA	2	0.1	-	2	-	-	16,500	-	-	-	-	-	1	-	-	1
MNCW	31	1.0	1	1	3	26	1,402,028	0.5	-	3	7	3	3	4	-	14
MRL	13	0.4	-	8	-	5	3,280,640	1.2	-	-	1	-	6	1	-	5
NICD	4	0.1	-	3	1	-	85,426	-	1	-	-	1	-	1	-	2
NIRC	4	0.1	1	-	-	3	1,138,646	0.4	1	1	-	-	1	3	-	2
NJTR	9	0.3	-	-	1	8	196,279	0.1	1	-	3	1	1	2	-	2
NS	259	8.1	47	169	21	22	7,719,151	2.9	3	10	37	21	101	40	3	57
PAL	3	0.1	-	3	-	-	405,500	0.2	-	1	-	-	1	-	-	2
PATH	1	-	-	-	-	1	7,000	-	-	-	-	-	1	-	-	-
PCMZ	1	-	-	-	1	-	111,700	-	-	4	-	1	-	-	-	-
PTRA	7	0.2	2	1	1	3	190,844	0.1	1	-	-	1	5	-	-	1
SCAX	9	0.3	1	3	5	-	1,347,496	0.5	1	2	-	5	1	-	-	3
SEPA	9	0.3	4	-	1	4	174,938	0.1	-	1	1	1	1	3	2	1
SOO	49	1.5	4	34	3	8	3,028,312	1.1	-	5	6	3	16	8	1	15
TM	12	0.4	1	10	-	1	1,301,950	0.5	-	1	3	-	3	-	-	6
TRRA	18	0.6	2	15	-	1	539,743	0.2	-	-	3	-	8	1	-	6
UP	769	24.2	39	518	50	162	85,408,529	31.9	6	36	85	50	256	84	22	272
URR	4	0.1	1	3	-	-	65,129	-	-	-	1	-	-	-	-	3
WC	35	1.1	10	14	-	11	980,667	0.4	-	5	2	-	23	3	-	7
WE	2	0.1	1	-	1	-	77,117	-	-	-	1	1	-	-	-	-
GRP3	334	10.5	12	274	11	37	16,622,440	6.2	-	14	30	11	68	45	1	179

Type of accident

Coll = collision between on track equipment. Der = derailment. HRC = highway-rail crossing. Othr = other.

Causes

Eqp = equipment defect. HRC = highway-rail crossing. Hmn = Human factor. Sig = signal defect. Trk = track defect.

Cnt = count. Ftl = fatality.

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TABLE 5-2 TRAIN ACCIDENTS BY STATE, TYPE AND MAJOR CAUSE, 1999

	Total		Type of Accident				Reportable Damage		Casualty		Causes					
	Accs	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
AL	49	1.7	6	31	4	8	2,688,929	1.0	-	2	2	4	17	6	3	17
AK	6	0.2	-	3	-	3	1,490,975	0.6	-	-	1	-	2	2	-	1
AZ	28	1.0	-	22	3	3	2,562,730	1.0	-	3	5	3	8	2	-	10
AR	70	2.4	2	41	5	22	4,949,771	1.8	1	4	6	5	25	8	9	17
CA	173	5.9	7	120	19	27	19,186,284	7.2	9	35	10	19	61	24	2	57
CO	60	2.1	3	48	-	9	6,095,668	2.3	-	-	10	-	21	7	-	22
CT	34	1.2	-	8	4	22	1,321,741	0.5	-	3	6	4	2	5	-	17
DE	5	0.2	-	3	-	2	179,085	0.1	-	-	1	-	2	-	-	2
DC	9	0.3	-	6	-	3	302,039	0.1	-	-	1	-	5	1	-	2
FL	64	2.2	2	53	3	6	5,252,558	2.0	-	9	4	3	16	9	-	32
GA	83	2.8	8	57	3	15	4,177,331	1.6	-	5	10	3	28	11	2	29
ID	19	0.6	-	15	2	2	2,534,409	0.9	-	-	4	2	4	1	-	8
IL	297	10.2	31	186	9	71	29,237,482	10.9	19	61	25	9	139	31	6	87
IN	95	3.2	8	58	10	19	4,751,880	1.8	3	9	8	10	34	13	1	29
IA	89	3.0	5	65	3	16	18,132,366	6.8	6	9	13	3	27	9	-	37
KS	95	3.2	7	68	6	14	7,028,536	2.6	-	5	10	6	23	6	1	49
KY	56	1.9	6	40	2	8	5,752,466	2.1	-	4	5	2	25	8	2	14
LA	79	2.7	1	49	9	20	3,698,429	1.4	-	8	6	9	29	8	2	25
ME	16	0.5	1	14	1	-	1,200,762	0.4	-	-	3	1	2	1	-	9
MD	30	1.0	4	14	-	12	4,762,108	1.8	-	25	1	-	18	6	-	5
MA	18	0.6	1	14	-	3	987,108	0.4	-	-	-	-	7	3	-	8
MI	46	1.6	2	32	3	9	3,269,991	1.2	-	3	4	3	23	3	1	12
MN	88	3.0	2	73	3	10	7,766,283	2.9	-	5	15	3	24	11	1	34
MS	44	1.5	-	28	9	7	3,328,574	1.2	2	8	3	9	12	7	-	13
MO	80	2.7	8	56	7	9	8,139,921	3.0	1	6	12	7	19	11	1	30
MT	27	0.9	-	17	-	10	6,777,893	2.5	-	-	5	-	13	1	-	8
NE	81	2.8	6	47	6	22	12,241,429	4.6	-	2	14	6	26	9	5	21
NV	8	0.3	1	5	-	2	707,532	0.3	-	1	1	-	3	1	-	3
NH	1	-	-	1	-	-	14,390	-	-	-	-	-	-	-	-	1
NJ	37	1.3	2	15	1	19	1,838,849	0.7	1	1	4	1	18	4	-	10
NM	20	0.7	-	16	2	2	3,306,660	1.2	-	1	6	2	8	1	-	3
NY	108	3.7	1	62	3	42	6,108,383	2.3	1	9	13	3	46	16	2	28
NC	40	1.4	9	20	4	7	3,218,578	1.2	-	4	4	4	13	7	1	11
ND	25	0.9	-	21	2	2	3,814,019	1.4	-	1	1	2	4	7	-	11
OH	104	3.6	19	62	6	17	9,542,983	3.6	4	12	3	6	50	18	1	26
OK	48	1.6	2	35	1	10	6,313,023	2.4	-	1	5	1	14	5	1	22
OR	53	1.8	5	36	-	12	4,197,843	1.6	-	2	5	-	26	4	1	17
PA	104	3.6	10	67	1	26	4,940,828	1.8	-	3	14	1	38	16	4	31
SC	34	1.2	2	21	4	7	2,041,651	0.8	-	-	2	4	14	5	-	9
SD	14	0.5	-	14	-	-	1,529,231	0.6	-	-	-	-	1	-	-	13
TN	69	2.4	8	52	1	8	2,303,458	0.9	-	1	10	1	21	11	-	26
TX	278	9.5	12	199	18	49	28,957,829	10.8	4	39	31	18	79	34	2	114
UT	33	1.1	2	24	-	7	2,703,101	1.0	-	-	4	-	16	5	-	8
VT	4	0.1	-	4	-	-	173,475	0.1	-	-	1	-	-	-	-	3
VA	49	1.7	6	31	1	11	1,764,100	0.7	-	2	6	1	20	13	-	9
WA	39	1.3	3	29	1	6	2,036,529	0.8	-	4	6	1	9	5	1	17
WV	28	1.0	1	24	-	3	4,527,059	1.7	-	-	6	-	4	5	-	13
WI	45	1.5	9	25	-	11	2,138,570	0.8	-	5	6	-	21	5	-	13
WY	42	1.4	3	30	-	9	8,083,441	3.0	-	1	9	-	14	7	-	12
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Tot	2,924	100	205	1,961	156	602	268,078,280	100.0	51	293	321	156	1,031	372	49	995

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TABLE 5-3 TRAIN ACCIDENTS BY MONTH, TYPE AND MAJOR CAUSE, 1999

	Total		Type of Accident				Reportable Damage		Casualty		Causes					
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
Jan	260	8.9	19	164	12	65	24,934,761	9.3	6	6	34	12	102	32	1	79
Feb	243	8.3	12	165	9	57	22,097,900	8.2	3	10	31	9	84	33	4	82
Mar	230	7.9	19	150	7	54	28,796,774	10.7	11	70	24	7	88	26	4	81
Apr	243	8.3	14	159	10	60	26,070,174	9.7	6	17	24	10	78	41	6	84
May	244	8.3	19	154	12	59	15,142,281	5.6	3	19	24	12	95	31	3	79
Jun	249	8.5	14	175	23	37	17,863,283	6.7	1	18	29	23	73	29	6	89
Jul	280	9.6	22	194	12	52	28,405,188	10.6	1	43	32	12	93	36	6	101
Aug	262	9.0	18	176	18	50	20,182,340	7.5	6	13	34	18	88	32	5	85
Sep	259	8.9	18	180	17	44	20,729,648	7.7	4	42	24	17	95	35	3	85
Oct	220	7.5	16	142	9	53	19,641,191	7.3	1	23	24	9	86	27	4	70
Nov	212	7.3	16	136	18	42	23,262,892	8.7	6	21	15	18	81	27	5	66
Dec	222	7.6	18	166	9	29	20,951,848	7.8	3	11	26	9	68	23	2	94
--																
Tot	2,924	100	205	1,961	156	602	268,078,280	100	51	293	321	156	1,031	372	49	995

TABLE 5-4 TRAIN ACCIDENTS BY DAY, TYPE AND MAJOR CAUSE, 1999

	Total		Type of Accident				Reportable Damage		Casualty		Causes					
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
Sun	413	14.1	26	287	18	82	38,628,809	14.4	7	37	40	18	158	51	3	143
Mon	425	14.5	27	282	27	89	36,307,234	13.5	7	29	45	27	150	64	1	138
Tue	459	15.7	26	304	37	92	43,309,868	16.2	16	96	56	37	161	66	10	129
Wed	420	14.4	32	284	26	78	36,290,220	13.5	8	48	57	26	134	56	11	136
Thu	417	14.3	34	273	18	92	41,774,414	15.6	4	25	37	18	155	47	9	151
Fri	390	13.3	30	265	14	81	34,962,751	13.0	4	43	37	14	127	43	11	158
Sat	400	13.7	30	266	16	88	36,804,984	13.7	5	15	49	16	146	45	4	140
--																
Tot	2,924	100	205	1,961	156	602	268,078,280	100.0	51	293	321	156	1,031	372	49	995

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TABLE 5-5 TRAIN ACCIDENTS BY TIME OF DAY, TYPE AND MAJOR CAUSE, 1999

Time	Total		Type of Accident				Reportable Damage		Casualty		Causes						
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk	
AM	1	115	3.9	13	73	-	29	13,130,165	4.9	2	8	24	-	49	19	1	22
	2	122	4.2	7	86	-	29	10,194,811	3.8	-	6	11	-	51	19	5	36
	3	113	3.9	12	83	-	18	12,578,324	4.7	-	6	15	-	43	10	2	43
	4	106	3.6	11	60	2	33	16,455,127	6.1	1	3	11	2	51	13	3	26
	5	128	4.4	8	85	3	32	11,664,167	4.4	2	12	18	3	49	10	4	44
	6	92	3.1	2	65	5	20	7,380,127	2.8	-	8	12	5	22	10	6	37
	7	99	3.4	8	67	8	16	8,779,812	3.3	1	11	15	8	35	12	1	28
	8	119	4.1	11	77	12	19	10,853,987	4.0	3	10	10	12	32	21	1	43
	9	108	3.7	5	68	13	22	5,340,085	2.0	1	2	13	13	32	13	2	35
	10	130	4.4	16	79	12	23	8,747,482	3.3	3	8	14	12	36	11	3	54
	11	143	4.9	9	92	16	26	9,939,903	3.7	5	34	19	16	38	18	1	51
	12	116	4.0	10	78	1	27	12,503,408	4.7	-	9	14	1	49	12	1	39
Sub	1,391	47.6	112	913	72	294	127,567,398	47.6	18	117	176	72	487	168	30	458	
PM	1	133	4.5	5	89	8	31	11,163,426	4.2	-	12	19	8	39	20	2	45
	2	140	4.8	6	93	19	22	10,571,967	3.9	8	9	8	19	35	14	2	62
	3	133	4.5	7	96	13	17	11,166,990	4.2	1	16	8	13	43	13	1	55
	4	148	5.1	10	103	15	20	19,648,471	7.3	8	10	13	15	44	21	2	53
	5	152	5.2	13	98	8	33	9,869,230	3.7	2	21	12	8	61	13	1	57
	6	130	4.4	8	84	3	35	11,300,891	4.2	-	6	13	3	52	22	1	39
	7	121	4.1	5	84	1	31	9,285,131	3.5	-	7	15	1	50	21	1	33
	8	113	3.9	5	83	1	24	6,686,519	2.5	-	2	13	1	48	16	-	35
	9	141	4.8	12	85	3	41	21,228,155	7.9	11	58	13	3	60	22	5	38
	10	105	3.6	5	76	4	20	4,286,052	1.6	-	1	13	4	38	14	2	34
	11	94	3.2	11	65	1	17	14,125,578	5.3	3	2	7	1	37	14	-	35
	12	123	4.2	6	92	8	17	11,178,472	4.2	-	32	11	8	37	14	2	51
Sub	1,533	52.4	93	1,048	84	308	140,510,882	52.4	33	176	145	84	544	204	19	537	
Total	2,924	100	205	1,961	156	602	268,078,280	100	51	293	321	156	1031	372	49	995	

TABLE 5-6 TRAIN ACCIDENTS BY TYPE AND MAJOR CAUSE, 1999

	Total		Reportable Damage		Casualty		Causes					
	Cnt	%	Amount	%	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
Derailments	1,961	67.1	189,888,914	70.8	1	41	260	-	518	223	20	940
Head on collision	11	0.4	5,749,617	2.1	2	14	1	-	10	-	-	-
Rear end collision	23	0.8	9,085,144	3.4	5	33	1	-	21	1	-	-
Side collision	124	4.2	7,418,012	2.8	-	10	4	-	105	10	2	3
Raking collision	43	1.5	1,962,871	0.7	-	1	4	-	27	8	2	2
Broken train coll.	2	0.1	17,233	-	-	-	-	-	1	1	-	-
Highway-rail Impact	156	5.3	22,988,646	8.6	42	164	-	156	-	-	-	-
RR crossing collision	2	0.1	2,753,884	1.0	-	4	-	-	2	-	-	-
Obstruction impact	56	1.9	3,583,479	1.3	1	2	4	-	13	36	-	3
Fire/violent rupture	24	0.8	6,481,517	2.4	-	-	11	-	-	13	-	-
Other impacts	355	12.1	10,808,040	4.0	-	21	16	-	260	40	23	16
Other events	167	5.7	7,340,923	2.7	-	3	20	-	74	40	2	31
-- Total	2,924	100	268,078,280	100	51	293	321	156	1,031	372	49	995

TABLE 5-7 TRAIN ACCIDENTS BY SUBCAUSE AND TYPE, 1999

	Total		Type of Accident				Reportable Damage		Casualty	
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf
Brakes	26	0.9	5	17	-	4	1,938,247	0.7	-	2
Trailer/Container on Flatcar	3	0.1	-	1	-	2	150,384	0.1	-	-
Body	22	0.8	-	14	-	8	1,765,442	0.7	-	-
Coupler & Draft System	36	1.2	2	29	-	5	2,584,019	1.0	-	1
Truck Components	68	2.3	-	67	-	1	10,307,846	3.8	-	-
Axles & Journal Bearings	62	2.1	-	62	-	-	11,848,786	4.4	-	-
Wheels	67	2.3	-	63	-	4	16,662,996	6.2	-	-
Locomotives	10	0.3	-	3	-	7	813,996	0.3	-	-
Doors	8	0.3	2	2	-	4	1,358,052	0.5	-	-
Other Mechanical	19	0.6	1	2	-	16	1,853,233	0.7	-	-
Brakes, Use of	136	4.7	22	43	-	71	4,186,298	1.6	-	8
Employee Physical Condition	2	0.1	1	-	-	1	33,802	-	-	-
Flagging, Fixed, Hand & Radio	40	1.4	15	14	-	11	11,781,603	4.4	2	34
General Switching Rules	357	12.2	58	136	-	163	9,919,070	3.7	-	12
Main Track Authority	33	1.1	14	7	-	12	7,121,855	2.7	2	10
Train Handling/Makeup	137	4.7	5	122	-	10	7,680,541	2.9	-	2
Speed	66	2.3	21	19	-	26	5,169,572	1.9	3	7
Switches, Use of	225	7.7	25	162	-	38	7,739,719	2.9	-	8
Miscellaneous Human Factors	35	1.2	5	15	-	15	2,316,039	0.9	-	2
Environmental Conditions	49	1.7	4	25	-	20	4,919,558	1.8	-	7
Loading Procedures	54	1.8	1	43	-	10	4,282,930	1.6	-	-
Highway-Rail Incidents	156	5.3	-	-	156	-	22,988,646	8.6	42	164
Unusual Operational Situations	112	3.8	2	57	-	53	10,192,332	3.8	1	-
Other Miscellaneous Causes	157	5.4	13	98	-	46	12,198,474	4.6	1	14
Signal Defects	49	1.7	4	20	-	25	2,727,023	1.0	-	-
Roadbed	41	1.4	-	38	-	3	3,576,457	1.3	-	-
Track Geometry	381	13.0	1	374	-	6	27,920,976	10.4	-	5
Rail, Joint Bar & Anchors	313	10.7	1	307	-	5	62,386,635	23.3	-	12
Frogs, Switches, Appliances	227	7.8	2	217	-	8	10,878,243	4.1	-	4
Other Track Defects	33	1.1	1	4	-	28	775,506	0.3	-	1
-- Total	2,924	100	205	1,961	156	602	268,078,280	100.0	51	293

TABLE 5-8 TRAIN ACCIDENTS WITH CONTRIBUTING CAUSE, 1999

Contributing Cause	Total		Type of Accident				Type of Track				
	Cnt	%	Coll	Der	HRC	Othr	Main	Yard	Side	Ind.	Unk
Brakes	1	0.3	-	1	-	-	1	-	-	-	-
Trailer/Container on Flatcar	1	0.3	1	-	-	-	-	1	-	-	-
Body	1	0.3	-	1	-	-	1	-	-	-	-
Coupler & Draft System	4	1.0	-	2	-	2	2	2	-	-	-
Truck Components	9	2.3	-	9	-	-	8	1	-	-	-
Axles & Journal Bearings	2	0.5	-	2	-	-	2	-	-	-	-
Wheels	19	4.8	-	17	-	2	9	9	1	-	-
Brakes, Use of	15	3.8	1	6	-	8	3	11	-	1	-
Flagging, Fixed, Hand & Radio	14	3.5	2	7	-	5	3	10	-	1	-
General Switching Rules	49	12.3	10	17	-	22	2	42	1	4	-
Main Track Authority	8	2.0	2	2	2	2	6	2	-	-	-
Train Handling/Makeup	27	6.8	2	24	-	1	11	13	-	2	1
Speed	14	3.5	1	8	-	5	7	6	-	1	-
Switches, Use of	27	6.8	5	19	-	3	3	18	2	4	-
Miscellaneous Human Factors	5	1.3	-	4	-	1	1	2	-	1	1
Environmental Conditions	11	2.8	2	6	-	3	3	3	-	5	-
Loading Procedures	12	3.0	-	8	-	4	10	2	-	-	-
Highway-Rail Incidents	9	2.3	-	-	9	-	9	-	-	-	-
Unusual Operational Situations	16	4.0	-	11	-	5	6	9	1	-	-
Other Miscellaneous Causes	14	3.5	2	10	-	2	6	2	-	6	-
Signal Defects	8	2.0	1	3	-	4	2	6	-	-	-
Roadbed	13	3.3	-	11	-	2	2	10	-	1	-
Track Geometry	75	18.8	2	70	-	3	31	24	6	14	-
Rail, Joint Bar & Anchors	23	5.8	-	23	-	-	8	10	1	3	1
Frogs, Switches, Appliances	20	5.0	1	18	-	1	2	14	1	2	1
Other Track Defects	3	0.8	-	2	-	1	1	2	-	-	-
-- Total	400	100	32	281	11	76	139	199	13	45	4

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

MAJOR CAUSE= Human Factors	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Failure to secure engine- rr empl	6	0.2	1	2	3	842,100	0.3	-	-
Fail to secure car hnd brk -rr emp	39	1.3	3	12	24	1,192,976	0.4	-	-
Fail to release hand brk - rr emp	3	0.1	-	3	-	83,714	-	-	-
Fail to apply suff. hand brakes -rr emp	49	1.7	10	10	29	1,148,504	0.4	-	4
Fail to apply car hnd brks -rr emp	21	0.7	4	6	11	470,566	0.2	-	2
Fail to secure equip - not rr emp	6	0.2	2	3	1	128,966	-	-	1
Fail to ctrl car spd use hnd brk-r emp	9	0.3	1	6	2	196,172	0.1	-	1
Use of brakes, other	3	0.1	1	1	1	123,300	-	-	-
Employee asleep	2	0.1	1	-	1	33,802	-	-	-
Fixed signal, failure to comply	7	0.2	5	1	1	6,193,661	2.3	2	6
Flagging, improper or failure to flag	3	0.1	-	2	1	99,156	-	-	-
Flagging signal, failure to comply	1	-	-	1	-	15,510	-	-	-
Hand signal, failure to comply	1	-	1	-	-	9,200	-	-	-
Hand signal improper	-	-	-	-	-	17,000	-	-	-
Hand signal, failure to give/receive	2	0.1	-	-	2	37,650	-	-	-
Radio communication, failure to comply	9	0.3	1	4	4	287,686	0.1	-	-
Radio communication, improper	1	-	-	1	-	24,011	-	-	-
Radio comm., failure to give/receive	6	0.2	-	4	2	139,450	0.1	-	-
Block signal, failure to comply	8	0.3	6	1	1	3,584,006	1.3	-	26
Interlocking signal, failure to comply	2	0.1	2	-	-	1,374,273	0.5	-	2
Car(s) shoved out & left out of clear	12	0.4	3	1	8	241,043	0.1	-	-
Cars left foul	52	1.8	8	7	37	987,080	0.4	-	-
Derail, failure to apply or remove	23	0.8	-	22	1	1,046,311	0.4	-	-
Instruction to trn/yd crew improper	20	0.7	7	4	9	585,735	0.2	-	1
Shoving movement, absence of man	113	3.9	21	48	44	3,601,323	1.3	-	-
Shoving movement, failure to control	40	1.4	12	15	13	860,479	0.3	-	2
Skate, failure to remove or place	3	0.1	-	1	2	100,883	-	-	-
Failure to stretch cars before shoving	8	0.3	1	3	4	294,695	0.1	-	1
Failure to couple	7	0.2	2	-	5	136,808	0.1	-	-
Passed couplers	41	1.4	1	24	16	850,202	0.3	-	3
Retarder, improper manual operation	7	0.2	1	1	5	118,707	-	-	-
Retarder yard skate improperly applied	1	-	-	-	1	39,295	-	-	-
Portable derail, improperly applied	1	-	-	1	-	30,300	-	-	-
Other general switching rules	29	1.0	2	9	18	1,026,209	0.4	-	5
Failure to stop train in clear	13	0.4	9	3	1	2,066,811	0.8	-	5
Motor car/on-trk rules, fail to comply	9	0.3	3	-	6	417,846	0.2	-	4
Movement without authority - rr emp	1	-	-	-	1	31,251	-	-	-
Fail to comply with trn order, etc.	3	0.1	1	-	2	3,362,974	1.3	2	1
Other main track authority causes	7	0.2	1	4	2	1,242,973	0.5	-	-
Improper train make-up at init term	3	0.1	1	2	-	183,475	0.1	-	-
Improper placement of cars in train	2	0.1	-	1	1	77,461	-	-	-
Buff/slack action excess, trn handling	51	1.7	-	50	1	2,524,761	0.9	-	2
Buff/slack action excess, trn make-up	7	0.2	1	6	-	479,809	0.2	-	-
Lat DB force on curve xcess trn hndlng	18	0.6	-	16	2	977,660	0.4	-	-
Lat DB force on curve excess, make-up	6	0.2	-	6	-	94,274	-	-	-
Lat drawbar force-short/long car combo	3	0.1	-	2	1	153,689	0.1	-	-
Improper train make-up	6	0.2	1	5	-	803,003	0.3	-	-
Improper train inspection	1	-	-	1	-	42,400	-	-	-
Automatic brake, insufficient	1	-	1	-	-	31,619	-	-	-
Automatic brake, excessive	1	-	-	1	-	150,765	0.1	-	-
Automatic brake, other improper use	3	0.1	-	3	-	45,239	-	-	-
Fail to allow air brks to release	5	0.2	-	5	-	208,781	0.1	-	-
Dynamic brake, excessive	1	-	-	1	-	272,709	0.1	-	-

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

(Continued)

MAJOR CAUSE= Human Factors	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Dynamic brake, too rapid adjustment	1	-	-	1	-	24,000	-	-	-
Dynamic brake, other improper use	-	-	-	-	-	5,000	-	-	-
Throttle (power), improper use	2	0.1	-	2	-	190,455	0.1	-	-
Throttle (power), too rapid adjustment	1	-	-	1	-	10,200	-	-	-
Excessive horsepower	3	0.1	-	3	-	130,440	-	-	-
Independent brake, improper use	11	0.4	1	9	1	279,059	0.1	-	-
Failure to actuate off independent brk	1	-	-	1	-	143,641	0.1	-	-
Other train handling/makeup	10	0.3	-	6	4	852,101	0.3	-	-
Coupling speed excessive	19	0.6	1	9	9	450,091	0.2	-	-
Switch movement, excessive speed	6	0.2	-	1	5	150,832	0.1	-	1
Train inside yard limits, excess speed	2	0.1	1	1	-	163,925	0.1	-	-
Train outside yd limits, excess speed	1	-	-	1	-	12,274	-	-	-
Failure to comply with restricted speed	25	0.9	17	1	7	3,127,472	1.2	3	5
Train outside yd limits(nonblk),exc spd	2	0.1	-	2	-	618,240	0.2	-	-
Speed, other	11	0.4	2	4	5	646,738	0.2	-	1
Spring Switch not clear before reverse	4	0.1	-	4	-	139,706	0.1	-	-
Switch improperly lined	156	5.3	23	101	32	4,820,434	1.8	-	6
Switch not latched or locked	10	0.3	-	9	1	620,073	0.2	-	-
Switch previously run through	43	1.5	-	40	3	1,744,951	0.7	-	2
Use of switches, other	12	0.4	2	8	2	414,555	0.2	-	-
Human factors - track	5	0.2	-	3	2	925,003	0.3	-	1
Human factors - signal	1	-	-	1	-	344,835	0.1	-	-
Human factors -motive power & equipment	4	0.1	-	3	1	65,808	-	-	-
Other train operation/human factors	25	0.9	5	8	12	980,393	0.4	-	1
-- Total	1,031	35.3	166	518	347	55,948,499	20.9	7	83

MAJOR CAUSE= Signal Defects

	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Automatic trn control sys inoperative	1	-	-	1	-	30,043	-	-	-
Classyard autocontrol sys switch fail	5	0.2	-	3	2	125,081	-	-	-
Class yd auto ctrl sys retarder fail	17	0.6	-	5	12	352,540	0.1	-	-
Fixed sig improperly displayed (defect)	1	-	-	1	-	241,958	0.1	-	-
Power switch failure	4	0.1	1	2	1	140,404	0.1	-	-
Radio communication equipment failure	1	-	-	1	-	21,137	-	-	-
Other communication equipment failure	2	0.1	-	-	2	48,285	-	-	-
Other signal failures	18	0.6	3	7	8	1,767,575	0.7	-	-
-- Total	49	1.7	4	20	25	2,727,023	1.0	-	-

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

MAJOR CAUSE= Track Defects

	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Roadbed settled or soft	34	1.2	-	34	-	2,923,875	1.1	-	-
Washout/rain/slide/etc. dmg -track	5	0.2	-	3	2	300,915	0.1	-	-
Other roadbed defects	2	0.1	-	1	1	351,667	0.1	-	-
Cross level of track irregular(joints)	31	1.1	-	31	-	2,060,265	0.8	-	-
Cross level track irreg.(not at joints)	41	1.4	1	39	1	2,258,780	0.8	-	-
Insufficient ballast section	1	-	-	1	-	200,000	0.1	-	-
Superelevation improper, excessive,etc.	5	0.2	-	5	-	475,333	0.2	-	-
Trk alignmnt irreg-not buckled/sunkink	12	0.4	-	11	1	971,487	0.4	-	-
Track alignment irreg(buckled/sunkink)	41	1.4	-	41	-	11,846,158	4.4	-	5
Wide gage(defective/missing crossties)	198	6.8	-	195	3	7,821,038	2.9	-	-
Wide gage(spikes/other rail fasteners)	24	0.8	-	23	1	757,705	0.3	-	-
Wide gage(loose,broke, etc, gage rods)	6	0.2	-	6	-	69,415	-	-	-
Wide gage (due to worn rails)	10	0.3	-	10	-	769,456	0.3	-	-
Other track geometry defects	12	0.4	-	12	-	691,339	0.3	-	-
Bolt hole crack or break	3	0.1	-	3	-	2,228,073	0.8	-	-
Broken base of rail	49	1.7	-	49	-	5,878,265	2.2	-	3
Broken weld (plant)	1	-	-	1	-	1,461,430	0.5	-	-
Broken weld (field)	12	0.4	-	12	-	11,616,135	4.3	-	2
Defective or missing crossties	16	0.5	-	15	1	698,922	0.3	-	-
Defect/missing spike-oth rail fastener	3	0.1	-	3	-	219,092	0.1	-	-
Detail fracture - shelling/head check	35	1.2	-	34	1	11,768,139	4.4	-	-
Head and web sep(outside jt bar limit)	37	1.3	-	36	1	4,141,941	1.5	-	-
Head & web separation-in jt bar limit	5	0.2	-	5	-	1,482,771	0.6	-	-
Horizontal split head	9	0.3	-	9	-	922,217	0.3	-	-
Joint bar broken (insulated)	1	-	-	1	-	1,262,750	0.5	-	7
Joint bar broken (noninsulated)	8	0.3	-	8	-	4,777,960	1.8	-	-
Joint bolts, broken, or missing	3	0.1	-	3	-	354,540	0.1	-	-
Mismatched rail-head contour	4	0.1	-	4	-	80,597	-	-	-
Piped rail	3	0.1	-	3	-	213,442	0.1	-	-
Transverse/compound fissure	61	2.1	-	61	-	8,755,367	3.3	-	-
Vertical split head	42	1.4	1	40	1	4,598,976	1.7	-	-
Worn rail	8	0.3	-	8	-	358,056	0.1	-	-
Other rail and joint bar defects	13	0.4	-	12	1	1,567,962	0.6	-	-
Expansion joint failed/malfunctioned	1	-	-	1	-	83,802	-	-	-
Guard rail loose/broken or mislocated	5	0.2	-	5	-	719,335	0.3	-	-
Railroad crossing frog, worn or broken	2	0.1	-	2	-	236,795	0.1	-	-
Retarder worn, broken, malfunctioning	9	0.3	2	3	4	200,991	0.1	-	-
Spring/power swtch mech. malfunction	6	0.2	-	6	-	126,976	-	-	-
Stock rail worn, broken, disconnected	7	0.2	-	7	-	187,710	0.1	-	-
Switch (hand op) stand mechanism defect	6	0.2	-	6	-	89,583	-	-	-
Swtch connect/operate rod broke/defect	4	0.1	-	4	-	85,313	-	-	-
Switch damaged or out of adjustment	37	1.3	-	36	1	1,091,394	0.4	-	1
Switch lug/crank broken	3	0.1	-	3	-	822,408	0.3	-	-
Switch out of adj. insuff. anchoring	9	0.3	-	8	1	362,340	0.1	-	-
Switch point worn or broken	85	2.9	-	85	-	3,038,084	1.1	-	2
Switch rod worn, bent, broken, etc.	1	-	-	1	-	36,400	-	-	-
Turnout frog (rigid) worn, or broken	1	-	-	1	-	23,262	-	-	-
Turnout frog(self guarded)-worn/broken	1	-	-	1	-	151,479	0.1	-	-
Turnout frog (spring) worn, or broken	4	0.1	-	4	-	1,726,542	0.6	-	-
Switch pt gap(btwn swt pt & stock rail)	29	1.0	-	29	-	1,084,135	0.4	-	-
Oth frog, switch, trk appliance defect	17	0.6	-	15	2	811,694	0.3	-	1
Bridge misalignment or failure	2	0.1	-	2	-	74,224	-	-	-
Flangeway clogged	1	-	-	1	-	55,500	-	-	1
Engineering design or construction	1	-	-	1	-	7,400	-	-	-
Other way and structure defect	29	1.0	1	-	28	638,382	0.2	-	-
-- Total	995	34.0	5	940	50	105,537,817	39.4	-	22

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

MAJOR CAUSE= Mechanical/Electrical	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Air hose uncoupled or burst	2	0.1	-	2	-	86,403	-	-	-
Obstructed brake pipe	2	0.1	-	1	1	316,961	0.1	-	-
Oth brk component dmg,worn,broke,etc.	1	-	-	1	-	15,000	-	-	-
Oth brk parts dmg,worm,broke,etc.(LOCO)	1	-	-	1	-	69,000	-	-	2
Brk valve malf. (undesired emergency)	2	0.1	-	2	-	28,255	-	-	-
Brk valve malf.(stuck brk, etc.)-loco	1	-	-	1	-	14,100	-	-	-
Rigging down or dragging	8	0.3	-	8	-	602,582	0.2	-	-
Hand brk broken or defective	4	0.1	2	-	2	57,215	-	-	-
Hand brake broken or defective (LOCO)	1	-	1	-	-	600,000	0.2	-	-
Other brake defects, cars	2	0.1	-	1	1	23,803	-	-	-
Other brake defects, (LOCOMOTIVE)	1	-	1	-	-	80,331	-	-	-
Hnd brk linkage/connect defect-loco	1	-	1	-	-	44,597	-	-	-
Broken or defective container	1	-	-	1	-	50,884	-	-	-
Broken or defective trailer	1	-	-	-	1	19,500	-	-	-
Oth trailer/container on flt car def	1	-	-	-	1	80,000	-	-	-
Center sill broken or bent	6	0.2	-	2	4	105,659	-	-	-
Center plate broken or defective	2	0.1	-	2	-	308,167	0.1	-	-
Ctr plate disengaged from truck	3	0.1	-	3	-	600,735	0.2	-	-
Side sill broken	3	0.1	-	2	1	470,453	0.2	-	-
Other body defects, (CAR)	8	0.3	-	5	3	280,428	0.1	-	-
Knuckle broken or defective	4	0.1	1	2	1	111,560	-	-	-
Coupler mismatch, high/low	3	0.1	-	2	1	22,835	-	-	-
Coupler retainer pin/cross key missing	5	0.2	-	5	-	297,122	0.1	-	-
Draft gear/mechanism broke/defective	5	0.2	-	4	1	129,063	-	-	-
Coupler shank broken/defective	2	0.1	-	2	-	728,500	0.3	-	-
Oth coupler/draft system defects-car	17	0.6	1	14	2	1,294,939	0.5	-	1
Side bearing clearance insufficient	24	0.8	-	24	-	3,279,290	1.2	-	-
Side bearing clearance excessive	4	0.1	-	4	-	247,423	0.1	-	-
Side bearing(s) broken	2	0.1	-	2	-	577,902	0.2	-	-
Side bearing(s) missing	2	0.1	-	2	-	200,047	0.1	-	-
Truck bolster broken	1	-	-	-	1	16,332	-	-	-
Truck bolster broken (LOCOMOTIVE)	1	-	-	1	-	206,400	0.1	-	-
Side frame broken	1	-	-	1	-	23,022	-	-	-
Truck bolster stiff	19	0.6	-	19	-	1,655,993	0.6	-	-
Truck bolster stiff (LOCO)	2	0.1	-	2	-	33,609	-	-	-
Defective snubbing	2	0.1	-	2	-	1,107,680	0.4	-	-
Broken, missing, or defective springs	1	-	-	1	-	47,816	-	-	-
Other truck component defects, (CAR)	3	0.1	-	3	-	310,448	0.1	-	-
Truck hunting	6	0.2	-	6	-	2,601,884	1.0	-	-
Broken/bent axle between wheel seats	4	0.1	-	4	-	908,348	0.3	-	-
Broke/bent axle btwn wheel seats-loco	1	-	-	1	-	30,000	-	-	-
Journal (plain) failure from overheat	10	0.3	-	10	-	1,575,539	0.6	-	-
Journal (roller bearing) overheating	46	1.6	-	46	-	9,255,899	3.5	-	-
Journal-cold brk, previously overheated	1	-	-	1	-	79,000	-	-	-
Broken flange	3	0.1	-	3	-	1,414,116	0.5	-	-
Broken flange (LOCOMOTIVE)	1	-	-	1	-	60,000	-	-	-
Broken rim	8	0.3	-	8	-	4,407,807	1.6	-	-
Broken plate	7	0.2	-	6	1	4,128,718	1.5	-	-
Broken hub	3	0.1	-	3	-	2,285,433	0.9	-	-
Worn Flange	16	0.5	-	15	1	858,303	0.3	-	-
Worn flange (LOCOMOTIVE)	2	0.1	-	2	-	14,637	-	-	-
Worn tread	1	-	-	1	-	490,500	0.2	-	-
Damaged flange or tread (flat)	1	-	-	1	-	152,100	0.1	-	-

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

(Continued)

MAJOR CAUSE= Mechanical/Electrical

	Total		Type of Accident			Reportable Damage		Casualty	
	Cnt	%	Coll	Der	Othr	Amount	%	Kld	Nonf
Damaged flange or tread (flat) (LOCO)	1	-	-	1	-	94,000	-	-	-
Damaged flange or tread (build up)	13	0.4	-	12	1	1,213,899	0.5	-	-
Loose wheel	6	0.2	-	6	-	945,516	0.4	-	-
Other wheel defects (CAR)	5	0.2	-	4	1	597,967	0.2	-	-
Traction motor failure (LOCOMOTIVE)	1	-	-	1	-	12,000	-	-	-
Crank case or air box explosion (LOCO)	1	-	-	-	1	200,000	0.1	-	-
Oil or fuel fire (LOCOMOTIVE)	2	0.1	-	-	2	19,000	-	-	-
Electrically caused fire (LOCOMOTIVE)	3	0.1	-	-	3	220,500	0.1	-	-
Other locomotive defects	3	0.1	-	2	1	362,496	0.1	-	-
Box car plug door open	1	-	-	-	1	10,770	-	-	-
Bottom outlet car door open	1	-	-	-	1	11,600	-	-	-
Bottom outlet door attachment defect	3	0.1	1	1	1	188,629	0.1	-	-
Other car door defects	3	0.1	1	1	1	1,147,053	0.4	-	-
Other mechanical/electrical failures	13	0.4	-	2	11	1,590,140	0.6	-	-
Other mechanical/electrical fail(LOCO)	6	0.2	1	-	5	263,093	0.1	-	-
-- Total	321	11.0	10	260	51	49,283,001	18.4	-	3

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TABLE 5-9 TRAIN ACCIDENTS BY SPECIFIC CAUSE AND TYPE, 1999

MAJOR CAUSE= Miscellaneous

	Total		Type of Accident				Reportable Damage		Casualty	
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Kld	Nonf
Snow,ice,mud,gravel,coal,etc. on trk	23	0.8	1	19	-	3	1,389,050	0.5	-	5
Extreme environmental - TORNADO	1	-	-	1	-	-	9,500	-	-	-
Extreme wind velocity	19	0.6	2	3	-	14	3,013,102	1.1	-	1
Other extreme environmental conditions	6	0.2	1	2	-	3	507,906	0.2	-	1
Load shifted	15	0.5	1	13	-	1	628,551	0.2	-	-
Load fell from car	4	0.1	-	2	-	2	292,366	0.1	-	-
Overloaded car	8	0.3	-	8	-	-	222,885	0.1	-	-
Improperly loaded car	15	0.5	-	15	-	-	2,551,004	1.0	-	-
Oversized load, misrouted	3	0.1	-	-	-	3	51,613	-	-	-
Trailer/container tiedown eqp improper	1	-	-	-	-	1	18,779	-	-	-
Improperly loaded contain/trail on car	2	0.1	-	-	-	2	377,322	0.1	-	-
Miscellaneous loading procedures	6	0.2	-	5	-	1	140,410	0.1	-	-
Highway user inattentiveness	72	2.5	-	-	72	-	4,508,192	1.7	20	37
Hwy user misjudgement	19	0.6	-	-	19	-	2,975,482	1.1	5	7
Highway user cited for violation	24	0.8	-	-	24	-	12,754,528	4.8	11	92
Malf.,improper op. of trn act. warning	-	-	-	-	-	-	22,205	-	-	-
Other causes (highway-rail collisions)	41	1.4	-	-	41	-	2,728,239	1.0	6	28
Object/equipment (mtr veh) on track	13	0.4	-	-	-	13	215,244	0.1	1	-
Obj/equip on/fouling track, other	24	0.8	-	6	-	18	2,202,800	0.8	-	-
Harmonic rock off, etc.	41	1.4	-	41	-	-	2,248,985	0.8	-	-
Fire, other than vandalism	10	0.3	-	-	-	10	4,737,305	1.8	-	-
Auto hump retarder failed to slow car	14	0.5	2	5	-	7	275,732	0.1	-	-
Yard skate slid and failed to stop car	7	0.2	-	3	-	4	222,081	0.1	-	-
Lading chains/straps fouling switches	2	0.1	-	2	-	-	280,863	0.1	-	-
Lading chains or straps fouling wheels	1	-	-	-	-	1	9,322	-	-	-
Interference(not vandals)with RR op.	6	0.2	1	2	-	3	297,285	0.1	-	-
Vandalism of on-track equipment	15	0.5	2	7	-	6	1,171,598	0.4	-	1
Vandalism of track or track appliances	32	1.1	-	27	-	5	2,672,563	1.0	-	4
Fail by non-rr empto control spd of car	2	0.1	-	1	-	1	26,090	-	-	-
Cause under investigation	23	0.8	-	17	-	6	4,425,353	1.7	1	-
Other miscellaneous causes	79	2.7	10	44	-	25	3,605,585	1.3	-	9
-- Total	528	18.1	20	223	156	129	54,581,940	20.4	44	185

TABLE 5-10 TRAIN ACCIDENTS BY TYPE TRACK AND CLASS, 1999

Trk - Cls		Total		Type of Accident				Reportable Damage	Casualty		Causes					
		Cnt	%	Coll	Der	HRC	Othr	Amount	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
Main	1	143	4.9	4	124	2	13	8,327,826	-	9	10	2	39	20	5	67
	2	221	7.6	12	176	13	20	31,289,231	3	24	45	13	35	29	-	99
	3	208	7.1	12	134	26	36	44,791,172	10	49	50	26	34	24	1	73
	4	326	11.1	17	167	88	54	96,632,791	30	150	90	88	43	48	1	56
	5	75	2.6	6	31	22	16	15,647,018	8	20	13	22	12	9	-	19
	6	9	0.3	-	1	-	8	2,623,136	-	-	2	-	-	3	-	4
	?	2	0.1	-	1	-	1	71,500	-	-	-	-	-	-	-	2
	X	26	0.9	2	22	1	1	1,495,877	-	2	2	1	5	3	-	15
	-Sub	1,010	34.5	53	656	152	149	200,878,551	51	254	212	152	168	136	7	335
Yard	1	1,318	45.1	110	855	-	353	42,732,241	-	23	73	-	659	147	32	407
	2	124	4.2	24	72	-	28	4,165,883	-	1	12	-	49	20	6	37
	3	15	0.5	1	9	-	5	2,268,668	-	3	-	-	6	3	-	6
	4	11	0.4	-	8	-	3	333,211	-	-	-	-	5	-	1	5
	5	1	-	-	1	-	-	390,279	-	-	1	-	-	-	-	-
	?	11	0.4	1	7	-	3	172,131	-	-	1	-	5	4	-	1
	X	51	1.7	3	36	-	12	1,212,012	-	1	4	-	23	4	1	19
	-Sub	1,531	52.4	139	988	-	404	51,274,425	-	28	91	-	747	178	40	475
	Side	1	67	2.3	3	57	-	7	5,032,052	-	6	10	-	16	11	-
2		19	0.6	-	18	-	1	827,096	-	-	3	-	3	4	1	8
3		7	0.2	-	7	-	-	664,448	-	1	-	-	2	1	-	4
4		5	0.2	-	4	-	1	353,424	-	-	-	-	3	-	1	1
X		8	0.3	-	7	-	1	226,460	-	-	-	-	3	3	-	2
-Sub		106	3.6	3	93	-	10	7,103,480	-	7	13	-	27	19	2	45
Ind.		1	182	6.2	8	141	1	32	4,535,568	-	3	3	1	71	22	-
	2	20	0.7	1	16	-	3	874,729	-	-	1	-	3	3	-	13
	3	3	0.1	-	3	-	-	56,285	-	-	1	-	1	1	-	-
	4	5	0.2	-	5	-	-	160,359	-	-	-	-	1	1	-	3
	?	2	0.1	-	2	-	-	28,044	-	-	-	-	-	1	-	1
	X	29	1.0	-	27	-	2	1,037,165	-	-	-	-	6	6	-	17
	-Sub	241	8.2	9	194	1	37	6,692,150	-	3	5	1	82	34	-	119
Unk	?	36	1.2	1	30	3	2	2,129,674	-	1	-	3	7	5	-	21
	-Sub	36	1.2	1	30	3	2	2,129,674	-	1	-	3	7	5	-	21
Total		2,924	100	205	1,961	156	602	268,078,280	51	293	321	156	1031	372	49	995

TABLE 5-11 TRAIN ACCIDENTS BY TYPE TRACK AND CONSIST SPEED, 1999

Trk - Spd Rng		Total		Type of Accident				Reportable Damage	Casualty		Causes					
		Cnt	%	Coll	Der	HRC	Othr	Amount	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk
Main	?	10	0.3	-	4	1	5	1,251,359	2	1	3	1	1	2	-	3
	1 - 9	216	7.4	13	168	8	27	11,610,062	-	9	25	8	79	24	3	77
	10-19	201	6.9	15	159	10	17	22,446,680	3	16	28	10	45	26	1	91
	20-29	172	5.9	10	131	17	14	35,258,676	3	25	46	17	17	25	2	65
	30-39	130	4.4	6	83	23	18	40,315,951	3	29	45	23	13	15	-	34
	40-49	128	4.4	5	75	33	15	40,064,163	9	44	37	33	7	13	-	38
	50-59	73	2.5	3	26	25	19	21,887,363	6	18	19	25	3	13	1	12
	60-69	41	1.4	1	10	13	17	11,711,038	2	27	8	13	3	9	-	8
	>= 70	39	1.3	-	-	-	22	16,333,259	23	85	1	22	-	9	-	7
-Sub	1,010	34.5	53	656	152	149	200,878,551	51	254	212	152	168	136	7	335	
Yard	?	30	1.0	-	9	-	21	1,044,533	-	-	2	-	13	15	-	-
	1 - 9	1,358	46.4	127	885	-	346	41,288,066	-	23	79	-	681	136	32	430
	10-19	135	4.6	11	87	-	37	5,837,133	-	2	8	-	51	24	8	44
	20-29	3	0.1	-	3	-	-	924,123	-	-	-	-	1	2	-	-
	30-39	2	0.1	-	2	-	-	438,870	-	-	1	-	1	-	-	-
	40-49	1	-	-	1	-	-	912,000	-	3	-	-	-	-	-	1
	50-59	2	0.1	1	1	-	-	829,700	-	-	1	-	-	1	-	-
	-Sub	1,531	52.4	139	988	-	404	51,274,425	-	28	91	-	747	178	40	475
Side	?	3	0.1	-	1	-	2	1,209,340	-	-	2	-	-	1	-	-
	1 - 9	68	2.3	1	61	-	6	3,012,046	-	1	5	-	16	15	-	32
	10-19	25	0.9	2	21	-	2	1,719,666	-	5	3	-	10	2	1	9
	20-29	9	0.3	-	9	-	-	887,428	-	1	2	-	1	1	1	4
	40-49	1	-	-	1	-	-	275,000	-	-	1	-	-	-	-	-
	-Sub	106	3.6	3	93	-	10	7,103,480	-	7	13	-	27	19	2	45
Ind.	?	3	0.1	-	3	-	-	50,408	-	-	-	-	2	-	-	1
	1 - 9	216	7.4	7	173	1	35	5,493,163	-	2	3	1	72	31	-	109
	10-19	18	0.6	2	14	-	2	951,638	-	-	2	-	4	3	-	9
	20-29	3	0.1	-	3	-	-	167,191	-	-	-	-	3	-	-	-
	30-39	1	-	-	1	-	-	29,750	-	1	-	-	1	-	-	-
	-Sub	241	8.2	9	194	1	37	6,692,150	-	3	5	1	82	34	-	119
Unk	?	1	-	-	-	-	1	1,100,000	-	-	-	-	-	1	-	-
	1 - 9	27	0.9	-	27	-	-	670,872	-	-	-	-	5	4	-	18
	10-19	4	0.1	-	3	1	-	180,737	-	1	-	1	-	-	-	3
	20-29	3	0.1	1	-	1	1	153,065	-	-	-	1	2	-	-	-
	50-59	1	-	-	-	1	-	25,000	-	-	-	1	-	-	-	-
	-Sub	36	1.2	1	30	3	2	2,129,674	-	1	-	3	7	5	-	21
Total		2,924	100	205	1,961	156	602	268,078,280	51	293	321	156	1031	372	49	995

TABLE 5-12 TRAIN ACCIDENTS BY WEATHER CONDITION, 1999

	Total		Type of Accident				Reportable Damage	Casualty		Causes						
	Cnt	%	Coll	Der	HRC	Othr	Amount	Kld	Nonf	Eqp	HRC	Hmn	Othr	Sig	Trk	
Dawn	Clear	76	2.6	4	53	3	16	6,940,707	1	6	13	3	25	6	4	25
	Cloudy	25	0.9	-	16	1	8	2,764,677	-	-	2	1	8	1	3	10
	Rain	6	0.2	-	3	-	3	910,838	-	-	-	-	-	2	-	4
	Fog	5	0.2	-	4	-	1	345,216	-	-	-	-	1	2	-	2
	Snow	7	0.2	-	6	-	1	2,079,885	-	-	-	-	2	1	-	4
	-- Sub	119	4.1	4	82	4	29	13,041,323	1	6	15	4	36	12	7	45
Day	Clear	1,085	37.1	68	728	100	189	88,506,174	13	127	112	100	324	126	14	409
	Cloudy	311	10.6	17	216	26	52	24,846,416	15	31	36	26	92	33	7	117
	Rain	57	1.9	7	34	2	14	3,631,592	1	4	5	2	18	8	1	23
	Fog	3	0.1	1	2	-	-	78,982	-	-	-	-	2	-	-	1
	Sleet	3	0.1	2	1	-	-	57,166	-	-	-	-	2	1	-	-
	Snow	21	0.7	4	13	2	2	1,509,905	-	2	3	2	7	3	-	6
	-- Sub	1,480	50.6	99	994	130	257	118,630,235	29	164	156	130	445	171	22	556
Dusk	Clear	85	2.9	6	62	3	14	8,621,015	3	5	5	3	32	15	-	30
	Cloudy	29	1.0	1	17	2	9	2,040,847	-	3	5	2	9	8	-	5
	Rain	9	0.3	1	4	-	4	295,393	-	-	-	-	3	3	-	3
	Sleet	1	-	-	1	-	-	21,300	-	-	-	-	1	-	-	-
	Snow	1	-	-	1	-	-	251,180	-	-	-	-	1	-	-	-
	-- Sub	125	4.3	8	85	5	27	11,229,735	3	8	10	5	46	26	-	38
Dark	Clear	754	25.8	64	501	9	180	71,730,084	14	86	88	9	326	103	15	213
	Cloudy	293	10.0	19	206	5	63	32,521,958	2	24	35	5	113	28	4	108
	Rain	98	3.4	2	60	2	34	10,478,073	-	4	9	2	37	26	-	24
	Fog	21	0.7	6	10	1	4	6,583,898	2	1	2	1	10	2	-	6
	Sleet	4	0.1	1	2	-	1	559,726	-	-	-	-	2	1	-	1
	Snow	30	1.0	2	21	-	7	3,303,248	-	-	6	-	16	3	1	4
	-- Sub	1,200	41.0	94	800	17	289	125,176,987	18	115	140	17	504	163	20	356
Total		2,924	100	205	1,961	156	602	268,078,280	51	293	321	156	1,031	372	49	995

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TABLE 5-13 TRAIN ACCIDENTS BY CONSIST LENGTH, 1999

Length	Consists		Type of Accident				Equipment Damage		Causes					
	Cnt	%	Coll	Der	HRC	Othr	Amount	%	Eqp	HRC	Hmn	Othr	Sig	Trk
???	3	0.1	-	1	-	2	48,969	-	1	-	2	-	-	-
1	149	4.5	31	40	7	71	3,470,729	1.9	9	7	73	38	6	16
2-5	351	10.6	56	117	19	159	6,778,990	3.7	17	19	197	55	17	46
6-10	238	7.2	21	104	20	93	9,805,479	5.3	17	20	107	27	1	66
11-15	184	5.5	18	95	17	54	9,315,078	5.0	9	17	82	22	1	53
16-20	187	5.6	17	116	11	43	13,428,258	7.3	7	11	78	24	3	64
21-25	151	4.6	22	91	5	33	3,124,883	1.7	12	5	61	14	1	58
26-30	143	4.3	16	93	5	29	4,827,940	2.6	12	5	62	14	3	47
31-35	158	4.8	17	101	4	36	4,478,498	2.4	13	4	70	20	5	46
36-40	111	3.3	14	73	3	21	3,864,166	2.1	10	3	39	16	2	41
41-45	127	3.8	17	76	2	32	5,418,279	2.9	4	2	62	17	2	40
46-50	109	3.3	18	67	3	21	5,528,158	3.0	8	3	48	12	2	36
51-60	234	7.1	22	156	12	44	11,483,142	6.2	26	12	89	22	2	83
61-70	181	5.5	22	129	12	18	8,387,089	4.5	17	12	60	20	3	69
71-80	185	5.6	20	133	6	26	13,656,367	7.4	25	6	64	18	1	71
81-90	162	4.9	10	126	7	19	7,680,183	4.2	18	7	56	20	3	58
91-100	150	4.5	13	116	9	12	16,019,718	8.7	25	9	33	13	2	68
101-110	169	5.1	11	141	4	13	10,029,704	5.4	38	4	43	24	2	58
111-120	156	4.7	11	130	4	11	18,523,641	10.0	32	4	29	19	2	70
121-130	88	2.7	12	66	3	7	16,011,805	8.7	21	3	27	8	3	26
131-140	45	1.4	4	37	1	3	9,570,829	5.2	10	1	14	5	2	13
141-150	13	0.4	-	13	-	-	1,510,005	0.8	2	-	3	1	-	7
>= 151	22	0.7	3	15	3	1	1,953,723	1.1	3	3	8	3	-	5
-- Tot	3,316	100	375	2,036	157	748	184,915,633	100.0	336	157	1,307	412	63	1,041

Counts are higher since multiple consists may be involved.

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TABLE 5-14 TRAIN ACCIDENTS BY TYPE TRACK AND CONSIST, 1999

Track - Equipment		Consists		Avg Len.	Type of Accident				Total Train Crew			
		Cnt	%		Coll	Der	HRC	Othr	Engineers	Conductors	Brakemen	Firemen
Main	Freight Train	823	24.8	78	58	604	93	68	4,218	799	160	17
	Psgr Train	102	3.1	11	8	6	37	51	406	128	76	21
	Commuter Train	24	0.7	5	3	2	12	7	78	24	8	-
	Work Train	9	0.3	20	-	7	1	1	68	7	6	2
	Single Car	8	0.2	1	5	1	-	2	9	1	-	-
	Cut of Cars	12	0.4	23	3	2	1	6	19	4	2	-
	Yard/ Switch	49	1.5	43	8	35	1	5	220	49	35	1
	Light loco(s)	16	0.5	3	4	4	3	5	77	14	5	-
	Maint/ Insp car	32	1.0	1	7	3	5	17	148	3	2	-
	-- Tot	1,075	32.4	63	96	664	153	162	5,243	1,029	294	41
Yard	Freight Train	562	16.9	66	56	431	-	75	2,948	557	205	10
	Psgr Train	20	0.6	6	3	9	-	8	93	19	5	-
	Commuter Train	4	0.1	10	-	4	-	-	13	2	2	1
	Work Train	2	0.1	75	1	1	-	-	9	1	-	-
	Single Car	64	1.9	2	8	16	-	40	34	9	1	-
	Cut of Cars	193	5.8	19	34	58	-	101	64	32	8	-
	Yard/ Switch	905	27.3	38	135	484	-	286	3,719	907	602	8
	Light loco(s)	85	2.6	2	20	42	-	23	267	55	18	-
	Maint/ Insp car	1	-	1	-	-	-	1	6	-	-	-
	-- Tot	1,836	55.4	41	257	1,045	-	534	7,153	1,582	841	19
Side	Freight Train	76	2.3	77	4	68	-	4	413	74	16	2
	Psgr Train	6	0.2	9	-	6	-	-	24	6	5	1
	Work Train	4	0.1	23	-	3	-	1	30	4	2	-
	Single Car	1	-	1	-	1	-	-	-	-	-	-
	Cut of Cars	4	0.1	28	-	3	-	1	-	-	-	-
	Yard/ Switch	15	0.5	30	-	12	-	3	78	15	10	-
	Light loco(s)	3	0.1	1	1	1	-	1	1	1	1	-
	-- Tot	109	3.3	60	5	94	-	10	546	100	34	3
Ind.	Freight Train	121	3.6	55	4	100	1	16	656	118	68	-
	Commuter Train	1	-	4	-	-	-	1	10	1	-	-
	Single Car	10	0.3	1	4	5	-	1	-	-	-	-
	Cut of Cars	17	0.5	22	4	8	-	5	11	4	3	-
	Yard/ Switch	106	3.2	24	2	88	-	16	511	104	85	-
	Light loco(s)	2	0.1	2	1	-	-	1	6	1	1	-
	-- Tot	257	7.8	38	15	201	1	40	1,194	228	157	-
Unk	Freight Train	27	0.8	74	1	22	3	1	145	27	7	-
	Single Car	2	0.1	1	-	1	-	1	-	-	-	-
	Cut of Cars	1	-	17	-	1	-	-	4	1	1	-
	Yard/ Switch	8	0.2	65	1	7	-	-	46	8	4	1
	Light loco(s)	1	-	3	-	1	-	-	7	1	-	-
-- Tot	39	1.2	65	2	32	3	2	202	37	12	1	
---Total		3,316	100	49	375	2,036	157	748	14,338	2,976	1,338	64

Counts are higher since multiple consists may be involved.

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TABLE 5-15 TRAIN ACCIDENTS BY CONSIST LENGTH AND TYPE CONSIST, 1999

Length	Freight Train	Psgr Train	Commuter Train	Work Train	Single Car	Cut of Cars	Yard/ Switch	Light loco(s)	Maint/ Insp car
???	1	-	1	-	-	-	-	-	1
1	-	6	-	-	83	-	1	29	30
2-5	22	28	17	-	1	93	115	73	2
6-10	49	49	10	4	-	22	99	5	-
11-15	51	26	-	2	-	16	89	-	-
16-20	45	14	1	3	-	16	108	-	-
21-25	60	1	-	-	-	16	74	-	-
26-30	64	3	-	1	-	5	70	-	-
31-35	55	-	-	1	-	10	92	-	-
36-40	44	-	-	-	-	7	60	-	-
41-45	62	-	-	1	-	11	53	-	-
46-50	60	-	-	1	1	9	38	-	-
51-60	143	-	-	1	-	7	83	-	-
61-70	127	-	-	-	-	4	50	-	-
71-80	135	-	-	-	-	6	44	-	-
81-90	126	-	-	-	-	1	35	-	-
91-100	130	-	-	1	-	2	17	-	-
101-110	145	1	-	-	-	1	22	-	-
111-120	140	-	-	-	-	1	15	-	-
121-130	83	-	-	-	-	-	5	-	-
131-140	38	-	-	-	-	-	7	-	-
141-150	11	-	-	-	-	-	2	-	-
>= 151	18	-	-	-	-	-	4	-	-
-- Tot	1,609	128	29	15	85	227	1,083	107	33

Counts are higher since multiple consists may be involved.

TABLE 5-16 INVOLVEMENT IN TRAIN ACCIDENTS BY TYPE CONSIST, 1999

	Total		Type of Accident				Type of Track					Causes					
	Cnt	%	Coll	Der	HRC	Othr	Main	Yard	Side	Ind.	Unk	Eqp	HRC	Hmn	Othr	Sig	Trk
Freight Train	1,560	49.3	89	1,215	97	159	796	541	75	121	27	243	97	398	168	9	645
Psgr Train	124	3.9	7	21	37	59	99	19	6	-	-	14	37	13	25	2	33
Commuter Train	28	0.9	2	6	12	8	23	4	-	1	-	4	12	6	2	1	3
Work Train	15	0.5	1	11	1	2	9	2	4	-	-	3	1	5	6	-	-
Single Car	76	2.4	13	24	-	39	7	58	1	8	2	4	-	34	26	5	7
Cut of Cars	215	6.8	41	71	1	102	12	182	4	16	1	11	1	128	43	11	21
Yard/ Switch	1,018	32.1	106	623	1	288	48	841	15	106	8	49	1	532	107	31	298
Light loco(s)	102	3.2	23	48	3	28	15	81	3	2	1	7	3	63	5	-	24
Maint/ Insp car	29	0.9	5	3	5	16	28	1	-	-	-	-	5	15	9	-	-
-- Total	3,167	100	287	2,022	157	701	1,037	1,729	108	254	39	335	157	1194	391	59	1031

If more than one consist of same type in accident, then only one is counted. For example, a collision between two freight trains would be counted as one freight train.

TABLE 5-17 DAMAGE BY TRACK TYPE, 1999

	Total Damage		Equip Damage		Track Damage	
	Amount	Avg	Amount	Avg	Amount	Avg
Main	200,878,551	168,947	140,718,564	118,350	60,159,987	50,597
Yard	51,274,425	26,873	33,837,048	17,734	17,437,377	9,139
Side	7,103,480	60,714	4,233,806	36,186	2,869,674	24,527
Ind.	6,692,150	25,253	4,662,653	17,595	2,029,497	7,658
Unk	2,129,674	29,995	1,463,562	20,614	666,112	9,382
--						
Total	268,078,280	75,515	184,915,633	52,089	83,162,647	23,426

TABLE 5-18 DAMAGE BY CONSIST TYPE, 1999

	Total Damage		Equip Damage		Track Damage	
	Amount	Avg	Amount	Avg	Amount	Avg
Freight Train	195,600,960	121,567	132,182,481	82,152	63,418,479	39,415
Psgr Train	23,251,950	181,656	22,790,048	178,047	461,902	3,609
Commuter Train	2,336,689	80,575	2,236,792	77,131	99,897	3,445
Work Train	736,564	49,104	374,737	24,982	361,827	24,122
Single Car	2,111,430	24,840	1,704,437	20,052	406,993	4,788
Cut of Cars	3,420,823	15,070	3,011,014	13,264	409,809	1,805
Yard/ Switch	29,051,028	26,825	19,753,605	18,240	9,297,423	8,585
Light loco(s)	2,940,445	27,481	1,951,466	18,238	988,979	9,243
Maint/ Insp car	970,473	29,408	911,053	27,608	59,420	1,801
99	7,657,918	32,726	-	-	7,657,918	32,726
-- Total	268,078,280	75,515	184,915,633	52,089	83,162,647	23,426

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CHAPTER 6

**TRAIN ACCIDENTS INVOLVING CONSISTS TRANSPORTING
HAZARDOUS MATERIAL**

Hazardous Material is any substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, or property when transported in commerce, and which has been so designated.

An incident resulting in damage to cars transporting hazardous material, or causing a release of the hazardous material, is not of and by itself a basis for reporting to FRA under the accident/incident rules. First, the incident must satisfy the criteria for train accident reporting described in the previous chapter. Namely, there must be total reportable damage to the rail equipment and track above the threshold. In 1997 the threshold was \$6,500, and in 1998 and 1999 it was \$6,600.

All evacuations, including precautionary ones, in response to a potential release of hazardous material are required to be reported even if an actual release did not occur.

Additional information concerning any unintentional release of hazardous material during transportation by rail or other modes is available through the Research and Special Programs Administration within the U. S. Department of Transportation.

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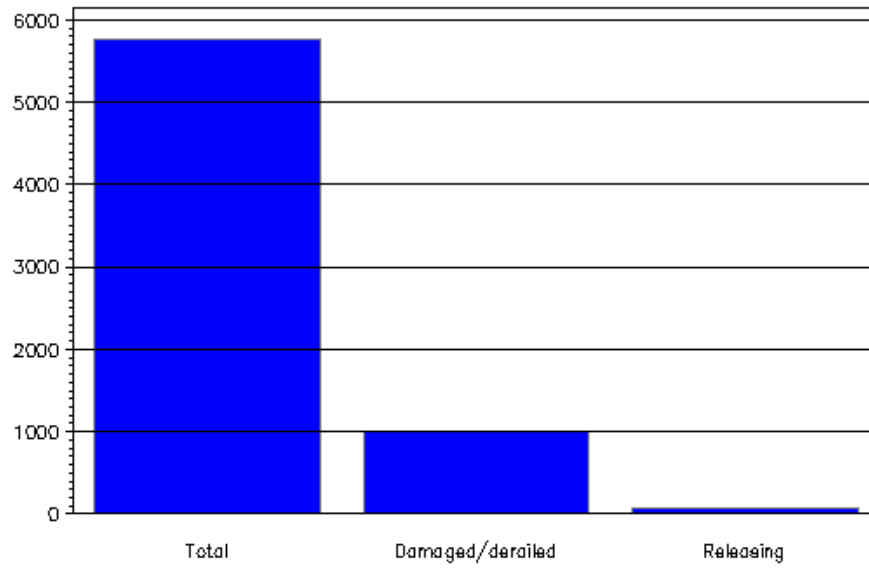
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6-1 HAZMAT CARS IN TRAIN ACCIDENTS, 1999



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TABLE 6-1 CONSISTS TRANSPORTING HAZMAT, BY RAILROAD, 1999

	Hazmat Consists			Total Cars In Consist	Hazmat Cars			Evacuations	
	Cnt	Damaged	Release		Cnt	Damaged	Release	Cnt	People
ALS	-	-	-	-	-	-	-	-	-
ARR	2	2	2	98	87	27	20	-	-
ATK	-	-	-	-	-	-	-	-	-
BAR	3	2	1	126	11	2	1	-	-
BNSF	210	91	10	14,656	1,963	232	14	3	450
BRC	13	5	1	424	60	13	2	-	-
CR	22	19	3	1,229	105	69	3	1	150
CRSH	4	4	-	78	17	8	-	-	-
CSX	110	53	4	7,817	948	151	8	-	-
DH	6	1	-	391	62	31	-	-	-
DME	-	-	-	-	-	-	-	-	-
DMIR	-	-	-	-	-	-	-	-	-
DWP	1	1	-	84	3	3	-	-	-
EJE	3	1	-	130	15	1	-	-	-
FEC	3	-	-	186	10	-	-	-	-
GRS	7	5	-	473	35	19	-	-	-
GTW	6	4	-	389	45	6	-	-	-
GWWR	2	2	-	8	5	5	-	-	-
IC	26	25	2	1,224	198	69	2	-	-
IHB	10	4	-	531	59	7	-	-	-
IMRL	12	6	2	969	92	14	4	1	150
KCS	21	10	2	1,198	188	26	2	-	-
LI	-	-	-	-	-	-	-	-	-
MBTA	-	-	-	-	-	-	-	-	-
MNCW	-	-	-	-	-	-	-	-	-
MRL	11	7	2	485	97	25	7	1	12
NICD	-	-	-	-	-	-	-	-	-
NIRC	-	-	-	-	-	-	-	-	2
NJTR	-	-	-	-	-	-	-	-	-
NS	28	13	-	1,541	154	29	-	1	11
PAL	-	-	-	-	-	-	-	-	-
PATH	-	-	-	-	-	-	-	-	-
PCMZ	-	-	-	-	-	-	-	-	-
PTRA	-	-	-	-	-	-	-	-	-
SCAX	-	-	-	-	-	-	-	-	-
SEPA	-	-	-	-	-	-	-	-	-
SOO	15	4	-	980	85	8	-	-	-
TM	4	1	1	360	8	3	1	-	0
TRRA	1	1	-	20	1	1	-	-	0
UP	142	71	9	8,680	1,049	191	9	5	80
URR	-	-	-	-	-	-	-	-	-
WC	11	1	-	672	32	1	-	-	-
WE	-	-	-	-	-	-	-	-	-
OTHE	43	23	3	1,839	431	69	3	3	141
Tot	716	356	42	44,588	5,760	1,010	76	15	996

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TABLE 6-2 CONSISTS TRANSPORTING HAZMAT, BY STATE, 1999

	Hazmat Consists			Total Cars In Consist	Hazmat Cars			Evacuations	
	Cnt	Damaged	Release		Cnt	Damaged	Release	Cnt	People
AL	15	5	-	857	98	18	-	-	-
AK	2	2	2	98	87	27	20	-	-
AZ	11	8	2	692	152	35	2	-	-
AR	18	8	-	924	118	15	-	-	-
CA	43	22	4	2,171	326	50	4	1	9
CO	16	3	-	938	107	8	-	-	-
CT	4	1	1	143	8	1	1	-	-
DE	-	-	-	-	-	-	-	-	-
DC	1	1	-	57	4	2	-	-	-
FL	10	3	-	885	94	12	-	-	-
GA	6	3	1	430	76	12	1	-	-
ID	6	3	1	483	73	10	1	1	200
IL	68	33	5	3,747	294	67	6	-	2
IN	24	12	-	1,328	143	25	-	-	-
IA	23	8	2	1,729	165	23	3	1	150
KS	18	6	2	1,147	129	6	2	-	-
KY	17	9	-	1,083	141	42	-	-	-
LA	30	22	2	1,483	281	61	2	1	7
ME	9	6	1	394	60	15	1	-	-
MD	5	2	-	259	41	5	-	-	-
MA	4	2	-	312	15	2	-	-	-
MI	7	3	-	371	50	4	-	-	-
MN	20	7	-	1,322	100	11	-	1	100
MS	11	6	2	689	65	11	2	1	1
MO	25	10	1	1,972	212	26	1	-	-
MT	19	9	4	1,085	178	33	10	1	12
NE	16	7	1	1,106	94	17	5	-	-
NV	1	1	-	114	18	7	-	-	-
NH	1	1	-	68	8	8	-	-	-
NJ	7	7	-	298	52	15	-	-	-
NM	7	3	-	549	57	10	-	-	-
NY	17	10	1	1,054	104	68	1	1	150
NC	13	8	1	1,027	144	29	2	-	-
ND	6	5	-	372	53	10	-	-	-
OH	12	5	-	757	75	8	-	-	-
OK	14	6	-	1,169	131	14	-	-	-
OR	16	4	-	959	124	7	-	1	12
PA	14	9	2	873	124	22	2	-	-
SC	11	6	-	670	67	14	-	-	-
SD	-	-	-	-	-	-	-	-	-
TN	26	16	1	1,422	231	39	4	1	11
TX	86	46	4	5,725	1,026	165	4	3	102
UT	5	4	1	288	63	12	1	1	40
VT	1	-	-	68	19	-	-	-	-
VA	6	1	-	334	53	3	-	-	-
WA	14	6	-	812	78	10	-	1	200
WV	3	3	-	220	42	6	-	-	-
WI	11	2	-	818	58	4	-	-	-
WY	17	12	1	1,286	122	21	1	-	-
Tot	716	356	42	44,588	5,760	1,010	76	15	996

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TABLE 6-3 CONSISTS TRANSPORTING HAZMAT, BY SUBCAUSE, 1999

	Hazmat Consists			Total Cars In Consist	Hazmat Cars			Evacuations	
	Cnt	Damaged	Release		Cnt	Damaged	Release	Cnt	People
Brakes	2	1	-	106	7	2	-	-	-
Trailer/Container on Flatcar	-	-	-	-	-	-	-	-	-
Body	8	4	1	560	42	4	1	-	-
Coupler & Draft System	8	5	2	625	103	34	7	1	150
Truck Components	34	18	5	2,631	376	53	7	1	1
Axles & Journal Bearings	29	8	2	2,668	319	26	5	1	200
Wheels	27	12	1	1,978	229	36	1	-	-
Locomotives	2	-	-	104	19	-	-	-	-
Doors	3	-	-	304	4	-	-	-	-
Other Mechanical	-	-	-	-	-	-	-	-	-
Brakes, Use of	33	17	1	996	136	35	1	1	12
Employee Physical Condition	1	1	-	63	4	1	-	-	-
Flagging, Fixed, Hand & Radio	15	7	-	1,119	86	11	-	-	-
General Switching Rules	90	56	6	3,125	440	103	7	1	7
Main Track Authority	6	-	-	445	33	-	-	-	-
Train Handling/Makeup	37	12	-	2,799	313	37	-	1	12
Speed	20	8	-	1,037	157	34	-	1	11
Switches, Use of	55	24	1	3,236	384	79	1	1	9
Miscellaneous Human Factors	5	3	-	344	33	4	-	-	-
Environmental Conditions	7	6	2	406	92	23	15	-	-
Loading Procedures	12	4	-	943	97	7	-	-	-
Highway-Rail Incidents	17	4	1	920	121	10	1	-	-
Unusual Operational Situations	24	6	-	1,428	144	18	-	-	2
Other Miscellaneous Causes	35	19	4	2,296	254	37	4	-	-
Signal Defects	10	7	-	641	79	8	-	-	-
Roadbed	7	4	1	560	95	14	1	-	-
Track Geometry	92	46	5	6,491	951	172	9	4	202
Rail, Joint Bar & Anchors	87	55	9	5,966	832	177	11	2	190
Frogs, Switches, Appliances	47	29	1	2,619	388	85	5	1	200
Other Track Defects	3	-	-	178	22	-	-	-	-
Total	716	356	42	44,588	5,760	1,010	76	15	996

TABLE 6-4 CONSISTS TRANSPORTING HAZMAT, BY ACCIDENT TYPE, 1999

	Hazmat Consists			Total Cars In Consist	Hazmat Cars			Evacuations	
	Cnt	Damaged	Release		Cnt	Damaged	Release	Cnt	People
Derailments	510	261	35	34,908	4,538	829	69	13	975
Head on collision	6	-	-	319	33	-	-	-	-
Rear end collision	8	2	-	763	30	3	-	-	-
Side collision	44	14	-	2,566	306	23	-	-	-
Raking collision	14	6	-	874	98	13	-	-	-
Broken train coll.	1	-	-	32	2	-	-	-	-
Highway-rail Impact	17	4	1	920	121	10	1	-	-
RR crossing collision	1	-	-	43	2	-	-	-	-
Obstruction impact	4	1	1	221	49	2	1	-	-
Fire/violent rupture	1	-	-	33	1	-	-	-	2
Other impacts	91	59	3	3,067	516	115	3	2	19
Other events	19	9	2	842	64	15	2	-	-
-- Total	716	356	42	44,588	5,760	1,010	76	15	996

CHAPTER 7

HIGHWAY-RAIL INCIDENTS

Any impact, regardless of severity, between a railroad on-track equipment consist and any user of a public or private crossing site, is to be reported on Form FRA F 6180.57. The crossing site includes sidewalks and pathways at, or associated with, the crossing.

In addition, whenever a highway-rail grade crossing accident/incident results in reportable damages greater than the current reporting threshold used for Rail Equipment Accident/Incident reporting, a Form FRA F 6180.54 must be completed. The reporting threshold for accidents for 1997 was \$6,500, and in 1999 it was \$6,600.

Highway users include but are not limited to: automobiles, buses, trucks, motorcycles, bicycles, recreational vehicles, farm vehicles, construction vehicles, roadway maintenance vehicles, and pedestrians.

Suicides or attempted suicides, as determined by a coroner or other public authority, at highway-rail crossing sites are not reportable. However, the event may be reportable under other criteria. For example, reportable conditions to others must be recorded on Form FRA F 6180.55a, e.g., the engineer sustained a fractured arm. Likewise, if the event caused reportable damage above the current monetary threshold for Rail Equipment Accidents/Incidents, a Form FRA F 6180.54 must be prepared. In these situations, the type of accident is coded as an "Obstruction".

Incidents involving highway users who have unsuccessfully attempted to avoid striking or being struck by a railroad consist at a crossing site are to be reported, regardless of where the actual impact between the consist and the highway user occurred.

Each reportable casualty resulting from a highway-rail crossing impact must also be reported on Form FRA F 6180.55a.

If the accident/incident satisfies the reporting requirements for rail equipment accidents (e.g., reportable railroad damage exceeds threshold), Form FRA F 6180.54 must also be completed by all railroads involved, including the railroad with track maintenance responsibility.

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CHAPTER 7

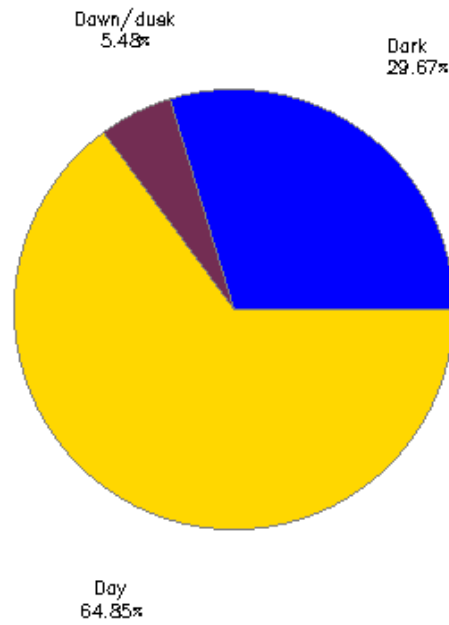
HIGHWAY-RAIL INCIDENTS

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7-1 TIME OF DAY IN CROSSING INCIDENTS, 1999



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TABLE 7-1 TOTAL HIGHWAY-RAIL INCIDENTS BY RAILROAD, 1999

	Totals			At Public Crossing						At Private Crossing					
				Motor Vehicle			Other			Motor Vehicle			Other		
	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
ARR	3	-	1	2	-	1	-	-	-	1	-	-	-	-	-
ATK	181	52	146	145	39	128	13	7	4	23	6	14	-	-	-
BAR	6	-	2	4	-	2	-	-	-	2	-	-	-	-	-
BNSF	528	59	237	425	42	197	21	5	13	80	12	26	2	-	1
BRC	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
CR	64	8	19	56	7	17	2	1	1	6	-	1	-	-	-
CRSH	13	1	2	11	1	2	-	-	-	2	-	-	-	-	-
CSX	425	54	189	368	45	169	15	8	7	39	1	12	3	-	1
DH	6	1	4	3	-	1	-	-	-	3	1	3	-	-	-
DME	11	-	3	9	-	2	2	-	1	-	-	-	-	-	-
DMIR	2	-	2	2	-	2	-	-	-	-	-	-	-	-	-
DWP	2	1	-	2	1	-	-	-	-	-	-	-	-	-	-
EJE	7	2	2	6	2	1	-	-	-	1	-	1	-	-	-
FEC	22	5	12	12	2	7	8	2	5	2	1	-	-	-	-
GRS	4	-	2	4	-	2	-	-	-	-	-	-	-	-	-
GTW	24	3	4	21	2	4	1	1	-	2	-	-	-	-	-
GWWR	4	-	1	4	-	1	-	-	-	-	-	-	-	-	-
IC	119	10	64	109	8	60	2	-	-	8	2	4	-	-	-
IHB	13	-	-	10	-	-	-	-	-	3	-	-	-	-	-
IMRL	34	2	11	29	1	9	1	-	1	4	1	1	-	-	-
KCS	144	15	57	128	12	53	4	2	-	12	1	4	-	-	-
LI	6	1	2	5	-	2	1	1	-	-	-	-	-	-	-
MBTA	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-
MNCW	3	-	3	2	-	2	-	-	-	1	-	1	-	-	-
MRL	8	2	3	3	1	2	-	-	-	5	1	1	-	-	-
NICD	6	1	-	6	1	-	-	-	-	-	-	-	-	-	-
NIRC	21	2	6	14	1	4	6	1	2	-	-	-	1	-	-
NJTR	7	4	1	3	1	1	4	3	-	-	-	-	-	-	-
NS	564	51	187	491	44	158	6	2	4	65	3	25	2	2	-
OTHE	379	13	83	324	12	74	4	1	2	50	-	6	1	-	1
PAL	6	-	1	6	-	1	-	-	-	-	-	-	-	-	-
PCMZ	5	1	6	2	-	4	3	1	2	-	-	-	-	-	-
PTRA	1	1	-	-	-	-	-	-	-	1	1	-	-	-	-
SCAX	10	2	2	7	2	1	1	-	1	2	-	-	-	-	-
SEPA	1	-	1	1	-	1	-	-	-	-	-	-	-	-	-
SOO	51	4	19	41	2	18	2	2	-	8	-	1	-	-	-
TM	7	-	3	7	-	3	-	-	-	-	-	-	-	-	-
UP	725	101	281	625	78	238	31	17	12	66	6	31	3	-	-
WC	67	6	36	66	5	36	-	-	-	-	-	-	1	1	-
WE	7	-	4	7	-	4	-	-	-	-	-	-	-	-	-
--- Tot	3,489	402	1,396	2,963	309	1,207	127	54	55	386	36	131	13	3	3

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TABLE 7-2 TOTAL HIGHWAY-RAIL INCIDENTS BY STATE, 1999

	Totals			At Public Crossing						At Private Crossing					
				Motor Vehicle			Other			Motor Vehicle			Other		
	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
AK	3	-	1	2	-	1	-	-	-	1	-	-	-	-	-
AL	124	12	34	110	12	32	2	-	1	12	-	1	-	-	-
AR	105	15	37	95	13	30	-	-	-	10	2	7	-	-	-
AZ	33	1	11	30	1	11	-	-	-	3	-	-	-	-	-
CA	204	24	73	156	10	55	19	9	10	29	5	8	-	-	-
CO	33	3	15	28	3	11	-	-	-	5	-	4	-	-	-
CT	8	-	3	6	-	2	-	-	-	2	-	1	-	-	-
DE	11	1	6	10	1	6	-	-	-	1	-	-	-	-	-
FL	95	19	38	79	14	32	12	4	5	4	1	1	-	-	-
GA	136	7	41	122	5	36	3	2	1	11	-	4	-	-	-
IA	99	10	28	87	5	23	5	2	3	7	3	2	-	-	-
ID	20	2	6	19	1	6	1	1	-	-	-	-	-	-	-
IL	202	54	114	157	43	100	21	8	9	23	3	5	1	-	-
IN	193	26	63	178	23	57	4	3	1	9	-	3	2	-	2
KS	77	8	40	74	8	39	-	-	-	3	-	1	-	-	-
KY	62	4	26	46	4	20	3	-	3	12	-	3	1	-	-
LA	180	20	72	158	15	64	6	1	3	15	4	5	1	-	-
MA	10	2	3	9	2	3	-	-	-	1	-	-	-	-	-
MD	18	1	1	16	1	1	-	-	-	2	-	-	-	-	-
ME	7	-	2	5	-	2	-	-	-	2	-	-	-	-	-
MI	122	15	48	105	9	41	6	4	2	11	2	5	-	-	-
MN	102	13	57	89	10	51	3	2	2	10	1	4	-	-	-
MO	99	9	54	86	7	51	2	2	-	10	-	2	1	-	1
MS	134	17	83	124	15	81	2	1	1	8	1	1	-	-	-
MT	19	4	6	11	2	5	-	-	-	8	2	1	-	-	-
NC	99	3	30	77	2	22	-	-	-	22	1	8	-	-	-
ND	17	1	3	13	1	2	2	-	1	2	-	-	-	-	-
NE	64	7	22	53	5	21	2	1	-	8	1	1	1	-	-
NH	6	-	1	6	-	1	-	-	-	-	-	-	-	-	-
NJ	24	5	7	17	2	6	4	3	-	3	-	1	-	-	-
NM	19	3	7	15	2	6	-	-	-	4	1	1	-	-	-
NV	6	-	1	2	-	-	1	-	1	3	-	-	-	-	-
NY	31	4	12	21	1	9	3	1	1	7	2	2	-	-	-
OH	146	21	59	126	18	53	1	1	-	18	1	6	1	1	-
OK	84	14	26	73	11	20	4	2	2	7	1	4	-	-	-
OR	30	2	5	22	1	4	-	-	-	8	1	1	-	-	-
PA	58	4	19	49	4	13	-	-	-	9	-	6	-	-	-
SC	64	8	27	59	7	26	2	1	1	2	-	-	1	-	-
SD	15	-	6	13	-	5	2	-	1	-	-	-	-	-	-
TN	90	4	36	87	4	35	-	-	-	3	-	1	-	-	-
TX	365	41	175	311	37	145	11	2	6	42	2	24	1	-	-
UT	19	5	8	18	5	8	-	-	-	1	-	-	-	-	-
VA	55	2	26	35	-	19	-	-	-	19	1	7	1	1	-
VT	6	-	1	5	-	1	-	-	-	1	-	-	-	-	-
WA	51	3	9	36	-	3	3	2	1	11	1	5	1	-	-
WI	109	7	43	102	5	41	2	1	-	4	-	2	1	1	-
WV	31	1	9	18	-	6	1	1	-	12	-	3	-	-	-
WY	4	-	2	3	-	1	-	-	-	1	-	1	-	-	-

Tot	3,489	402	1,396	2,963	309	1,207	127	54	55	386	36	131	13	3	3

TABLE 7-3 TOTAL HRC CASUALTIES BY STATE AND AGE GROUP, 1999

	Deaths				Total		Nonfatal Cases				Total	
	Age Group						Age Group					
	Unk	< 16	16-21	> 21	Cnt	%	Unk	< 16	16-21	> 21	Cnt	%
AL	-	2	3	7	12	3.0	-	-	8	26	34	2.4
AK	-	-	-	-	-	-	-	-	-	1	1	0.1
AZ	1	-	-	-	1	0.2	2	-	3	6	11	0.8
AR	1	1	3	10	15	3.7	-	4	4	29	37	2.7
CA	3	4	1	16	24	6.0	8	5	7	53	73	5.2
CO	-	-	2	1	3	0.7	-	-	5	10	15	1.1
CT	-	-	-	-	-	-	1	-	-	2	3	0.2
DE	-	-	-	1	1	0.2	-	-	1	5	6	0.4
FL	1	1	6	11	19	4.7	4	2	8	24	38	2.7
GA	-	2	-	5	7	1.7	1	6	8	26	41	2.9
ID	-	-	-	2	2	0.5	-	-	1	5	6	0.4
IL	16	-	6	32	54	13.4	18	2	10	84	114	8.2
IN	1	4	5	16	26	6.5	2	4	11	46	63	4.5
IA	1	-	2	7	10	2.5	-	-	6	22	28	2.0
KS	-	1	2	5	8	2.0	-	5	6	28	39	2.8
KY	-	1	1	2	4	1.0	-	3	8	15	26	1.9
LA	1	-	2	17	20	5.0	4	5	6	56	71	5.1
ME	-	-	-	-	-	-	-	-	1	1	2	0.1
MD	-	-	-	1	1	0.2	-	-	-	1	1	0.1
MA	-	-	-	2	2	0.5	-	-	-	3	3	0.2
MI	5	-	1	9	15	3.7	3	2	15	28	48	3.4
MN	-	3	3	7	13	3.2	1	10	8	38	57	4.1
MS	2	3	4	8	17	4.2	10	11	15	47	83	5.9
MO	-	-	3	6	9	2.2	1	9	13	31	54	3.9
MT	-	-	-	4	4	1.0	-	-	-	6	6	0.4
NE	-	-	1	6	7	1.7	-	2	4	17	23	1.6
NV	-	-	-	-	-	-	-	-	-	1	1	0.1
NH	-	-	-	-	-	-	1	-	-	-	1	0.1
NJ	-	-	-	5	5	1.2	-	-	1	6	7	0.5
NM	-	-	-	3	3	0.7	-	-	1	6	7	0.5
NY	-	-	-	4	4	1.0	-	2	-	10	12	0.9
NC	-	-	-	3	3	0.7	1	2	7	20	30	2.1
ND	-	-	-	1	1	0.2	-	-	-	3	3	0.2
OH	-	1	2	18	21	5.2	-	2	12	45	59	4.2
OK	-	-	5	9	14	3.5	1	2	6	17	26	1.9
OR	-	-	-	2	2	0.5	-	-	-	5	5	0.4
PA	-	-	-	4	4	1.0	-	-	1	18	19	1.4
SC	-	2	1	5	8	2.0	2	3	6	16	27	1.9
SD	-	-	-	-	-	-	-	-	4	2	6	0.4
TN	-	1	1	2	4	1.0	2	1	9	24	36	2.6
TX	-	-	5	36	41	10.2	4	19	28	125	176	12.6
UT	1	-	-	4	5	1.2	2	-	2	4	8	0.6
VT	-	-	-	-	-	-	-	-	-	1	1	0.1
VA	-	-	-	2	2	0.5	-	4	5	17	26	1.9
WA	1	-	-	2	3	0.7	1	1	2	5	9	0.6
WV	-	-	-	1	1	0.2	-	-	2	7	9	0.6
WI	-	-	1	6	7	1.7	1	4	12	26	43	3.1
WY	-	-	-	-	-	-	-	-	-	2	2	0.1
All	34	26	60	282	402	100.0	70	110	246	970	1,396	100.0

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TABLE 7-4 TOTAL HIGHWAY-RAIL INCIDENTS BY MONTH, 1999

Month	Total Incidents		Total		At Public Crossing						At Private Crossing					
	Cnt	%			Motor Vehicle			Other			Motor Vehicle			Other		
			Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
Jan	357	10.23	27	103	307	19	88	10	2	5	40	6	10	-	-	-
Feb	248	7.11	25	85	213	21	78	8	3	3	27	1	4	-	-	-
Mar	290	8.31	36	159	259	33	146	7	3	2	24	-	11	-	-	-
Apr	230	6.59	30	99	192	21	82	14	8	5	24	1	12	-	-	-
May	267	7.65	31	101	222	24	80	11	5	5	30	1	15	4	1	1
Jun	334	9.57	33	150	268	22	129	16	6	7	49	5	13	1	-	1
Jul	297	8.51	30	148	250	24	132	7	3	3	39	2	13	1	1	-
Aug	311	8.91	43	103	253	33	79	10	3	8	44	6	16	4	1	-
Sep	301	8.63	39	103	262	30	92	10	4	4	28	5	6	1	-	1
Oct	272	7.80	37	111	237	28	96	9	6	3	26	3	12	-	-	-
Nov	293	8.40	43	116	257	36	106	11	5	4	24	2	6	1	-	-
Dec	289	8.28	28	118	243	18	99	14	6	6	31	4	13	1	-	-

Total	3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

TABLE 7-5 TOTAL HIGHWAY-RAIL INCIDENTS BY DAY, 1999

Type / Day		Total Incidents		Total		At Public Crossing						At Private Crossing					
		Cnt	%			Motor Vehicle			Other			Motor Vehicle			Other		
				Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
Rail	Sunday	357	10.23	46	131	288	37	107	10	3	4	58	6	19	1	-	1
Equip	Monday	385	11.03	50	127	320	33	114	15	10	3	48	7	10	2	-	-
Struck	Tuesday	400	11.46	57	201	339	44	179	17	8	7	42	4	14	2	1	1
Highway	Wednesday	354	10.15	46	152	286	29	134	18	9	4	50	8	14	-	-	-
User	Thursday	407	11.67	61	147	339	48	119	17	9	6	49	4	22	2	-	-
	Friday	390	11.18	50	129	321	32	106	22	10	10	43	6	13	4	2	-
	Saturday	398	11.41	40	166	333	35	132	15	4	11	50	1	23	-	-	-

	Total	2691	77.13	350	1053	2,226	258	891	114	53	45	340	36	115	11	3	2
Highway	Sunday	106	3.04	9	59	98	9	57	1	-	1	7	-	1	-	-	-
User	Monday	136	3.90	9	46	123	9	41	5	-	3	7	-	2	1	-	-
Struck	Tuesday	133	3.81	4	59	120	4	55	1	-	1	12	-	3	-	-	-
Rail	Wednesday	104	2.98	6	48	99	6	45	2	-	2	3	-	1	-	-	-
Equip	Thursday	110	3.15	4	42	105	4	41	2	-	1	3	-	-	-	-	-
	Friday	120	3.44	11	48	107	10	40	2	1	2	10	-	5	1	-	1
	Saturday	89	2.55	9	41	85	9	37	-	-	-	4	-	4	-	-	-

	Total	798	22.87	52	343	737	51	316	13	1	10	46	-	16	2	-	1
-----	Total	3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

TABLE 7-6 TOTAL HIGHWAY-RAIL INCIDENTS BY HOUR OF DAY, 1999

Hour of Day	Total Incidents		Total		At Public Crossing						At Private Crossing						
					Motor Vehicle			Other			Motor Vehicle			Other			
	Cnt	%	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	
AM	1	87	2.49	9	27	79	9	23	4	-	4	4	-	-	-	-	-
	2	91	2.61	4	26	77	4	24	-	-	-	14	-	2	-	-	-
	3	70	2.01	5	25	61	3	24	2	2	-	7	-	1	-	-	-
	4	60	1.72	5	16	48	4	14	4	-	2	7	-	-	1	1	-
	5	64	1.83	4	23	54	4	21	1	-	1	9	-	1	-	-	-
	6	98	2.81	9	38	87	8	37	2	-	1	8	1	-	1	-	-
	7	146	4.18	22	73	127	17	66	6	3	3	13	2	4	-	-	-
	8	202	5.79	27	69	168	20	59	6	4	1	26	3	8	2	-	1
	9	179	5.13	20	60	147	11	52	5	2	1	26	7	7	1	-	-
	10	195	5.59	19	70	159	16	55	5	1	2	30	2	13	1	-	-
	11	210	6.02	37	97	174	31	85	7	5	2	29	1	10	-	-	-
	12	74	2.12	6	18	68	6	16	2	-	2	4	-	-	-	-	-

	Total	1476	42.30	167	542	1,249	133	476	44	17	19	177	16	46	6	1	1
PM	1	229	6.56	33	104	188	27	85	9	1	6	31	4	13	1	1	-
	2	208	5.96	26	75	170	17	61	11	4	8	27	5	6	-	-	-
	3	200	5.73	12	87	166	8	68	6	2	1	27	2	18	1	-	-
	4	205	5.88	18	88	174	10	76	8	5	2	22	3	10	1	-	-
	5	228	6.53	21	95	193	15	77	11	4	6	23	2	11	1	-	1
	6	169	4.84	24	66	142	16	52	8	6	2	18	2	11	1	-	1
	7	136	3.90	20	61	124	19	58	5	1	2	6	-	1	1	-	-
	8	142	4.07	16	59	121	12	53	8	3	4	12	-	2	1	1	-
	9	121	3.47	23	78	106	21	77	3	2	-	12	-	1	-	-	-
	10	103	2.95	17	34	91	10	32	8	7	2	4	-	-	-	-	-
	11	100	2.87	7	28	93	7	26	3	-	2	4	-	-	-	-	-
	12	172	4.93	18	79	146	14	66	3	2	1	23	2	12	-	-	-

	Total	2013	57.70	235	854	1,714	176	731	83	37	36	209	20	85	7	2	2
-----	Total	3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

TABLE 7-7 TOTAL HIGHWAY-RAIL INCIDENTS BY TYPE HIGHWAY USER, 1999

Type & Highway User		Total Incidents		Total		At Public Crossing						At Private Crossing					
						Motor Vehicle			Other			Motor Vehicle			Other		
		Cnt	%	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
Rail Equip	Car	1303	37.35	161	449	1,187	145	413	-	-	-	116	16	36	-	-	-
Struck	Truck	323	9.26	26	119	263	21	101	-	-	-	60	5	18	-	-	-
Highway	Trk& Trail	430	12.32	23	209	338	19	182	-	-	-	92	4	27	-	-	-
User	Pickup Trk	363	10.40	60	153	319	53	135	-	-	-	44	7	18	-	-	-
	Van	100	2.87	20	64	83	16	49	-	-	-	17	4	15	-	-	-
	Bus	5	0.14	-	-	4	-	-	-	-	-	1	-	-	-	-	-
	School Bus	1	0.03	-	-	1	-	-	-	-	-	-	-	-	-	-	-
	Motorcycle	1	0.03	-	-	1	-	-	-	-	-	-	-	-	-	-	-
	Oth Mtr V.	40	1.15	4	12	30	4	11	-	-	-	10	-	1	-	-	-
	Pedestrian	78	2.24	45	32	-	-	-	74	43	31	-	-	-	4	2	1
	Other	47	1.35	11	15	-	-	-	40	10	14	-	-	-	7	1	1
	---- Total	2691	77.13	350	1053	2,226	258	891	114	53	45	340	36	115	11	3	2
Highway	Car	460	13.18	24	200	435	24	193	-	-	-	25	-	7	-	-	-
User Struck	Truck	85	2.44	7	33	80	7	31	-	-	-	5	-	2	-	-	-
Rail Equip	Trk& Trail	45	1.29	-	15	35	-	9	-	-	-	10	-	6	-	-	-
	Pickup Trk	150	4.30	12	72	147	12	72	-	-	-	3	-	-	-	-	-
	Van	29	0.83	2	10	28	2	10	-	-	-	1	-	-	-	-	-
	Bus	1	0.03	-	-	1	-	-	-	-	-	-	-	-	-	-	-
	Motorcycle	6	0.17	5	1	6	5	1	-	-	-	-	-	-	-	-	-
	Oth Mtr V.	7	0.20	1	1	5	1	-	-	-	-	2	-	1	-	-	-
	Pedestrian	3	0.09	-	3	-	-	-	3	-	3	-	-	-	-	-	-
	Other	12	0.34	1	8	-	-	-	10	1	7	-	-	-	2	-	1
	---- Total	798	22.87	52	343	737	51	316	13	1	10	46	-	16	2	-	1
---- Total		3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

TABLE 7-8 HIGHWAY-RAIL INCIDENTS BY USERS, 1999

Type / Vehicle		Total		Freight Train	Psgr Train	Commute Train	Work Train	Single Car	Cut of Cars	Yard/ Switch	Light loco(s)	Maint Insp car
		Cnt	%									
Rail	Car	1,303	37.3	982	124	13	5	1	1	80	79	18
Equip	Truck	323	9.3	245	18	1	3	-	-	28	24	4
Struck	Trk& Trail	430	12.3	311	23	8	3	-	1	47	33	4
Highway	Pickup Trk	363	10.4	273	21	4	4	1	1	23	26	10
User	Van	100	2.9	64	12	5	2	-	-	6	11	-
	Bus	5	0.1	2	-	1	-	-	-	2	-	-
	School Bus	1	-	-	-	-	-	-	-	1	-	-
	Motorcycle	1	-	1	-	-	-	-	-	-	-	-
	Oth Mtr V.	40	1.1	32	4	-	-	-	-	2	2	-
	Pedestrian	78	2.2	53	19	4	-	-	-	1	1	-
	Other	47	1.3	32	7	3	1	-	-	-	3	1

	Sub Total	2,691	77.1	1,995	228	39	18	2	3	190	179	37
Highway	Car	460	13.2	335	17	1	2	-	1	61	32	11
User	Truck	85	2.4	62	4	-	-	3	-	6	8	2
Struck	Trk& Trail	45	1.3	25	1	-	1	1	-	7	9	1
Rail	Pickup Trk	150	4.3	116	5	-	4	-	-	11	7	7
Equip	Van	29	0.8	20	2	-	-	-	-	6	-	1
	Bus	1	-	1	-	-	-	-	-	-	-	-
	Motorcycle	6	0.2	3	-	-	1	-	-	2	-	-
	Oth Mtr V.	7	0.2	4	-	-	-	-	-	-	1	2
	Pedestrian	3	0.1	2	1	-	-	-	-	-	-	-
	Other	12	0.3	8	1	1	-	-	-	1	1	-

	Sub Total	798	22.9	576	31	2	8	4	1	94	58	24
Total		3,489	100.0	2,571	259	41	26	6	4	284	237	61

TABLE 7-9 TOTAL HIGHWAY-RAIL INCIDENTS BY WARNING DEVICE, 1999

Warning	Total Incidents		Total		At Public Crossing						At Private Crossing					
					Motor Vehicle			Other			Motor Vehicle			Other		
	Cnt	%	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
Gates	837	23.99	115	308	741	76	270	83	38	36	12	1	2	1	-	-
Flashing lites	712	20.41	69	306	675	58	290	24	11	10	12	-	5	1	-	1
HWTS,WW,Bells	73	2.09	3	33	68	3	28	-	-	-	5	-	5	-	-	-
Watchman	58	1.66	-	9	46	-	8	-	-	-	12	-	1	-	-	-
Stop signs	412	11.81	64	181	299	44	129	6	4	2	104	16	49	3	-	1
Cross bucks	1255	35.97	142	527	1,118	127	478	14	1	7	121	14	42	2	-	-
Other	9	0.26	2	2	3	1	1	-	-	-	5	-	1	1	1	-
None	133	3.81	7	30	13	-	3	-	-	-	115	5	26	5	2	1
---- Total	3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

TABLE 7-10 TOTAL HIGHWAY-RAIL INCIDENTS BY WEATHER, 1999

Type / Weather		Total Incidents		Total		At Public Crossing						At Private Crossing					
						Motor Vehicle			Other			Motor Vehicle			Other		
		Cnt	%	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf	Cnt	Kld	Nonf
Rail	Not rpt	1	0.03	-	-	1	-	-	-	-	-	-	-	-	-	-	
Equip	Clear	1958	56.12	251	799	1,623	189	671	84	38	32	245	23	96	6	1	-
Struck	Cloudy	502	14.39	83	200	413	57	176	21	12	10	65	13	13	3	1	1
Highway	Rain	128	3.67	7	28	107	5	26	3	2	-	17	-	1	1	-	1
User	Fog	34	0.97	4	8	23	2	3	4	1	2	6	-	3	1	1	-
	Sleet	6	0.17	-	-	5	-	-	1	-	-	-	-	-	-	-	-
	Snow	62	1.78	5	18	54	5	15	1	-	1	7	-	2	-	-	-
	---- Total	2691	77.13	350	1053	2,226	258	891	114	53	45	340	36	115	11	3	2
Highway	Clear	547	15.68	39	241	506	38	222	8	1	6	31	-	12	2	-	1
User	Cloudy	145	4.16	10	61	135	10	58	3	-	2	7	-	1	-	-	-
Struck	Rain	57	1.63	3	23	52	3	21	1	-	1	4	-	1	-	-	-
Rail	Fog	21	0.60	-	10	20	-	9	1	-	1	-	-	-	-	-	-
Equip	Sleet	4	0.11	-	2	3	-	2	-	-	-	1	-	-	-	-	-
	Snow	24	0.69	-	6	21	-	4	-	-	-	3	-	2	-	-	-
	---- Total	798	22.87	52	343	737	51	316	13	1	10	46	-	16	2	-	1
---- Total		3489	100.0	402	1396	2,963	309	1207	127	54	55	386	36	131	13	3	3

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CHAPTER 8

HIGHWAY-RAIL INCIDENTS AT PUBLIC CROSSINGS THAT INVOLVE MOTOR VEHICLES

FRA's reporting rules define any contact between a rail and highway user at a crossing site as a highway-rail incident. The following are situations that occur at or near crossing locations that do not qualify as highway-rail crossing incidents, but may require reporting under other provisions of the rule, e.g., train accident or casualty reporting.

- Q1. A man driving a truck did not see a train occupying a highway-rail crossing and lost control of his vehicle when he slammed on the brakes to avoid a collision. His truck ended up in the ditch with considerable damage, and he broke his arm. What reports are required?
- A1. Since an impact did not occur between a highway and a rail user, you do not need to prepare a highway-rail accident/incident report (form 6180.57). The motorist did sustain a reportable injury arising from the operation of a railroad. Therefore, an injury report (form 6180.55a) must be completed. If the motorist had struck the consist, a form 6180.57 would be required even if the impact did not occur on the crossing site.
- Q2. A highway user hits a signal stand at a highway crossing and was injured, but there was no on-track equipment present, nor were railroad employees in the vicinity. Is this reportable?
- A2. No. The regulation exempts the reporting of motor vehicle accidents at highway-rail crossing sites when they do not involve the presence of on-track equipment or railroad employees.
- Q3. A motorist in an off-road vehicle was waiting behind several automobiles at a crossing site where the gates were down and a standing train was occupying the track. He apparently became impatient and drove his vehicle off the highway and parallel to the track to a point where he could cross over the track behind the train. His vehicle stalled on a parallel set of tracks, and he was unable to start it. He exited his truck just before a train on the adjacent track hit it. Should this be reported as a highway-rail accident/incident or any other type?
- A3. An event such as this would not qualify as a highway-rail crossing collision since the motor vehicle operator had left the highway of his own choosing and his vehicle was struck at a location other than a designated crossing site. The event would be reportable as an obstruction accident on form 6180.54 if reportable damage was in excess of the threshold. If the motorist or employees were hurt in connection with this event, then an injury report (form 6180.55a) would need to be completed.

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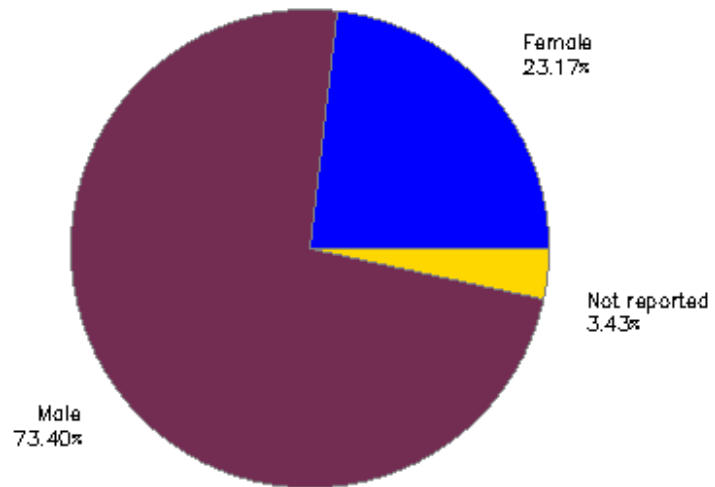
CHAPTER 8

HIGHWAY-RAIL INCIDENTS AT PUBLIC CROSSINGS THAT INVOLVE MOTOR VEHICLES

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8-1 DRIVER'S GENDER, 1999



Railroad Safety Statistics Annual Report 1999

TABLE 8-1 RATES FOR MOTOR VEHICLE INCIDENTS AT PUBLIC CROSSINGS BY STATE, 1999

	Accidents				Deaths				Nonfatal			
	Cnt	Per 100 Xings	Per 100K Vehicles	Per 100K ADT	Cnt	Per 100 Xings	Per 100K Vehicles	Per 100K ADT	Cnt	Per 100 Xings	Per 100K Vehicles	Per 100K ADT
AL	110	3.16	2.82	1.59	12	0.34	0.31	0.17	32	0.92	8.20	0.05
AK	2	0.89	0.36	0.43	-	-	-	-	1	0.44	1.79	0.02
AZ	30	3.21	1.00	1.05	1	0.11	0.03	0.03	11	1.18	3.67	0.04
AR	95	3.00	5.35	2.49	13	0.41	0.73	0.34	30	0.95	16.90	0.08
CA	156	1.99	0.60	0.38	10	0.13	0.04	0.02	55	0.70	2.12	0.01
CO	28	1.44	0.79	0.70	3	0.15	0.08	0.07	11	0.57	3.09	0.03
CT	6	1.61	0.22	0.48	-	-	-	-	2	0.54	0.73	0.02
DE	10	3.27	1.60	0.93	1	0.33	0.16	0.09	6	1.96	9.57	0.06
DC	-	-	-	-	-	-	-	-	-	-	-	-
FL	79	2.02	0.69	0.42	14	0.36	0.12	0.07	32	0.82	2.78	0.02
GA	122	2.08	1.75	1.41	5	0.09	0.07	0.06	36	0.61	5.16	0.04
HI	-	-	-	-	-	-	-	-	-	-	-	-
ID	19	1.38	1.65	1.04	1	0.07	0.09	0.05	6	0.43	5.20	0.03
IL	157	1.58	1.65	0.75	43	0.43	0.45	0.20	100	1.01	10.51	0.05
IN	178	2.75	3.25	1.35	23	0.36	0.42	0.17	57	0.88	10.41	0.04
IA	87	1.69	2.73	1.63	5	0.10	0.16	0.09	23	0.45	7.23	0.04
KS	74	1.11	3.41	1.54	8	0.12	0.37	0.17	39	0.59	17.98	0.08
KY	46	1.85	1.59	1.18	4	0.16	0.14	0.10	20	0.80	6.93	0.05
LA	158	4.48	4.55	2.21	15	0.43	0.43	0.21	64	1.82	18.44	0.09
ME	5	0.60	0.52	0.26	-	-	-	-	2	0.24	2.09	0.01
MD	16	2.34	0.42	0.69	1	0.15	0.03	0.04	1	0.15	0.26	-
MA	9	0.76	0.17	0.21	2	0.17	0.04	0.05	3	0.25	0.57	0.01
MI	105	1.82	1.27	0.70	9	0.16	0.11	0.06	41	0.71	4.95	0.03
MN	89	1.75	2.07	1.45	10	0.20	0.23	0.16	51	1.00	11.84	0.08
MS	124	4.40	5.42	2.47	15	0.53	0.66	0.30	81	2.87	35.42	0.16
MO	86	1.83	1.94	1.74	7	0.15	0.16	0.14	51	1.08	11.51	0.10
MT	11	0.74	1.09	0.85	2	0.14	0.20	0.15	5	0.34	4.95	0.04
NE	53	1.39	3.43	2.17	5	0.13	0.32	0.20	21	0.55	13.60	0.09
NV	2	0.66	0.16	0.22	-	-	-	-	-	-	-	-
NH	6	1.49	0.55	0.58	-	-	-	-	1	0.25	0.92	0.01
NJ	17	0.91	0.29	0.15	2	0.11	0.03	0.02	6	0.32	1.02	0.01
NM	15	1.93	0.92	1.68	2	0.26	0.12	0.22	6	0.77	3.69	0.07
NY	21	0.67	0.20	0.27	1	0.03	0.01	0.01	9	0.29	0.85	0.01
NC	77	1.69	1.30	0.84	2	0.04	0.03	0.02	22	0.48	3.71	0.02
ND	13	0.29	1.89	1.02	1	0.02	0.15	0.08	2	0.04	2.91	0.02
OH	126	1.97	1.23	0.91	18	0.28	0.18	0.13	53	0.83	5.16	0.04
OK	73	1.66	2.46	1.53	11	0.25	0.37	0.23	20	0.46	6.73	0.04
OR	22	0.95	0.72	0.48	1	0.04	0.03	0.02	4	0.17	1.31	0.01
PA	49	0.88	0.53	0.29	4	0.07	0.04	0.02	13	0.23	1.42	0.01
RI	-	-	-	-	-	-	-	-	-	-	-	-
SC	59	1.95	2.01	1.07	7	0.23	0.24	0.13	26	0.86	8.86	0.05
SD	13	0.61	1.64	1.06	-	-	-	-	5	0.23	6.30	0.04
TN	87	2.71	1.92	1.30	4	0.12	0.09	0.06	35	1.09	7.73	0.05
TX	311	2.55	2.31	1.06	37	0.30	0.27	0.13	145	1.19	10.76	0.05
UT	18	1.85	1.16	0.98	5	0.51	0.32	0.27	8	0.82	5.14	0.04
VT	5	1.01	0.97	0.71	-	-	-	-	1	0.20	1.95	0.01
VA	35	1.69	0.60	0.58	-	-	-	-	19	0.92	3.23	0.03
WA	36	1.33	0.73	0.70	-	-	-	-	3	0.11	0.61	0.01
WV	18	1.12	1.29	1.01	-	-	-	-	6	0.37	4.28	0.03
WI	102	2.33	2.33	1.07	5	0.11	0.11	0.05	41	0.94	9.37	0.04
WY	3	0.72	0.52	0.89	-	-	-	-	1	0.24	1.74	0.03
	2,963	1.88	1.38	0.90	309	0.20	0.14	0.09	1,207	0.77	5.62	0.04

**TABLE 8-2 RATES FOR MOTOR VEHICLE INCIDENTS AT PUBLIC CROSSINGS
BY WARNING DEVICE, 1999**

	Accidents			Deaths			Nonfatal			Number of Crossings
	Cnt	Per 100 Xings	Per 100K ADT	Cnt	Per 100 Xings	Per 100K ADT	Cnt	Per 100 Xings	Per 100K ADT	
Unknown	13	0.24	0.17	-	-	-	3	0.06	0.04	5,380
Other	3	0.61	0.53	1	0.20	0.18	1	0.20	0.18	489
Cross bucks	1,118	1.50	2.13	127	0.17	0.24	478	0.64	0.91	74,387
Stop signs	299	2.74	4.59	44	0.40	0.68	129	1.18	1.98	10,894
Special warning	46	1.19	0.34	-	-	-	8	0.21	0.06	3,874
HWTS,WW,Bells	68	4.64	1.16	3	0.20	0.05	28	1.91	0.48	1,465
Flashing lights	675	2.42	0.64	58	0.21	0.06	290	1.04	0.28	27,874
Gates	741	2.23	0.53	76	0.23	0.05	270	0.81	0.19	33,235
Total	2,963	1.88	0.90	309	0.20	0.09	1,207	0.77	0.37	157,598

TABLES 8-3 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY RAILROAD AND TYPE WARNING, 1999

	Type of Warning								Type Incident	
	Gates	Flashi- ng lites	HWTS,W- W,Bells	Watchm- an	Stop signs	Cross bucks	Other	None	Rail Equip Struck Highway User	Highway User Struck Rail Equip
ARR	1	-	1	-	-	-	-	-	1	1
ATK	76	14	7	-	16	31	-	1	126	19
BAR	-	3	-	-	-	1	-	-	3	1
BNSF	121	76	3	1	32	190	-	2	340	85
BRC	-	-	-	-	-	1	-	-	-	1
CR	19	18	3	-	3	13	-	-	40	16
CRSH	1	2	-	-	-	4	1	3	7	4
CSX	78	113	5	13	53	105	-	1	278	90
DH	1	1	-	-	-	1	-	-	3	-
DME	1	2	-	-	-	6	-	-	5	4
DMIR	-	-	-	-	-	2	-	-	-	2
DWP	-	1	-	-	-	1	-	-	1	1
EJE	-	5	-	-	-	1	-	-	4	2
FEC	12	-	-	-	-	-	-	-	9	3
GRS	-	-	1	3	-	-	-	-	3	1
GTW	8	5	1	-	6	1	-	-	15	6
GWWR	-	3	-	-	-	1	-	-	4	-
IC	5	29	2	1	7	65	-	-	81	28
IHB	10	-	-	-	-	-	-	-	7	3
IMRL	-	3	-	-	7	19	-	-	20	9
KCS	11	26	3	-	6	81	-	1	94	34
LI	5	-	-	-	-	-	-	-	5	-
MBTA	2	-	-	-	-	-	-	-	2	-
MNCW	1	1	-	-	-	-	-	-	2	-
MRL	-	1	-	-	-	2	-	-	2	1
NICD	2	2	1	-	-	1	-	-	5	1
NIRC	13	1	-	-	-	-	-	-	14	-
NJTR	3	-	-	-	-	-	-	-	3	-
NS	113	138	11	8	43	177	-	1	382	109
OTHE	32	64	13	13	41	159	2	-	199	125
PAL	-	3	-	2	-	1	-	-	4	2
PCMZ	2	-	-	-	-	-	-	-	2	-
SCAX	7	-	-	-	-	-	-	-	7	-
SEPA	-	1	-	-	-	-	-	-	1	-
SOO	7	9	-	-	11	14	-	-	31	10
TM	-	4	-	-	-	3	-	-	6	1
UP	199	127	17	4	65	209	-	4	474	151
WC	11	21	-	1	9	24	-	-	42	24
WE	-	2	-	-	-	5	-	-	4	3
Tot	741	675	68	46	299	1,118	3	13	2,226	737

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TABLES 8-3A MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY STATE AND TYPE WARNING, 1999

	Type of Warning								Rail Equip Struck Highway User	Highway User Struck Rail Equip
	Gates	Flashi- ng lites	HWTS,W- W,Bells	Watchm- an	Stop signs	Cross bucks	Other	None		
AK	1	-	1	-	-	-	-	-	1	1
AL	17	21	2	2	32	36	-	-	92	18
AR	15	21	5	1	10	43	-	-	78	17
AZ	13	14	-	-	1	2	-	-	28	2
CA	91	23	9	2	8	22	-	1	128	28
CO	6	5	2	1	8	4	-	2	22	6
CT	3	2	-	-	1	-	-	-	5	1
DE	3	6	-	-	1	-	-	-	5	5
FL	49	9	1	1	1	18	-	-	65	14
GA	29	14	6	3	31	39	-	-	100	22
IA	10	16	-	1	8	52	-	-	56	31
ID	2	4	-	1	9	3	-	-	16	3
IL	62	43	1	2	-	49	-	-	113	44
IN	43	55	3	1	23	53	-	-	128	50
KS	12	10	-	-	7	45	-	-	60	14
KY	7	18	1	3	1	16	-	-	39	7
LA	16	37	3	2	20	80	-	-	124	34
MA	2	2	2	2	1	-	-	-	7	2
MD	5	1	1	-	1	7	1	-	12	4
ME	-	3	-	-	-	2	-	-	4	1
MI	25	38	1	-	23	18	-	-	62	43
MN	11	11	-	1	21	45	-	-	63	26
MO	18	19	2	-	-	45	-	2	73	13
MS	3	25	6	2	9	78	-	1	94	30
MT	-	2	-	-	2	7	-	-	9	2
NC	28	16	-	1	-	31	-	1	58	19
ND	4	2	-	-	-	7	-	-	8	5
NE	16	1	1	-	5	30	-	-	35	18
NH	-	2	2	1	-	1	-	-	2	4
NJ	7	4	1	-	-	3	-	2	9	8
NM	1	6	1	-	-	7	-	-	14	1
NV	2	-	-	-	-	-	-	-	1	1
NY	14	3	-	-	1	3	-	-	18	3
OH	32	20	2	4	6	61	1	-	95	31
OK	11	16	1	-	6	38	-	1	59	14
OR	5	1	1	-	7	8	-	-	14	8
PA	5	18	-	3	1	20	1	1	35	14
SC	14	16	1	2	9	16	-	1	49	10
SD	1	2	-	-	-	10	-	-	6	7
TN	12	34	3	4	1	33	-	-	69	18
TX	95	80	6	1	23	106	-	-	228	83
UT	3	2	1	-	5	6	-	1	9	9
VA	13	12	-	3	-	7	-	-	21	14
VT	-	2	1	-	1	1	-	-	3	2
WA	11	2	1	-	6	16	-	-	28	8
WI	15	31	-	2	10	44	-	-	68	34
WV	7	6	-	-	-	5	-	-	11	7
WY	2	-	-	-	-	1	-	-	2	1
Tot	741	675	68	46	299	1,118	3	13	2,226	737

**TABLE 8-4 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSING
BY TYPE CONSIST AND CONSIST SPEED, 1999**

Type	Consist Speed	Total	Freight Train	Psgr Comm Trn	Work Train	Car(s)	Yard Switch	Light loco(s)	Whistle Ban?		
									Unk	Yes	No
Rail	1-9	352	155	9	3	21	112	52	29	27	296
Equip	10-19	268	185	15	3	11	23	31	12	17	239
Struck	21-29	349	303	16	2	3	7	18	28	15	306
Highway	30-39	397	352	28	1	-	2	14	19	25	353
User	40-49	472	435	21	2	2	1	11	28	19	425
	50-59	245	204	32	1	-	-	8	17	11	217
	60-69	96	51	44	-	-	-	1	7	7	82
	>= 71	47	2	44	-	-	-	1	11	2	34

	Sub Total	2,226	1,687	209	12	37	145	136	151	123	1,952
Highway	Unknown	70	49	-	2	4	12	3	6	-	64
User	1-9	207	103	1	2	18	55	28	10	7	190
Struck	10-19	127	94	4	1	6	12	10	5	4	118
Rail	21-29	101	95	-	1	-	2	3	3	5	93
Equip	30-39	85	79	-	1	1	1	3	6	4	75
	40-49	73	67	1	-	-	1	4	5	-	68
	50-59	48	43	5	-	-	-	-	4	4	40
	60-69	15	7	8	-	-	-	-	1	-	14
	>= 71	11	3	8	-	-	-	-	1	1	9

	Sub Total	737	540	27	7	29	83	51	41	25	671
Total		2,963	2,227	236	19	66	228	187	192	148	2,623

**TABLE 8-5 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE WARNING, MOTORIST ACTION, AND WARNING LOCATION, 1999**

Type	Warning	Total		Motorist					Warning Location			
				Drove around thru gate	Stopped then proceed	Did not stop	Other	Unknown	Not repor- ted	Both sides	Veh Apr	Opp. Veh Apr
		Cnt	%									
Rail Equip	Gates	606	20.5	179	14	40	232	141	3	568	34	1
Struck Highway	Flashing lites	469	15.8	1	36	273	143	16	2	442	23	2
User	HWTS,WW,Bells	48	1.6	1	1	28	17	1	-	46	2	-
	Watchman	29	1.0	-	6	13	8	2	1	24	4	-
	Stop signs	236	8.0	-	23	127	80	6	1	221	12	2
	Cross bucks	826	27.9	-	41	538	226	21	2	803	16	5
	Other	2	0.1	-	-	1	1	-	1	1	-	-
	None	10	0.3	-	1	5	4	-	10	-	-	-
	-Sub Total	2,226	75.1	181	122	1,025	711	187	20	2,105	91	10
Highway User	Gates	135	4.6	92	2	34	1	6	-	128	7	-
Struck Rail	Flashing lites	206	7.0	1	8	193	-	4	1	194	10	1
Equip	HWTS,WW,Bells	20	0.7	-	4	16	-	-	-	18	2	-
	Watchman	17	0.6	-	1	16	-	-	-	16	1	-
	Stop signs	63	2.1	-	4	58	1	-	1	57	5	-
	Cross bucks	292	9.9	-	8	272	3	9	1	278	10	3
	Other	1	-	-	-	1	-	-	-	1	-	-
	None	3	0.1	-	-	2	-	1	3	-	-	-
	-Sub Total	737	24.9	93	27	592	5	20	6	692	35	4
Total		2,963	100.0	274	149	1,617	716	207	26	2,797	126	14

**TABLE 8-6 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE VEHICLE, VEHICLE SPEED AND DRIVER GENDER, 1999**

Type	Vehicle Speed	Total	Car	Trucks	Trk& Trail	Van	Buses	Oth Mtr V.	Vehicle Driver		
									?	M	F
Rail	Unknown	127	76	27	17	4	1	2	4	86	37
Equip	Stopped	811	492	166	112	33	2	6	51	533	227
Struck	1-9	502	210	145	109	18	1	19	10	392	100
Highway	10-19	405	210	118	63	11	1	2	11	298	96
User	21-29	186	92	69	13	10	-	2	1	139	46
	30-39	127	70	34	16	7	-	-	2	97	28
	40-49	40	23	14	3	-	-	-	-	29	11
	50-59	22	12	6	4	-	-	-	2	12	8
	60-69	4	1	2	1	-	-	-	-	4	-
	>= 71	2	1	1	-	-	-	-	-	2	-

	Sub Total	2,226	1,187	582	338	83	5	31	81	1,592	553
Highway	Unknown	29	20	6	1	2	-	-	-	18	11
User	Stopped	6	3	1	-	2	-	-	-	5	1
Struck	1-9	181	100	54	15	10	1	1	4	136	41
Rail	10-19	165	111	45	4	3	-	2	8	113	44
Equip	21-29	126	73	41	6	3	-	3	3	97	26
	30-39	100	58	32	5	5	-	-	3	72	25
	40-49	58	32	20	3	-	-	3	-	52	6
	50-59	54	25	25	1	3	-	-	-	44	10
	60-69	13	10	3	-	-	-	-	-	10	3
	>= 71	5	3	-	-	-	-	2	-	5	-

	Sub Total	737	435	227	35	28	1	11	18	552	167
Total		2,963	1,622	809	373	111	6	42	99	2,144	720

**TABLE 8-7 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY VEHICLE SPEED, WEATHER AND CONDITION OF DRIVER, 1999**

Type	Vehicle Speed	Total	Not rpt	Clear	Cloudy	Rain	Fog	Sleet	Snow	Driver			
										?	Kld	Nonf	OK
Rail	Unknown	127	1	89	22	10	2	-	3	-	5	14	108
Equip	Stopped	811	-	588	143	40	11	2	27	2	31	115	663
Struck	1-9	502	-	366	102	18	5	1	10	-	42	134	326
Highway	10-19	405	-	301	81	13	1	1	8	-	46	141	218
User	21-29	186	-	131	34	15	2	1	3	-	31	71	84
	30-39	127	-	95	19	10	-	-	3	-	17	41	69
	40-49	40	-	28	9	1	2	-	-	-	6	13	21
	50-59	22	-	19	3	-	-	-	-	-	7	7	8
	60-69	4	-	4	-	-	-	-	-	-	1	1	2
	>= 71	2	-	2	-	-	-	-	-	-	-	1	1

	Sub Total	2,226	1	1,623	413	107	23	5	54	2	186	538	1,500
Highway	Unknown	29	-	19	4	3	-	-	3	-	1	11	17
User	Stopped	6	-	3	3	-	-	-	-	-	-	-	6
Struck	1-9	181	-	130	30	13	2	-	6	-	4	42	135
Rail	10-19	165	-	111	34	10	3	1	6	-	5	45	115
Equip	21-29	126	-	80	24	10	7	-	5	-	3	37	86
	30-39	100	-	67	17	9	5	1	1	1	1	34	64
	40-49	58	-	34	16	6	2	-	-	-	7	22	29
	50-59	54	-	46	5	1	1	1	-	-	7	27	20
	60-69	13	-	12	1	-	-	-	-	-	6	3	4
	>= 71	5	-	4	1	-	-	-	-	-	2	3	-

	Sub Total	737	-	506	135	52	20	3	21	1	36	224	476
Total		2,963	1	2,129	548	159	43	8	75	3	222	762	1,976

**TABLE 8-8 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY DRIVER AGE, GENDER, AND TYPE VEHICLE, 1999**

Age	Total		Type Vehicle									Vehicle Driver		
			Car	Truck	Trk& Trail	Pick-up Trk	Van	Bus	Scho-ol Bus	Moto-rcyc-le	Oth Mtr V.	?	M	F
	Cnt	%												
Unknown	370	12.5	214	35	46	55	16	1	-	-	3	93	214	63
6-10	1	-	1	-	-	-	-	-	-	-	-	-	1	-
11-15	5	0.2	5	-	-	-	-	-	-	-	-	-	4	1
16-20	330	11.1	221	21	4	78	1	-	-	1	4	-	237	93
21-25	411	13.9	256	50	40	51	9	-	-	1	4	2	312	97
26-30	304	10.3	177	28	36	45	14	1	-	1	2	1	210	93
31-35	273	9.2	144	37	35	40	11	-	-	2	4	2	203	68
36-40	284	9.6	108	52	67	42	9	1	-	1	4	-	220	64
41-45	214	7.2	89	38	38	32	12	-	-	-	5	-	169	45
46-50	201	6.8	94	24	44	25	10	-	1	1	2	1	152	48
51-55	145	4.9	69	16	27	17	11	2	-	-	3	-	110	35
56-60	106	3.6	48	14	20	20	4	-	-	-	-	-	73	33
61-65	84	2.8	40	8	6	23	7	-	-	-	-	-	65	19
66-70	75	2.5	46	5	8	11	3	-	-	-	2	-	60	15
Other	160	5.4	110	15	2	27	4	-	-	-	2	-	114	46
Total	2,963	100.0	1,622	343	373	466	111	5	1	7	35	99	2,144	720

**TABLE 8-9 MOTOR VEHICLES THAT STRUCK CONSIST AT PUBLIC CROSSINGS, 1999
BY CONSIST LENGTH, PORTION OF TRAIN STRUCK AND WARNING TYPE**

Consist Length	Total	Position of Consist Struck						Type of Warning							
		Unk	1st car/ loco	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Gates	Flash- ing lites	HWTS,W- W,Bells	Watchm- an	Stop signs	Cross bucks	Other	None
1	51	-	49	2	-	-	-	10	15	3	-	7	14	-	2
2-5	93	-	79	1	2	3	8	14	26	-	9	5	39	-	-
6-10	75	1	57	3	4	3	7	8	25	4	5	4	29	-	-
11-15	48	-	29	4	4	6	5	10	9	3	2	5	18	-	1
16-20	41	-	26	8	1	2	4	4	10	1	-	5	21	-	-
21-25	33	-	20	1	2	4	6	5	11	3	-	2	12	-	-
26-30	27	-	11	2	4	3	7	5	6	-	-	2	14	-	-
31-35	30	-	23	1	4	1	1	3	14	-	1	1	10	1	-
36-40	15	-	7	5	2	-	1	3	5	-	-	1	6	-	-
41-45	19	1	8	3	3	1	3	5	6	1	-	-	7	-	-
46-50	13	-	10	2	1	-	-	4	3	-	-	1	5	-	-
51-60	39	-	19	6	6	3	5	8	14	1	-	3	13	-	-
61-70	39	-	24	7	2	1	5	7	11	-	-	3	18	-	-
71-80	41	-	21	10	2	4	4	10	10	1	-	4	16	-	-
81-90	40	-	15	8	4	6	7	9	7	-	-	6	18	-	-
91-100	35	-	10	8	3	2	12	11	7	-	-	4	13	-	-
101-110	34	-	17	11	1	2	3	3	10	2	-	5	14	-	-
111-120	29	-	10	10	3	2	4	10	6	-	-	3	10	-	-
>= 121	35	-	14	8	6	4	3	6	11	1	-	2	15	-	-
-Total	737	2	449	100	54	47	85	135	206	20	17	63	292	1	3

**TABLE 8-10 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY CONSIST LENGTH, TYPE CONSIST, AND DRIVER GENDER, 1999**

Type	Consist Length	Total	Freight Train	Psgr Comm Trn	Work Train	Car(s)	Yard Switch	Light loco(s)	Vehicle Driver		
									?	M	F
Rail	1	103	-	2	-	32	1	68	1	67	35
Equip	2-5	224	57	60	3	3	36	65	4	168	52
Struck	6-10	207	94	64	3	1	42	3	7	157	43
Highway	11-15	146	82	45	1	1	17	-	9	99	38
User	16-20	101	66	22	-	-	13	-	6	66	29
	21-25	80	64	7	-	-	9	-	2	60	18
	26-30	88	75	3	-	-	10	-	3	66	19
	31-35	70	63	2	1	-	4	-	2	42	26
	36-40	93	84	1	2	-	6	-	4	69	20
	41-45	74	69	1	1	-	3	-	3	55	16
	46-50	66	66	-	-	-	-	-	2	45	19
	51-60	152	148	1	-	-	3	-	4	114	34
	61-70	136	134	-	1	-	1	-	6	102	28
	71-80	156	156	-	-	-	-	-	7	113	36
	81-90	116	116	-	-	-	-	-	6	78	32
	91-100	117	117	-	-	-	-	-	2	93	22
	101-110	99	98	1	-	-	-	-	3	65	31
	111-120	94	94	-	-	-	-	-	5	64	25
	>= 121	104	104	-	-	-	-	-	5	69	30
	-Sub Total	2,226	1,687	209	12	37	145	136	81	1,592	553
Highway	1	51	-	1	-	26	-	24	3	38	10
User	2-5	93	37	6	2	3	19	26	3	66	24
Struck	6-10	75	41	10	-	-	23	1	2	54	19
Rail	11-15	48	28	5	1	-	14	-	2	38	8
Equip	16-20	41	30	5	1	-	5	-	2	28	11
	21-25	33	27	-	-	-	6	-	-	21	12
	26-30	27	22	-	1	-	4	-	-	24	3
	31-35	30	28	-	-	-	2	-	-	22	8
	36-40	15	11	-	1	-	3	-	1	14	-
	41-45	19	19	-	-	-	-	-	-	9	10
	46-50	13	12	-	-	-	1	-	-	7	6
	51-60	39	38	-	-	-	1	-	2	27	10
	61-70	39	37	-	1	-	1	-	-	27	12
	71-80	41	40	-	-	-	1	-	-	36	5
	81-90	40	40	-	-	-	-	-	-	33	7
	91-100	35	35	-	-	-	-	-	-	29	6
	101-110	34	32	-	-	-	2	-	1	24	9
	111-120	29	29	-	-	-	-	-	1	25	3
	>= 121	35	34	-	-	-	1	-	1	30	4
	-Sub Total	737	540	27	7	29	83	51	18	552	167
Total		2,963	2,227	236	19	66	228	187	99	2,144	720

**TABLE 8-11 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE CONSIST, NUMBER OF PEOPLE ON TRAIN,
AND TYPE PERSON HURT, 1999**

Consist	People on Train		Total		Hwy User		RR Employees		Others	
	Total	Avg	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf
Freight Train	5,113	2	240	914	238	869	2	45	-	-
Psg'r Train	29,441	144	43	139	32	56	-	47	11	36
Commuter Train	3,351	108	5	14	5	7	-	1	-	6
Work Train	53	3	5	5	5	5	-	-	-	-
Single Car	9	2	-	3	-	2	-	1	-	-
Cut of Cars	9	2	-	2	-	2	-	-	-	-
Yard/ Switch	629	3	4	62	4	54	-	8	-	-
Light loco(s)	469	3	12	58	12	51	-	7	-	-
Maint Insp car	72	1	-	10	-	8	-	2	-	-
Total	39,146	13	309	1,207	296	1,054	2	111	11	42

**TABLE 8-12 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE VEHICLE, NUMBER OF OCCUPANTS, AND VEHICLE DAMAGE, 1999**

Vehicle	People in Vehicles		Reported Vehicle Damage		Total		Hwy User		RR Employees		Others	
	Total	Avg	Total	Avg	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf
Car	1,965	1	4,879,986	3,009	169	606	169	600	-	6	-	-
Truck	374	1	1,895,583	5,526	28	132	28	117	-	14	-	1
Trk & Trail	357	1	4,241,710	11,372	19	191	8	68	-	82	11	41
Pickup Trk	586	1	1,953,493	4,192	65	207	65	202	-	5	-	-
Van	168	2	443,600	3,996	18	59	17	56	1	3	-	-
Bus	25	5	18,804	3,761	-	-	-	-	-	-	-	-
School Bus	34	34	1,500	1,500	-	-	-	-	-	-	-	-
Motorcycle	6	1	34,200	4,886	5	1	5	1	-	-	-	-
Oth Mtr V.	41	1	242,200	6,920	5	11	4	10	1	1	-	-
Total	3,556	1	13,711,076	4,627	309	1,207	296	1,054	2	111	11	42

**TABLE 8-13 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE WARNING, POSITION ON CROSSING
AND IF HAZMAT WAS RELEASED, 1999**

Type	Warning	Total		Position on Crossing				Hazmat Released By				
		Cnt	%	Stalled	Stopped	Moving	Trapped	Unk	Hwy User	Rail User	Both	Neither
Rail Equip	Gates	606	20.5	90	219	222	75	-	3	90	1	512
Struck Highway User	Flashing lites	469	15.8	45	105	313	6	1	5	74	1	388
	HWTS,WW,Bells	48	1.6	4	13	31	-	-	-	10	-	38
	Watchman	29	1.0	-	8	20	1	-	-	-	-	29
	Stop signs	236	8.0	16	68	149	3	-	1	44	1	190
	Cross bucks	826	27.9	49	188	583	6	2	3	153	3	665
	Other	2	0.1	1	-	1	-	-	-	-	-	2
	None	10	0.3	1	4	5	-	-	-	1	-	9
	-Sub Total	2,226	75.1	206	605	1,324	91	3	12	372	6	1,833
	Highway User	Gates	135	4.6	1	1	132	1	-	-	17	-
Struck Rail Equip	Flashing lites	206	7.0	-	-	206	-	-	-	34	-	172
	HWTS,WW,Bells	20	0.7	-	-	20	-	-	-	2	-	18
	Watchman	17	0.6	-	-	17	-	-	-	-	-	17
	Stop signs	63	2.1	-	1	62	-	-	-	6	-	57
	Cross bucks	292	9.9	-	3	289	-	-	-	43	-	249
	Other	1	-	-	-	1	-	-	-	-	-	1
	None	3	0.1	-	-	3	-	-	-	-	-	3
	-Sub Total	737	24.9	1	5	730	1	-	-	102	-	635
Total		2,963	100.0	207	610	2,054	92	3	12	474	6	2,468

**TABLE 8-14 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSINGS
BY TYPE VEHICLE AND WARNING, 1999**

Type	Vehicle	Total		Gates	Flashi- ng lites	HWTS,W- W,Bells	Watchm- an	Stop signs	Cross bucks	Other	None
		Cnt	%								
Rail Equip	Car	1,187	40.1	376	263	28	18	112	386	1	3
Struck	Truck	263	8.9	39	56	2	6	33	126	-	1
Highway User	Trk& Trail	338	11.4	84	73	9	3	43	123	-	3
	Pickup Trk	319	10.8	78	55	7	1	40	134	1	3
	Van	83	2.8	26	17	2	1	5	32	-	-
	Bus	4	0.1	-	1	-	-	-	3	-	-
	School Bus	1	-	-	-	-	-	-	1	-	-
	Motorcycle	1	-	1	-	-	-	-	-	-	-
	Oth Mtr V.	30	1.0	2	4	-	-	3	21	-	-
	-Sub Total	2,226	75.1	606	469	48	29	236	826	2	10
	Highway User	Car	435	14.7	88	132	11	13	33	157	-
Struck Rail Equip	Truck	80	2.7	10	21	1	2	8	38	-	-
	Trk& Trail	35	1.2	7	7	2	1	5	11	-	2
	Pickup Trk	147	5.0	22	37	5	-	13	70	-	-
	Van	28	0.9	6	6	1	1	3	11	-	-
	Bus	1	-	-	-	-	-	-	1	-	-
	Motorcycle	6	0.2	2	2	-	-	-	1	1	-
	Oth Mtr V.	5	0.2	-	1	-	-	1	3	-	-
	-Sub Total	737	24.9	135	206	20	17	63	292	1	3
Total		2,963	100.0	741	675	68	46	299	1,118	3	13

**TABLE 8-15 MOTOR VEHICLE HRC INCIDENTS AT PUBLIC CROSSING
BY WARNING STATUS FOR ACCIDENTS OCCURING AT CROSSINGS
WITH TRAIN ACTIVATED DEVICES BY TYPE VEHICLE, 1999**

Type Vehicle		Total	Status of Warning System							
			Unknown	Provided Minimum 20 Secs.	Alleged > 60 Secs.	Alleged < 20 Secs.	Alleged No Warning	Confirm > 60 Secs.	Confirm < 20 Secs.	Confirm No Warning
Rail	Car	667	4	629	17	6	2	2	1	6
Equip	Truck	97	-	91	3	1	-	2	-	-
Struck	Trk& Trail	166	-	156	6	-	1	-	-	3
Highway	Pickup Trk	140	-	133	3	-	-	1	-	3
User	Van	45	-	42	1	1	-	-	-	1
	Bus	1	-	1	-	-	-	-	-	-
	Motorcycle	1	-	1	-	-	-	-	-	-
	Oth Mtr V.	6	-	6	-	-	-	-	-	-
	-Sub Total	1,123	4	1,059	30	8	3	5	1	13
Highway	Car	231	1	215	6	2	2	1	-	4
User	Truck	32	-	29	2	-	-	1	-	-
Struck	Trk& Trail	16	-	16	-	-	-	-	-	-
Rail	Pickup Trk	64	-	54	5	1	1	1	-	2
Equip	Van	13	-	13	-	-	-	-	-	-
	Motorcycle	4	-	4	-	-	-	-	-	-
	Oth Mtr V.	1	-	1	-	-	-	-	-	-
	-Sub Total	361	1	332	13	3	3	3	-	6
Total		1,484	5	1,391	43	11	6	8	1	19

CHAPTER 9

HIGHWAY-RAIL CROSSING INVENTORY

The Federal-Aid Highway Act of 1973 (Section 203) required that each State highway agency maintain an inventory of all crossings. According to the implementing instructions contained in the Federal-Aid Policy Guide, maintaining the National Inventory will satisfy the legislative requirement for a State Inventory. A primary purpose of the National Inventory is to provide for the existence of a uniform inventory data base which can be merged with accident/incident files and used to analyze information for planning and implementation of crossing improvement programs.

Railroads, with direction and guidance from the Association of American Railroads and the American Short Line Association, were assigned the responsibility for making a site-specific inventory of each highway-rail crossing and for installing a unique identifying number at each location. The railroads were also identified as being responsible for periodic updating of certain inventory information and maintenance of the crossing number.

The State highway-departments assisted in the project by providing site-specific highway location and use data. State public utility commissions and other State and local governmental agencies also participated in the project. The responsibility for the updating of certain highway information data items was determined to be the responsibility of the State and/or local governmental agencies.

The Inventory Data File is a record of grade crossing location, physical, and operational characteristics to provide information for the administration and statistical analysis of crossings. This information is reported on a voluntary basis to the FRA on the U.S. DOT-AAR Crossing Inventory Form.

The information contained on highway-rail incident reports is routinely merged with inventory data and the consolidated file is used for the development of Federal programs, funding alternatives for crossing improvement, studies related to railroad safety programs, effectiveness of warning devise, and for other safety programs and issues.

Although the inventory contains information on grade separated crossings, the counts appearing in this section are only for at-grade crossings, i.e., the locations where the potential exists for an impact between a rail and a highway user.

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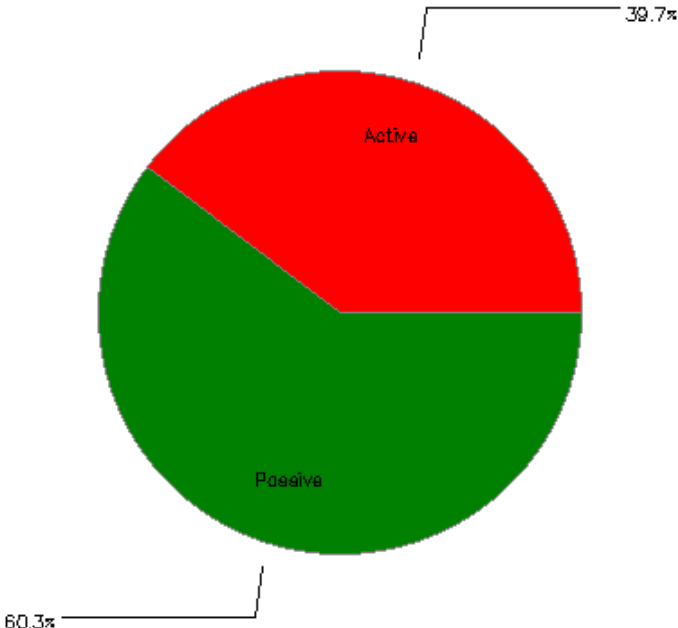
HIGHWAY-RAIL CROSSING INVENTORY

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9-1 PUBLIC CROSSINGS BY PROTECTION TYPE



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TABLE 9-1 AT-GRADE HIGHWAY-RAIL CROSSINGS BY RAILROAD, 1999

	Total		Pedestrian		Private Vehicle		Public Vehicle	
	Cnt	%	Cnt	%	Cnt	%	Cnt	%
ALS	48	-	-	-	27	-	21	-
ARR	333	0.1	8	-	104	-	221	0.1
ATK	322	0.1	14	-	68	-	240	0.1
BAR	504	0.2	5	-	341	0.1	158	0.1
BLE	238	0.1	2	-	96	-	140	0.1
BNSF	35,496	13.7	248	0.1	13,629	5.3	21,619	8.3
BRC	114	-	-	-	76	-	38	-
CR	9,576	3.7	101	-	3,749	1.4	5,726	2.2
CRSH	2	-	-	-	-	-	2	-
CSX	28,064	10.8	303	0.1	9,268	3.6	18,493	7.1
DH	531	0.2	5	-	446	0.2	80	-
DME	1,367	0.5	2	-	556	0.2	809	0.3
DMIR	270	0.1	1	-	129	-	140	0.1
DWP	101	-	-	-	20	-	81	-
EJE	290	0.1	7	-	96	-	187	0.1
FEC	852	0.3	12	-	110	-	730	0.3
GRP3	69,153	26.6	501	0.2	27,723	10.7	40,929	15.8
GRS	1,783	0.7	13	-	614	0.2	1,156	0.4
GTW	1,203	0.5	12	-	299	0.1	892	0.3
GWWR	585	0.2	5	-	247	0.1	333	0.1
IC	5,837	2.2	72	-	2,237	0.9	3,528	1.4
IHB	132	0.1	2	-	45	-	85	-
IMRL	432	0.2	3	-	156	0.1	273	0.1
KCS	4,364	1.7	11	-	1,696	0.7	2,657	1.0
LI	396	0.2	9	-	83	-	304	0.1
MNCW	122	-	-	-	60	-	62	-
MRL	1,155	0.4	3	-	703	0.3	449	0.2
NICD	155	0.1	7	-	25	-	123	-
NIRC	86	-	1	-	10	-	75	-
NJTR	457	0.2	25	-	89	-	343	0.1
NS	33,436	12.9	147	0.1	12,747	4.9	20,542	7.9
PAL	447	0.2	3	-	186	0.1	258	0.1
PATH	2	-	-	-	2	-	-	-
PTRA	163	0.1	1	-	97	-	65	-
SCAX	388	0.1	17	-	46	-	325	0.1
SEPA	324	0.1	10	-	53	-	261	0.1
SOO	3,487	1.3	39	-	1,733	0.7	1,715	0.7
TM	425	0.2	-	-	195	0.1	230	0.1
TRRA	149	0.1	-	-	12	-	137	0.1
UP	51,561	19.9	334	0.1	20,243	7.8	30,984	11.9
URR	59	-	6	-	39	-	14	-
WC	4,187	1.6	51	-	1,523	0.6	2,613	1.0
WE	958	0.4	9	-	389	0.1	560	0.2
	259,554	100.0	1,989	0.8	99,967	38.5	157,598	60.7

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TABLE 9-2 AT-GRADE HIGHWAY-RAIL CROSSINGS BY STATE, 1999

	Total		Pedestrian		Private Vehicle		Public Vehicle	
	Cnt	%	Cnt	%	Cnt	%	Cnt	%
Alabama	5,409	2.1	20	-	1,907	0.7	3,482	1.3
Alaska	337	0.1	8	-	104	-	225	0.1
Arizona	1,624	0.6	7	-	681	0.3	936	0.4
Arkansas	4,651	1.8	8	-	1,480	0.6	3,163	1.2
California	12,775	4.9	155	0.1	4,771	1.8	7,849	3.0
Colorado	3,265	1.3	21	-	1,301	0.5	1,943	0.7
Connecticut	634	0.2	-	-	262	0.1	372	0.1
Delaware	457	0.2	2	-	149	0.1	306	0.1
Dist Of								
Columbia	42	-	11	-	8	-	23	-
Florida	5,258	2.0	56	-	1,287	0.5	3,915	1.5
Georgia	8,416	3.2	38	-	2,519	1.0	5,859	2.3
Hawaii	6	-	-	-	-	-	6	-
Idaho	2,641	1.0	12	-	1,249	0.5	1,380	0.5
Illinois	15,725	6.1	305	0.1	5,489	2.1	9,931	3.8
Indiana	9,121	3.5	67	-	2,581	1.0	6,473	2.5
Iowa	9,324	3.6	42	-	4,130	1.6	5,152	2.0
Kansas	10,795	4.2	32	-	4,118	1.6	6,645	2.6
Kentucky	5,026	1.9	39	-	2,496	1.0	2,491	1.0
Louisiana	6,716	2.6	35	-	3,155	1.2	3,526	1.4
Maine	1,680	0.6	9	-	835	0.3	836	0.3
Maryland	1,376	0.5	7	-	686	0.3	683	0.3
Massachusetts	1,748	0.7	18	-	538	0.2	1,192	0.5
Michigan	8,511	3.3	108	-	2,649	1.0	5,754	2.2
Minnesota	8,211	3.2	51	-	3,078	1.2	5,082	2.0
Mississippi	4,859	1.9	16	-	2,022	0.8	2,821	1.1
Missouri	7,959	3.1	59	-	3,192	1.2	4,708	1.8
Montana	3,499	1.3	16	-	2,005	0.8	1,478	0.6
Nebraska	6,529	2.5	14	-	2,700	1.0	3,815	1.5
Nevada	571	0.2	3	-	267	0.1	301	0.1
New Hampshire	623	0.2	6	-	214	0.1	403	0.2
New Jersey	2,498	1.0	48	-	591	0.2	1,859	0.7
New Mexico	1,354	0.5	1	-	577	0.2	776	0.3
New York	6,389	2.5	69	-	3,174	1.2	3,146	1.2
North								
Carolina	7,853	3.0	54	-	3,244	1.2	4,555	1.8
North Dakota	6,609	2.5	19	-	2,092	0.8	4,498	1.7
Ohio	9,602	3.7	30	-	3,187	1.2	6,385	2.5
Oklahoma	6,026	2.3	15	-	1,623	0.6	4,388	1.7
Oregon	5,213	2.0	89	-	2,815	1.1	2,309	0.9
Pennsylvania	9,115	3.5	120	-	3,401	1.3	5,594	2.2
Rhode Island	199	0.1	-	-	71	-	128	-
South								
Carolina	4,297	1.7	11	-	1,268	0.5	3,018	1.2
South Dakota	3,519	1.4	6	-	1,376	0.5	2,137	0.8
Tennessee	5,055	1.9	24	-	1,824	0.7	3,207	1.2
Texas	18,435	7.1	31	-	6,198	2.4	12,206	4.7
Utah	1,755	0.7	4	-	780	0.3	971	0.4
Vermont	1,192	0.5	46	-	650	0.3	496	0.2
Virginia	4,849	1.9	41	-	2,734	1.1	2,074	0.8
Washington	5,674	2.2	57	-	2,912	1.1	2,705	1.0
West Virginia	3,628	1.4	58	-	1,964	0.8	1,606	0.6
Wisconsin	7,143	2.8	99	-	2,672	1.0	4,372	1.7
Wyoming	1,361	0.5	2	-	941	0.4	418	0.2
	259,554	100.0	1,989	0.8	99,967	38.5	157,598	60.7

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TABLE 9-3 PUBLIC AT GRADE BY WARNING DEVICE AND RAILROAD, 1999

	Total		Unknown	Other	Cross bucks	Stop signs	Special warning	HWTS,WW- ,Bells	Flashing lights	Gates
	Cnt	%								
ALS	21	0.01	1	-	6	-	1	-	7	6
ARR	221	0.14	8	-	99	26	7	-	35	46
ATK	240	0.15	7	3	9	6	5	-	9	201
BAR	158	0.10	-	-	56	5	5	-	87	5
BLE	140	0.09	2	-	70	-	2	-	29	37
BNSF	21,619	13.72	441	13	12,078	972	194	135	2,952	4,834
BRC	38	0.02	1	-	18	-	1	-	8	10
CR	5,726	3.63	487	152	1,696	158	777	97	1,556	803
CRSH	2	-	-	-	2	-	-	-	-	-
CSX	18,493	11.73	492	12	5,748	1,567	352	147	3,930	6,245
DH	80	0.05	2	-	21	1	1	2	20	33
DME	809	0.51	30	-	600	47	-	1	116	15
DMIR	140	0.09	-	2	74	32	2	-	20	10
DWP	81	0.05	-	-	42	15	1	-	10	13
EJE	187	0.12	-	-	29	3	9	2	62	82
FEC	730	0.46	9	-	46	3	27	-	31	614
GRP3	40,929	25.97	1,388	161	24,020	3,279	1,204	446	6,715	3,716
GRS	1,156	0.73	47	2	277	42	189	19	340	240
GTW	892	0.57	2	-	87	187	35	4	200	377
GWWR	333	0.21	-	-	188	10	-	18	89	28
IC	3,528	2.24	174	4	1,478	371	79	26	842	554
IHB	85	0.05	3	-	9	-	17	-	25	31
IMRL	273	0.17	3	-	163	40	10	-	51	6
KCS	2,657	1.69	116	-	1,541	183	3	6	480	328
LI	304	0.19	-	1	8	-	-	1	-	294
MNCW	62	0.04	3	-	3	-	1	1	35	19
MRL	449	0.28	6	-	266	45	-	1	64	67
NICD	123	0.08	1	-	5	27	-	7	42	41
NIRC	75	0.05	1	-	-	-	1	1	5	67
NJTR	343	0.22	7	-	28	1	10	1	79	217
NS	20,542	13.03	687	93	7,764	1,565	503	101	4,017	5,812
PAL	258	0.16	3	-	118	10	1	3	103	20
PTRA	65	0.04	5	-	25	1	-	-	11	23
SCAX	325	0.21	-	-	29	4	-	-	18	274
SEPA	261	0.17	45	2	30	17	19	21	77	50
SOO	1,715	1.09	84	-	875	179	19	6	256	296
TM	230	0.15	7	-	144	6	10	-	59	4
TRRA	137	0.09	2	-	15	2	54	-	19	45
UP	30,984	19.66	1,284	44	15,164	1,779	310	384	4,604	7,415
URR	14	0.01	-	-	-	-	-	10	1	3
WC	2,613	1.66	22	-	1,271	289	24	22	725	260
WE	560	0.36	10	-	285	22	1	3	145	94
	157,598	100.0	5,380	489	74,387	10,894	3,874	1,465	27,874	33,235

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TABLE 9-4 PUBLIC AT GRADE BY WARNING DEVICE AND STATE, 1999

	Total		Unknown	Other	Cross bucks	Stop signs	Special warning	HWTS,WW- ,Bells	Flashing lights	Gates	AADT
	Cnt	%									
AK	225	0.14	9	-	102	26	7	-	35	46	461,644
AL	3,482	2.21	123	8	1,480	728	24	14	619	486	6,920,796
AR	3,163	2.01	129	-	1,971	189	69	24	442	339	3,816,494
AZ	936	0.59	25	-	352	99	11	4	69	376	2,858,581
CA	7,849	4.98	173	14	2,872	323	42	283	1,050	3,092	41,036,873
CO	1,943	1.23	66	3	943	240	34	37	254	366	4,004,599
CT	372	0.24	19	-	32	50	24	5	140	102	1,256,800
DC	23	0.01	2	-	1	2	12	2	4	-	179,150
DE	306	0.19	15	-	48	4	21	1	168	49	1,071,492
FL	3,915	2.48	53	6	871	128	86	13	535	2,223	18,772,053
GA	5,859	3.72	165	7	2,556	1,022	115	23	316	1,655	8,663,271
HI	6	-	-	-	5	1	-	-	-	-	8,000
IA	5,152	3.27	83	1	2,943	399	40	29	999	658	5,329,961
ID	1,380	0.88	16	-	479	559	5	4	183	134	1,820,661
IL	9,931	6.30	328	2	4,311	71	195	117	2,606	2,301	21,047,975
IN	6,473	4.11	130	7	2,329	895	71	91	1,567	1,383	13,178,099
KS	6,645	4.22	116	11	4,592	254	74	45	633	920	4,809,302
KY	2,491	1.58	116	-	1,071	51	48	17	787	401	3,899,453
LA	3,526	2.24	218	11	1,780	245	38	28	676	530	7,163,601
MA	1,192	0.76	51	3	230	5	212	31	463	197	4,364,201
MD	683	0.43	34	2	254	39	25	22	206	101	2,306,195
ME	836	0.53	1	-	277	14	72	-	399	73	1,940,592
MI	5,754	3.65	84	4	2,218	960	111	39	1,470	868	15,087,236
MN	5,082	3.22	96	2	3,012	690	17	10	609	646	6,136,533
MO	4,708	2.99	217	1	2,677	122	94	57	929	611	4,935,511
MS	2,821	1.79	188	10	1,133	684	47	15	538	206	5,018,174
MT	1,478	0.94	50	-	977	87	11	3	164	186	1,293,249
NC	4,555	2.89	204	6	2,019	54	160	20	691	1,401	9,184,546
ND	4,498	2.85	158	-	3,773	76	1	-	115	375	1,277,174
NE	3,815	2.42	112	-	2,553	255	5	9	280	601	2,445,018
NH	403	0.26	2	3	109	39	80	10	125	35	1,039,669
NJ	1,859	1.18	121	2	399	19	234	17	656	411	11,000,200
NM	776	0.49	9	4	433	12	2	6	109	201	890,351
NV	301	0.19	5	-	129	10	4	1	23	129	895,881
NY	3,146	2.00	68	22	721	19	198	57	500	1,561	7,875,324
OH	6,385	4.05	81	10	2,732	171	75	21	1,174	2,121	13,821,380
OK	4,388	2.78	61	7	2,920	123	64	24	679	510	4,759,294
OR	2,309	1.47	123	43	863	435	90	44	136	575	4,536,692
PA	5,594	3.55	453	276	1,898	140	664	111	1,305	747	16,685,638
RI	128	0.08	22	-	9	5	22	22	33	15	606,675
SC	3,018	1.91	21	-	1,164	422	131	2	504	774	5,510,439
SD	2,137	1.36	75	-	1,823	29	-	1	192	17	1,226,304
TN	3,207	2.03	245	1	1,528	167	175	38	665	388	6,681,265
TX	12,206	7.75	524	8	6,530	303	98	66	1,789	2,888	29,239,922
UT	971	0.62	69	5	412	51	85	5	164	180	1,828,421
VA	2,074	1.32	53	-	539	13	67	8	495	899	6,069,058
VT	496	0.31	2	-	199	25	44	3	196	27	702,703
WA	2,705	1.72	251	1	1,362	100	50	27	380	534	5,110,396
WI	4,372	2.77	68	-	1,870	489	101	46	1,254	544	9,561,731
WV	1,606	1.02	137	9	724	28	18	9	454	227	1,783,777
WY	418	0.27	9	-	162	22	1	4	94	126	338,650
	157,598	100.0	5,380	489	74,387	10,894	3,874	1,465	27,874	33,235	330,451,004

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TABLE 9-5 PRIVATE/PEDESTRIAN AT GRADE BY DEVELOPMENT AND RAILROAD, 1999

	Total		Not reported	Farm	Residential	Recreational	Industrial
	Cnt	%					
ALS	27	0.03	-	8	5	-	14
ARR	104	0.10	-	4	14	5	81
ATK	68	0.07	1	35	13	3	16
BAR	341	0.34	-	148	33	45	115
BLE	96	0.10	-	38	12	2	44
BNSF	13,629	13.63	2	9,567	902	141	3,017
BRC	76	0.08	-	-	-	-	76
CR	3,749	3.75	-	1,904	424	105	1,316
CSX	9,269	9.27	392	4,971	1,724	160	2,022
DH	446	0.45	-	305	49	37	55
DME	556	0.56	-	479	8	1	68
DMIR	129	0.13	-	24	17	1	87
DWP	20	0.02	-	4	4	7	5
EJE	96	0.10	-	41	1	-	54
FEC	112	0.11	85	4	3	-	20
GRP3	27,730	27.74	161	17,049	3,569	572	6,379
GRS	615	0.62	-	207	65	21	322
GTW	299	0.30	-	207	19	5	68
GWWR	247	0.25	-	217	2	1	27
IC	2,237	2.24	-	1,518	235	14	470
IHB	45	0.05	-	-	2	-	43
IMRL	156	0.16	-	87	39	7	23
KCS	1,696	1.70	-	1,118	215	10	353
LI	83	0.08	-	67	4	3	9
MNCW	60	0.06	-	12	8	7	33
MRL	703	0.70	-	484	64	16	139
NICD	25	0.03	-	8	2	-	15
NIRC	10	0.01	-	3	3	1	3
NJTR	89	0.09	-	35	16	4	34
NS	12,747	12.75	905	7,027	2,321	168	2,326
PAL	186	0.19	-	118	30	1	37
PATH	2	-	-	1	-	-	1
PTRA	97	0.10	-	1	-	-	96
SCAX	46	0.05	-	13	6	3	24
SEPA	53	0.05	-	22	12	2	17
SOO	1,733	1.73	-	1,366	108	19	240
TM	195	0.20	1	117	18	2	57
TRRA	12	0.01	-	3	-	-	9
UP	20,244	20.25	189	13,109	1,613	222	5,111
URR	39	0.04	-	-	-	-	39
WC	1,523	1.52	-	905	144	46	428
WE	389	0.39	-	216	36	5	132
	99,979	100.0	1,736	61,442	11,740	1,636	23,425

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TABLE 9-6 PRIVATE/PEDESTRIAN AT GRADE BY TYPE DEVELOPMENT AND STATE, 1999

	Total		Not reported	Farm	Residential	Recreational	Industrial
	Cnt	%					
AK	104	0.10	-	4	14	5	81
AL	1,907	1.91	4	1,084	342	32	445
AR	1,480	1.48	-	983	214	17	266
AZ	681	0.68	-	391	24	12	254
CA	4,772	4.77	9	2,103	339	122	2,199
CO	1,301	1.30	2	782	242	16	259
CT	262	0.26	1	49	30	32	150
DC	8	0.01	-	-	-	-	8
DE	149	0.15	-	82	37	5	25
FL	1,296	1.30	224	461	182	26	403
GA	2,519	2.52	-	1,378	608	31	502
IA	4,130	4.13	1	3,083	322	48	676
ID	1,249	1.25	1	788	59	10	391
IL	5,489	5.49	-	3,605	487	75	1,322
IN	2,580	2.58	3	1,708	312	28	529
KS	4,118	4.12	-	3,504	197	7	410
KY	2,496	2.50	-	1,454	679	17	346
LA	3,155	3.16	-	1,707	493	21	934
MA	538	0.54	-	169	68	39	262
MD	686	0.69	-	394	74	15	203
ME	835	0.84	-	348	113	73	301
MI	2,650	2.65	-	1,349	398	130	773
MN	3,078	3.08	-	2,211	244	51	572
MO	3,192	3.19	1	2,276	319	26	570
MS	2,022	2.02	1	1,341	406	7	267
MT	2,005	2.01	-	1,572	106	24	303
NC	3,244	3.24	1	1,599	828	30	786
ND	2,092	2.09	-	1,867	26	10	189
NE	2,700	2.70	-	2,378	83	12	227
NH	215	0.22	-	111	28	20	56
NJ	591	0.59	1	198	63	11	318
NM	577	0.58	-	426	28	2	121
NV	267	0.27	191	28	3	8	37
NY	3,174	3.17	-	2,151	338	101	584
OH	3,187	3.19	-	2,085	288	37	777
OK	1,623	1.62	-	1,217	150	10	246
OR	2,816	2.82	-	1,352	335	41	1,088
PA	3,401	3.40	-	1,470	510	155	1,266
RI	71	0.07	-	7	18	9	37
SC	1,268	1.27	2	644	292	19	311
SD	1,376	1.38	-	1,151	81	4	140
TN	1,824	1.82	-	1,066	386	24	348
TX	6,198	6.20	3	4,124	506	35	1,530
UT	780	0.78	-	524	36	16	204
VA	2,734	2.73	1,290	959	194	18	273
VT	650	0.65	-	450	62	29	109
WA	2,912	2.91	-	1,410	371	51	1,080
WI	2,672	2.67	-	1,757	196	83	636
WV	1,964	1.96	1	850	596	42	475
WY	941	0.94	-	792	13	-	136
	99,979	100.0	1,736	61,442	11,740	1,636	23,425

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CHAPTER 10

TRESPASSERS, NOT AT HIGHWAY-RAIL CROSSINGS

A “trespasser” is defined as any person who is on that part of railroad property used in railroad operation and whose presence is prohibited, forbidden, or unlawful. Employees who are trespassing on railroad property are to be reported as “Trespassers” (Class E).

A person on a highway-rail crossing should not be classified as a trespasser unless the crossing is protected by gates, or other similar barriers that were closed when the person went on the crossing, or unless the person attempted to pass over, under, or between cars or locomotives of a consist occupying the crossing. Although these individuals are identified as “trespassers” on form FRA F 6180.55a, they are excluded from this chapter because the incident is defined as a highway-rail incident. These casualties can be found in Chapters 7 and 8 that summarize highway-rail crossing incidents.

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CHAPTER 10

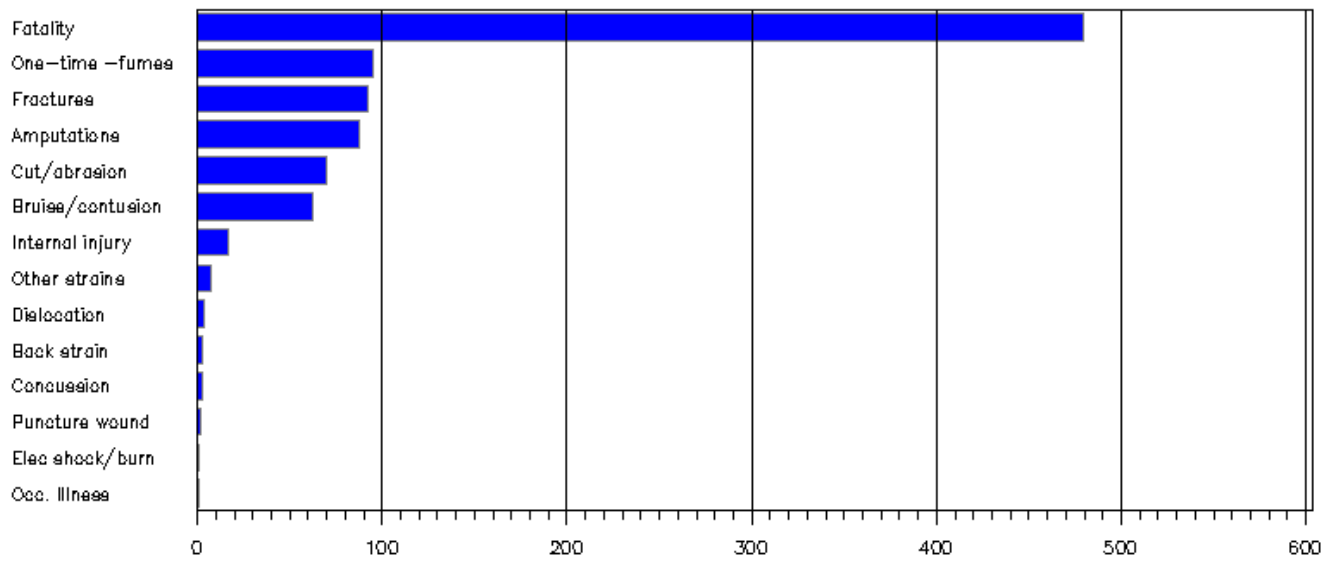
TRESPASSERS, NOT AT HIGHWAY-RAIL CROSSINGS

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10- 1TRESPASSER CASES, 1999



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TABLE 10-1 REPORTABLE CONDITIONS TO TRESPASSERS NOT AT HRC, 1999

Condition	Total		Age of Trespasser															
			Unk	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	> 70
	Cnt	%																
Bruise/contusion	62	6.7	11	-	1	7	7	6	6	7	2	2	2	5	1	2	-	3
Occ. Illness	1	0.1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Sprain/Str.,leg/foot	4	0.4	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-
Sprain/Str.,head/fac	2	0.2	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Sprain/Str.,torso	3	0.3	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-
Sprain/Str., other	1	0.1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Cut/abrasion	70	7.6	3	-	1	5	11	7	7	10	10	4	2	6	1	1	-	2
Puncture wound	2	0.2	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Electric shock/burn	1	0.1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dislocation	4	0.4	-	-	-	-	1	1	-	-	-	2	-	-	-	-	-	-
Fracture,arm/hand	15	1.6	-	-	1	-	3	2	2	-	1	3	1	2	-	-	-	-
Fracture,leg/foot	54	5.8	4	-	-	1	8	11	12	5	4	4	1	3	1	-	-	-
Fracture,head/face	12	1.3	-	-	-	2	2	1	-	-	4	2	-	-	-	1	-	-
Fracture,torso	4	0.4	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	1
Fracture,multiple	5	0.5	1	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-
Fracture,other	2	0.2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Amputation,arm/hand	16	1.7	-	-	1	-	2	2	3	3	3	1	1	-	-	-	-	-
Amputation,leg/foot	71	7.7	3	-	9	10	12	11	8	2	6	4	4	1	-	-	-	1
Amputation,other	1	0.1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Fatality	479	52	42	3	4	14	47	69	51	38	66	56	35	17	5	7	8	17
Concussion	3	0.3	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Internal injury	17	1.8	1	1	-	1	-	2	3	1	3	4	-	-	-	1	-	-
Unspecified injury	95	10	8	1	2	4	10	17	15	11	6	8	5	4	-	-	-	4
All	924	100	76	5	19	44	110	137	109	78	108	93	51	38	8	12	8	28

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TABLE 10-2 TRESPASSERS KILLED, BY RAILROAD AND AGE, NOT AT HRC, 1999

RR	Cnt	%	Age of Trespasser															
			Unk	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	> 70
ATK	51	10.6	20	1	2	4	3	3	4	2	6	2	1	-	-	-	1	2
BNSF	63	13.2	-	1	-	-	7	11	7	5	9	4	6	5	-	1	-	7
CR	6	1.3	-	-	-	-	-	1	-	-	2	1	1	-	-	-	-	1
CRSH	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
CSX	64	13.4	-	-	-	6	8	14	7	6	8	4	5	1	-	1	1	3
DH	2	0.4	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
FEC	10	2.1	-	-	-	1	-	1	1	-	3	3	1	-	-	-	-	-
GRS	2	0.4	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
GWWR	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
IC	6	1.3	1	-	-	-	1	1	-	2	1	-	-	-	-	-	-	-
IMRL	2	0.4	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
KCS	5	1.0	-	1	-	-	1	-	-	-	-	1	1	1	-	-	-	-
LI	4	0.8	3	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
MBTA	5	1.0	3	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
MNCW	5	1.0	-	-	-	1	-	-	1	2	-	-	-	1	-	-	-	-
MRL	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
NIRC	5	1.0	-	-	-	-	-	-	-	1	1	-	1	-	-	-	1	1
NJTR	13	2.7	-	-	-	-	2	2	1	1	1	1	3	2	-	-	-	-
NS	47	9.8	-	-	1	1	3	8	8	2	9	7	2	-	2	3	1	-
PCMZ	2	0.4	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
SEPA	6	1.3	-	-	-	-	-	-	-	-	1	2	1	1	-	-	1	-
SOO	3	0.6	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-
UP	165	34.4	12	-	1	1	18	26	18	15	18	31	11	4	2	2	3	3
WE	1	0.2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
OTHE	9	1.9	2	-	-	-	1	1	1	-	4	-	-	-	-	-	-	-
All	479	100	42	3	4	14	47	69	51	38	66	56	35	17	5	7	8	17

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TABLE 10-3 TRESPASSERS KILLED, BY STATE AND AGE, NOT AT HRC, 1999

ST	Cnt	%	Age of Trespasser															
			Unk	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	> 70
AL	6	1.3	-	-	-	-	1	2	1	-	-	-	1	-	1	-	-	-
AZ	14	2.9	-	-	-	-	3	3	2	-	2	1	1	-	1	-	1	-
AR	10	2.1	-	1	-	-	1	1	-	1	3	3	-	-	-	-	-	-
CA	86	18.0	16	-	-	1	3	12	11	6	6	13	5	3	1	1	2	6
CO	6	1.3	1	-	-	-	1	1	-	-	2	-	1	-	-	-	-	-
CT	10	2.1	-	1	2	2	-	-	1	-	2	-	1	1	-	-	-	-
DE	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
FL	24	5.0	1	-	-	1	-	6	2	2	5	4	1	-	-	1	-	1
GA	11	2.3	-	-	1	-	-	3	1	1	2	2	-	-	-	1	-	-
ID	2	0.4	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
IL	32	6.7	2	-	-	-	5	5	4	2	4	4	2	2	-	-	1	1
IN	5	1.0	1	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-
IA	6	1.3	-	-	1	-	2	2	-	-	-	1	-	-	-	-	-	-
KS	4	0.8	-	-	-	-	-	1	-	1	-	2	-	-	-	-	-	-
KY	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
LA	8	1.7	1	-	-	-	2	2	2	1	2	-	-	-	-	-	-	-
MD	10	2.1	1	-	-	2	1	1	2	-	2	-	-	-	-	-	1	-
MA	10	2.1	3	-	-	-	2	-	-	1	-	-	1	1	1	-	-	1
MI	5	1.0	1	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1
MN	10	2.1	-	1	-	-	2	-	1	1	3	1	-	-	-	-	-	1
MS	8	1.7	1	-	-	-	1	-	1	2	2	-	-	1	-	-	-	-
MO	7	1.5	-	-	-	-	2	2	1	-	-	1	1	-	-	-	-	-
NE	4	0.8	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1
NV	4	0.8	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-
NJ	14	2.9	-	-	-	-	2	2	-	1	2	1	3	2	-	-	-	1
NM	5	1.0	-	-	-	1	2	-	1	-	-	-	-	-	-	-	-	1
NY	18	3.8	3	-	-	1	2	2	1	2	1	1	4	-	-	-	1	-
NC	21	4.4	1	-	-	2	2	3	5	2	4	-	-	-	1	-	-	1
ND	2	0.4	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
OH	14	2.9	1	-	-	1	1	4	1	-	2	2	-	-	-	1	1	-
OK	7	1.5	1	-	-	-	-	3	-	-	2	-	1	-	-	-	-	-
OR	8	1.7	-	-	-	-	1	-	-	1	2	1	1	1	-	-	1	-
PA	15	3.1	1	-	-	-	1	2	-	2	1	4	1	1	-	-	1	1
RI	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
SC	8	1.7	-	-	-	-	-	-	2	1	3	1	1	-	-	-	-	-
TN	12	2.5	-	-	-	2	-	1	4	1	1	1	2	-	-	-	-	-
TX	42	8.8	2	-	-	-	5	6	6	4	3	5	6	2	1	1	-	1
UT	2	0.4	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
VA	8	1.7	1	-	-	-	-	-	-	1	2	2	2	-	-	-	-	-
WA	13	2.7	1	-	-	1	1	4	-	3	1	-	1	1	-	-	-	-
WV	1	0.2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
WI	2	0.4	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
WY	2	0.4	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
ALL	479	100	42	3	4	14	47	69	51	38	66	56	35	17	5	7	8	17

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TABLE 10-4 TRESPASSERS INJURED, BY RAILROAD AND AGE, NOT AT HRC, 1999

RR	Cnt	%	Age of Trespasser														
			Unk	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	> 70
ATK	25	5.6	13	1	-	1	2	1	1	3	-	1	-	2	-	-	-
BNSF	53	11.9	-	1	4	4	9	6	4	8	5	6	-	2	1	1	2
CR	9	2.0	-	-	-	2	4	1	1	-	1	-	-	-	-	-	-
CRSH	1	0.2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
CSX	47	10.6	-	-	4	5	5	12	1	4	6	3	1	4	-	-	2
DH	2	0.4	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
DME	1	0.2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
FEC	7	1.6	-	-	-	1	1	1	2	-	-	2	-	-	-	-	-
GRS	1	0.2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
GTW	2	0.4	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
IC	2	0.4	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
IHB	2	0.4	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
IMRL	2	0.4	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
KCS	3	0.7	-	-	-	-	1	-	-	-	-	-	-	1	-	-	1
LI	3	0.7	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-
MBTA	1	0.2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
MNCW	3	0.7	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-
MRL	1	0.2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
NIRC	10	2.2	-	-	-	1	-	-	2	2	1	-	1	2	-	1	-
NJTR	3	0.7	-	-	-	-	1	-	-	1	-	-	1	-	-	-	-
NS	50	11.2	-	-	2	6	6	6	7	3	10	6	-	3	-	1	-
PCMZ	1	0.2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PTRA	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
SEPA	7	1.6	1	-	-	-	-	2	1	-	-	1	-	1	-	-	1
SOO	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
TM	1	0.2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
UP	192	43.1	15	-	-	7	29	35	37	18	16	13	10	3	2	2	5
WC	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
OTHE	13	2.9	2	-	2	1	-	1	1	1	1	2	-	2	-	-	-
All	445	100	34	2	15	30	63	68	58	40	42	37	16	21	3	5	11

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TABLE 10-5 TRESPASSERS INJURED, BY STATE AND AGE, NOT AT HRC, 1999

ST	Cnt	%	Age of Trespasser														
			Unk	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	> 70
AL	6	1.3	-	-	-	1	1	1	-	1	-	-	-	1	-	-	1
AZ	15	3.4	-	-	-	-	4	5	2	2	1	1	-	-	-	-	-
AR	7	1.6	-	-	-	-	1	-	-	2	1	2	-	1	-	-	-
CA	44	9.9	6	-	2	2	5	6	6	4	1	6	-	3	1	-	2
CO	8	1.8	-	-	1	1	1	2	2	1	-	-	-	-	-	-	-
CT	2	0.4	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
DE	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
FL	18	4.0	2	-	-	2	2	5	2	2	-	3	-	-	-	-	-
GA	12	2.7	2	-	-	-	1	2	2	1	2	1	-	1	-	-	-
ID	1	0.2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
IL	29	6.5	3	-	1	5	2	3	5	2	1	1	2	2	-	2	-
IN	8	1.8	-	-	2	1	-	-	-	-	3	1	-	1	-	-	-
IA	4	0.9	-	-	-	-	2	-	1	-	1	-	-	-	-	-	-
KS	9	2.0	-	-	-	-	1	1	-	2	1	1	1	-	-	-	2
KY	9	2.0	-	-	-	-	1	6	1	-	1	-	-	-	-	-	-
LA	8	1.8	2	-	-	-	1	-	1	-	1	-	1	1	-	-	1
MD	6	1.3	-	-	-	-	1	-	1	-	1	-	3	1	-	-	-
MA	3	0.7	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-
MI	5	1.1	1	-	-	1	-	2	-	-	1	-	-	-	-	-	-
MN	9	2.0	-	-	-	3	1	-	3	-	-	1	1	-	-	-	-
MS	4	0.9	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-
MO	13	2.9	-	1	1	1	2	1	2	-	1	1	1	-	-	1	1
MT	2	0.4	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
NE	5	1.1	-	-	-	1	1	1	-	1	1	-	-	-	-	-	-
NV	3	0.7	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-
NJ	5	1.1	-	-	-	-	1	-	-	1	1	-	2	-	-	-	-
NM	9	2.0	1	1	-	-	1	1	4	1	-	-	-	-	-	-	-
NY	16	3.6	1	-	2	3	3	1	1	-	2	1	-	1	-	-	1
NC	12	2.7	2	-	-	1	3	-	-	2	1	2	1	-	-	-	-
ND	1	0.2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
OH	8	1.8	1	-	1	-	2	-	1	1	1	-	-	1	-	-	-
OK	9	2.0	-	-	-	1	-	1	1	1	-	4	1	-	-	-	-
OR	5	1.1	-	-	-	-	1	-	2	1	-	1	-	-	-	-	-
PA	15	3.4	2	-	-	1	2	3	1	-	1	3	-	1	-	-	1
SC	6	1.3	-	-	1	-	-	-	-	2	2	1	-	-	-	-	-
SD	1	0.2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
TN	4	0.9	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-
TX	90	20.2	7	-	-	1	16	24	16	8	9	2	2	1	1	1	2
UT	1	0.2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
VA	10	2.2	2	-	1	2	1	-	1	-	-	-	-	2	-	1	-
WA	10	2.2	-	-	1	1	-	-	-	3	2	-	-	2	1	-	-
WV	8	1.8	-	-	-	1	1	2	1	-	1	-	-	2	-	-	-
WI	4	0.9	1	-	-	-	1	-	-	1	-	-	1	-	-	-	-
All	445	100	34	2	15	30	63	68	58	40	42	37	16	21	3	5	11

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TABLE 10-6 TRESPASSERS NOT AT HRC BY STATE AND AGE GROUP, 1999

	Deaths				Total		Nonfatal Cases				Total	
	Age Group						Age Group					
	Unk	< 16	16-21	> 21	Cnt	%	Unk	< 16	16-21	> 21	Cnt	%
AL	-	-	3	3	6	1.3	-	1	2	3	6	1.3
AZ	-	-	4	10	14	2.9	-	-	8	7	15	3.4
AR	-	1	1	8	10	2.1	-	-	1	6	7	1.6
CA	16	1	4	65	86	18.0	6	4	5	29	44	9.9
CO	1	-	1	4	6	1.3	-	2	1	5	8	1.8
CT	-	5	-	5	10	2.1	-	-	1	1	2	0.4
DE	-	-	1	-	1	0.2	-	-	-	1	1	0.2
FL	1	1	5	17	24	5.0	2	2	6	8	18	4.0
GA	-	1	1	9	11	2.3	2	-	3	7	12	2.7
ID	-	-	-	2	2	0.4	-	-	-	1	1	0.2
IL	2	-	5	25	32	6.7	3	6	3	17	29	6.5
IN	1	-	2	2	5	1.0	-	3	-	5	8	1.8
IA	-	1	2	3	6	1.3	-	-	2	2	4	0.9
KS	-	-	-	4	4	0.8	-	-	2	7	9	2.0
KY	-	-	-	1	1	0.2	-	-	5	4	9	2.0
LA	1	-	2	5	8	1.7	2	-	1	5	8	1.8
MD	1	2	2	5	10	2.1	-	-	1	5	6	1.3
MA	3	-	2	5	10	2.1	-	2	-	1	3	0.7
MI	1	-	1	3	5	1.0	1	1	-	3	5	1.1
MN	-	1	2	7	10	2.1	-	3	1	5	9	2.0
MS	1	-	1	6	8	1.7	-	-	2	2	4	0.9
MO	-	-	2	5	7	1.5	-	3	2	8	13	2.9
MT	-	-	-	-	-	-	-	-	1	1	2	0.4
NE	1	-	-	3	4	0.8	-	1	1	3	5	1.1
NV	-	-	-	4	4	0.8	1	-	-	2	3	0.7
NJ	-	-	3	11	14	2.9	-	-	1	4	5	1.1
NM	-	1	2	2	5	1.0	1	1	2	5	9	2.0
NY	3	1	3	11	18	3.8	1	5	3	7	16	3.6
NC	1	2	3	15	21	4.4	2	1	3	6	12	2.7
ND	-	-	-	2	2	0.4	-	-	1	-	1	0.2
OH	1	1	2	10	14	2.9	1	1	2	4	8	1.8
OK	1	-	1	5	7	1.5	-	1	1	7	9	2.0
OR	-	-	1	7	8	1.7	-	-	1	4	5	1.1
PA	1	-	2	12	15	3.1	2	1	2	10	15	3.4
RI	-	-	-	1	1	0.2	-	-	-	-	-	-
SC	-	-	-	8	8	1.7	-	1	-	5	6	1.3
SD	-	-	-	-	-	-	-	1	-	-	1	0.2
TN	-	2	1	9	12	2.5	-	-	-	4	4	0.9
TX	2	-	5	35	42	8.8	7	1	16	66	90	20.2
UT	-	-	-	2	2	0.4	-	-	-	1	1	0.2
VA	1	-	-	7	8	1.7	2	3	1	4	10	2.2
WA	1	1	3	8	13	2.7	-	2	-	8	10	2.2
WV	-	-	-	1	1	0.2	-	1	1	6	8	1.8
WI	1	-	-	1	2	0.4	1	-	1	2	4	0.9
WY	1	-	-	1	2	0.4	-	-	-	-	-	-
All	42	21	67	349	479	100.0	34	47	83	281	445	100.0

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TABLE 10-7 TRESPASSERS CASUALTIES, BY MONTH AND DAY, NOT AT HRC, 1999

Cond	Month	Total		Day Of The Week							Age of Person			
		Cnt	%	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Unk	< 16	16-21	> 21
Kld	Jan	30	3.2	3	6	3	5	5	7	1	3	1	6	20
	Feb	41	4.4	6	3	7	6	5	8	6	8	3	3	27
	Mar	36	3.9	4	5	5	7	3	3	9	5	1	3	27
	Apr	36	3.9	5	5	4	5	6	8	3	2	2	5	27
	May	61	6.6	6	11	10	9	10	9	6	6	6	12	37
	Jun	45	4.9	5	10	8	5	6	6	5	3	1	8	33
	Jul	53	5.7	5	6	3	5	11	11	12	2	-	11	40
	Aug	46	5.0	8	8	4	3	8	11	4	2	1	8	35
	Sep	29	3.1	1	4	5	5	8	2	4	2	2	1	24
	Oct	34	3.7	4	2	5	3	10	5	5	3	2	3	26
	Nov	32	3.5	2	4	6	1	7	8	4	2	1	6	23
	Dec	36	3.9	4	8	4	8	5	1	6	4	1	1	30
	Total	479	51.8	53	72	64	62	84	79	65	42	21	67	349
Nonf	Jan	32	3.5	2	4	4	2	4	9	7	5	-	4	23
	Feb	25	2.7	1	2	2	5	5	4	6	1	4	2	18
	Mar	48	5.2	3	4	5	2	11	8	15	5	8	8	27
	Apr	47	5.1	2	5	10	5	10	8	7	6	5	12	24
	May	42	4.5	7	4	5	3	5	7	11	4	6	9	23
	Jun	40	4.3	8	4	8	4	2	8	6	3	4	7	26
	Jul	50	5.4	4	9	-	14	8	12	3	5	5	10	30
	Aug	37	4.0	2	6	6	4	5	9	5	-	2	9	26
	Sep	36	3.9	3	4	2	9	10	5	3	1	4	7	24
	Oct	30	3.2	3	1	6	11	5	2	2	2	4	8	16
	Nov	36	3.9	2	7	5	5	2	7	8	2	4	7	23
	Dec	22	2.4	5	6	1	3	2	1	4	-	1	-	21
	Total	445	48.2	42	56	54	67	69	80	77	34	47	83	281
Total	924	100	95	128	118	129	153	159	142	76	68	150	630	

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TABLE 10-8 TRESPASSERS CASUALTIES, BY TIME AND DAY, NOT AT HRC, 1999

Time		Total	Day Of The Week													
			Sun		Mon		Tue		Wed		Thu		Fri		Sat	
			Cnt	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld	Nonf	Kld
AM	1	43	4	1	3	5	2	2	3	4	6	1	2	3	3	4
	2	66	-	3	6	3	10	3	3	3	8	6	8	8	4	1
	3	27	1	1	1	-	2	-	4	-	4	4	5	2	1	2
	4	26	5	1	2	1	1	-	-	1	1	1	3	2	5	3
	5	32	1	1	-	-	1	-	2	4	5	4	4	5	4	1
	6	24	-	1	3	1	-	1	2	4	2	3	2	3	2	-
	7	25	3	1	5	1	1	1	2	2	1	3	1	1	2	1
	8	28	3	-	2	1	3	2	2	2	4	-	2	2	2	3
	9	25	1	-	4	-	1	1	1	4	2	3	5	1	-	2
	10	41	1	6	3	2	4	5	4	3	1	1	3	4	2	2
	11	34	1	1	1	5	2	6	-	-	4	1	5	6	-	2
	12	45	2	3	1	4	3	4	5	3	4	3	1	7	3	2
	Total	416	22	19	31	23	30	25	28	30	42	30	41	44	28	23
PM	1	31	1	2	1	3	1	2	1	4	2	3	3	2	5	1
	2	28	1	-	3	2	2	-	1	4	1	2	2	4	3	3
	3	40	5	3	1	2	1	2	1	3	2	8	4	3	2	3
	4	36	2	2	7	-	2	1	1	2	4	1	2	5	5	2
	5	43	3	2	5	3	5	3	1	1	4	5	2	2	1	6
	6	42	1	3	3	1	3	-	7	1	6	4	3	3	1	6
	7	50	3	2	1	2	4	5	4	5	5	3	5	2	2	7
	8	41	6	2	3	3	3	1	3	4	2	2	2	1	5	4
	9	55	-	4	5	7	3	1	1	2	6	2	6	6	5	7
	10	52	5	2	4	3	2	7	9	2	4	4	3	2	1	4
	11	56	2	-	3	3	6	7	2	4	6	5	5	3	6	4
	12	34	2	1	5	4	2	-	3	5	-	-	1	3	1	7
	Total	508	31	23	41	33	34	29	34	37	42	39	38	36	37	54
Total		924	53	42	72	56	64	54	62	67	84	69	79	80	65	77

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TABLE 10-9 TRESPASSERS CASUALTIES, BY LOCATION, NOT AT HRC, 1999

Location	Total		Deaths		Nonfatal		Age of Person			
	Cnt	%	Cnt	%	Cnt	%	Unk	< 16	16-21	> 21
Alongside of on-track equipmen	61	6.6	18	3.8	43	9.7	2	8	7	44
At work station	1	0.1	-	-	1	0.2	-	-	-	1
Beside track	127	13.7	44	9.2	83	18.7	5	10	21	91
Between tracks	185	20.0	126	26.3	59	13.3	7	3	25	150
Between cars/locomotives	25	2.7	4	0.8	21	4.7	-	2	4	19
In car	15	1.6	4	0.8	11	2.5	-	2	4	9
In/operating vehicle	13	1.4	6	1.3	7	1.6	-	2	2	9
On bridge/trestle	29	3.1	16	3.3	13	2.9	4	7	8	10
On highway-rail crossing	7	0.8	3	0.6	4	0.9	-	1	-	6
On side of car	31	3.4	8	1.7	23	5.2	2	9	6	14
On track	404	43.7	240	50.1	164	36.9	54	22	72	256
On end of car	3	0.3	2	0.4	1	0.2	-	1	1	1
On platform	2	0.2	-	-	2	0.4	-	-	-	2
Under car	11	1.2	5	1.0	6	1.3	-	-	-	11
Other location	10	1.1	3	0.6	7	1.6	2	1	-	7
All	924	100	479	100	445	100	76	68	150	630

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TABLE 10-10 TRESPASSERS CASUALTIES, BY EVENT, NOT AT HRC, 1999

Location	Total		Deaths		Nonfatal		Age of Person			
	Cnt	%	Cnt	%	Cnt	%	Unk	< 16	16-21	> 21
Assaulted by other	3	0.3	1	0.2	2	0.4	-	-	-	3
Caught in/compressed by hand tools	1	0.1	-	-	1	0.2	-	-	-	1
Collision - between on track equipment	1	0.1	1	0.2	-	-	-	-	-	1
Collision/impact - auto, truck, bus, van, etc.	24	2.6	7	1.5	17	3.8	-	1	5	18
Committing vandalism/theft	1	0.1	1	0.2	-	-	-	-	-	1
Electrical shock due to contact with 3rd rail, c	1	0.1	-	-	1	0.2	1	-	-	-
Horseplay, practical joke, etc.	8	0.9	2	0.4	6	1.3	-	2	2	4
Lost balance	40	4.3	10	2.1	30	6.7	-	3	10	27
Missed handhold, grabiron, step, etc.	3	0.3	2	0.4	1	0.2	-	-	1	2
Other impacts - on track equipment	5	0.5	3	0.6	2	0.4	-	-	2	3
Pushed/shoved from	3	0.3	-	-	3	0.7	-	-	1	2
Ran into on-track equipment	2	0.2	2	0.4	-	-	-	-	-	2
Ran into object/equipment	1	0.1	-	-	1	0.2	-	-	-	1
Slack action, draft, compressive buff/coupling	2	0.2	-	-	2	0.4	-	-	-	2
Slipped,fell,stumbled,etc. due to irregular surf	6	0.6	-	-	6	1.3	1	1	2	2
Slipped,fell,stumbled,etc. on oil, grease,etc.	1	0.1	-	-	1	0.2	-	-	-	1
Slipped,fell,stumbled,etc. due to object,ballast	3	0.3	-	-	3	0.7	-	1	-	2
Struck by object	6	0.6	-	-	6	1.3	-	1	-	5
Struck by on-track equipment	723	78.2	425	88.7	298	67.0	65	48	115	495
Struck against object	3	0.3	1	0.2	2	0.4	-	-	1	2
Sudden/unexpected movement of on-track equipmen	3	0.3	-	-	3	0.7	1	-	-	2
Sudden/unexpected movement of vehicle	1	0.1	-	-	1	0.2	-	-	-	1
Thrill seeking	9	1.0	1	0.2	8	1.8	-	5	3	1
Caught, crushed, pinched, other	10	1.1	2	0.4	8	1.8	1	-	-	9
On track equipment, other incidents	3	0.3	1	0.2	2	0.4	-	-	1	2
Slipped, fell, stumbled, other	43	4.7	13	2.7	30	6.7	6	3	6	28
Sudden, unexpected movement, other	3	0.3	1	0.2	2	0.4	-	-	1	2
Other (describe in narrative)	15	1.6	6	1.3	9	2.0	1	3	-	11
All	924	100	479	100	445	100	76	68	150	630

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APPENDIX A

ABBREVIATIONS

Abbreviation	Name
%	Percent of total
AADT	Average annual daily traffic
Acc	Accident, events reported on form 6180-54 (Chapter 6)
Avg	Average
Chg	Change
Cls	Class
Cnt	Count
Coll	Collision between ontrack equipment
Comm	Commuter
Der	Derailment
EOD	Railroad employee on duty
Eqp	Equipment
Exp	Exposure
Ftl	Fatality
HRC	Highway-rail crossing
HWTS	Highway traffic signals
Hmn	Human factor
Incs	Incidents
Len	Length
Loco	Locomotive
Mtr V	Motor vehicle
Nonf	Nonfatal cases (injuries and occupational illnesses)
Othr	Other
Psgr	Passenger on train
RR	Railroad
Rng	Range
Sig	Signal
Spd	Speed
Term	Terminated
Trans	Transferred
Tres	Trespasser
Trk	Track
Trn	Train
Unk	Unknown
Veh	Vehicle
WW	Wigwags
w/o	Without

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APPENDIX B

ACCIDENT PREDICTION AND RESOURCE ALLOCATION PROCEDURE NORMALIZING CONSTANTS

The U.S. DOT Highway-Rail Crossing Resource Allocation Procedure, as described in the *Rail-Highway Crossing Resource Allocation Procedure Users Guide, Third Edition*, August 1987, DOT/FRA/OS-87/10, uses three normalizing constants in the accident prediction formula, Formula A, Section 3.2.4, Page 17. These constants need to be adjusted periodically in order to keep the procedure matched with the current accident trends. The last recalculation and adjustment was made for Calendar Year 1992 and published in Bulletins No. 14 through 19.

The process of determining the three (3) new normalizing constants for 1998 is performed such that the 1997 accident prediction sum of the top 20 percent of the crossings is made to equal the sum of the *observed* number of accidents that occurred for those same 20 percent of crossings using the accident data for Calendar Years 1992 to 1996 (to predict 1997). The *observed* accidents are those accident records that are in the data file. Because of inaccurate reporting which results in some mismatched data records, the number of *observed* accidents normally will not be equal to the actual number of accidents which have occurred and as reported in the yearly Bulletin. This process is performed for each of the respective three formulae for the three types of warning device groups, (1) passive, (2) flashing lights, and (3) gates. This process normalizes the calculated prediction for the current trend in accident data (downward) and relative to each of the three types of warning devices.

These constants were redetermined for the national model using the crossings in the National Inventory File as of December 1997. Those using the ADOT Model should update their models by replacing the old constants with the new recalculated values. These normalizing constants are located in the computer program ACPD.NEW as shown in the *Users Guide Third Edition* at the top of Page A-4, Appendix A1 and in RESAL.NEW on Page B-3, Appendix B1.

As of August 1998, these new constants will be in the computer program used to fulfill requests for accident prediction and resource allocation listings, as well as in the new 1998 PCAPS Computer Program containing 1997 data. The table below lists the new and prior constants.

ACCIDENT PREDICTION AND RESOURCE ALLOCATION PROCEDURE NORMALIZING CONSTANTS

WARNING DEVICE GROUPS	NEW	PRIOR YEARS			
	1998	1992	1990	1988	1986
(1) Passive	.7159	.8239	.9417	.8778	.8644
(2) Flashing Lights	.5292	.6935	.8345	.8013	.8887
(3) Gates	.4921	.6714	.8901	.8911	.8131

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