

AGRICULTURE, FORESTRY, AND FISHING: agricultural production—crops  
 agricultural production—livestock and animal specialities agricultural services  
 forestry fishing, hunting, and trapping MINING: metal mining coal mining  
 oil and gas extraction mining and quarrying of nonmetallic minerals, except fuels  
 CONSTRUCTION: building construction—general contractors and operative builders  
 heavy construction other than building construction—contractors construction—special  
 trade contractors MANUFACTURING: food and kindred products tobacco  
 products textile mill products apparel and other finished products made from fabrics and  
 similar materials Minnesota products except furniture furniture and fixtures  
 paper and allied products printing, publishing, and allied industries chemicals and  
 allied products petroleum refining and related industries rubber and miscellaneous  
 plastic products machinery and electrical products stone, clay, glass, and concrete products  
 primary metal industries fabricated metal products except machinery and transportation  
 equipment industrial and commercial machinery and computer equipment electronic  
 and other electrical equipment and components, except computer equipment  
 transportation equipment measuring, measuring and controlling instruments;  
 photographic, medical, and optical goods watches and clocks miscellaneous  
 manufacturing industries TRANSPORTATION, COMMUNICATIONS, ELECTRIC,  
 GAS, AND SANITARY SERVICES: railroad transportation local and suburban  
 transit and interurban highway passenger transportation motor freight transportation and  
 warehousing United States Postal Service water transportation transportation by air  
 pipeline and other utility lines and services electric, gas, and sanitary services  
 WHOLESALE TRADE: wholesale trade—durable goods  
 wholesale trade—nondurable goods RETAIL TRADE: building materials, hardware,  
 garden supply, and mobile home dealers general merchandise stores food stores  
 automotive dealers and gasoline service stations apparel and accessory stores home  
 furniture, furnishings, and equipment stores eating and drinking places miscellaneous  
 retail FINANCE, INSURANCE, AND REAL ESTATE: depository institutions  
 nondepository credit institutions security and commodity brokers, dealers, exchanges,  
 and services insurance carriers insurance agents, brokers, and services real estate  
 holding and other investment offices SERVICES: hotels, rooming houses, camps, and  
 other lodging places personal services business services automotive repair, services,  
 and parking miscellaneous repair services motion pictures amusement and  
 recreation services health services legal services education services social  
 services museums, art galleries, and botanical and zoological gardens membership  
 organizations engineering, accounting, research, management, and related services  
 private households miscellaneous services PUBLIC ADMINISTRATION:  
 executive and general government, except finance justice, public order, and  
 safety taxation, and monetary policy administration of human resource  
 programs on housing programs  
 administrative and public utility activities and services

# Minnesota

# Workplace Safety Report

## Occupational Injuries and Illnesses, 1998



**Research and Statistics**  
**Minnesota Department of Labor and Industry**



# Minnesota Workplace Safety Report: Occupational Injuries and Illnesses, 1998

by David Berry

October 2000



Research & Statistics

443 Lafayette Road N.  
St. Paul, MN 55155-4307  
651-297-3163  
dli.research@state.mn.us  
[www.doli.state.mn.us/research.html](http://www.doli.state.mn.us/research.html)

Information in this report can be obtained in alternative formats by calling the Department of Labor and Industry at 1-800-342-5354 or TTY at (651) 297-4198.



443 Lafayette Road North  
St. Paul, Minnesota 55155  
www.doli.state.mn.us



651-296-6107  
TTY: 651-297-4198  
1-800-DIAL-DLI

October 2000

Dear Colleague:

I am pleased to provide you with a copy of our *Minnesota Workplace Safety Report: Occupational Injuries and Illnesses, 1998*.

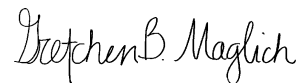
Every day, about 450 Minnesotans are hurt at work or become ill from job-related causes. Almost 90 Minnesotans are killed on the job each year. These injuries, illnesses, and deaths exact a toll on Minnesota workers, families, and businesses.

The *Safety Report* presents and analyzes data on Minnesota's job-related injuries, illnesses, and fatalities — their incidence, nature, and causes, the industries in which they occur; and changes in their incidence over time. This information is important for improving the safety and health of Minnesota's workplaces and thereby reducing the burden of occupational injuries and illnesses on workers, families, and employers.

The report also describes programs of the Department of Labor and Industry to help employers and workers reduce injuries and illnesses in their own workplaces.

I think you will find this report to be a valuable source of information and a useful reference.

Sincerely,



Gretchen Maglich  
Commissioner



## Executive Summary

According to the most recent data, about 450 Minnesotans per day are hurt at work or become ill from job-related causes. This amounts to roughly 165,000 cases per year, about 33,000 of which involve more than three days off the job. An average of 84 Minnesotans per year were killed at work from 1994 through 1998.

These injuries, illnesses and deaths exact a toll on workers and their families; they also affect business costs and productivity. Workers' compensation in Minnesota cost an estimated \$1.0 billion in 1998, or \$1.46 per \$100 of covered payroll. This does not count other costs, such as delayed production, hiring and training of new workers, pain and suffering, and those economic losses to injured workers and their families that are not covered by workers' compensation.

This report, part of an annual series, gives information through 1998 on Minnesota's job-related injuries, illnesses and fatalities. Data sources are (1) the annual Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics [BLS]), (2) workers' compensation claims data primarily from the Department of Labor and Industry (DLI), and (3) the annual Census of Fatal Occupational Injuries (BLS). The claims data, presented by injury year, are in the form of estimates representing full claim maturity.

Major findings of this report include the following:

### Injury and Illness Incidence Over Time

*BLS survey data for Minnesota* indicate that —

- Minnesota's total rate of workplace injuries and illnesses dropped to 7.5 per 100 full-time-equivalent (FTE) workers in 1997 and 1998 from a range of 8.3-8.6 for 1992-1996.

- The rate of "lost-workday" (LWD) cases — those with days away from work and/or restricted work activity — fell slightly to 3.4-3.5 per 100 FTE workers in 1996-1998 from 3.6-3.7 for 1988-1995. (See Appendix A for a detailed definition of LWD cases.)
- The composition of LWD cases has changed markedly. From 1984 to 1998, the rate of days-away-from-work (DAFW) cases fell steadily from 3.1 to 1.9, while the rate of restricted-work-activity-only (RWAO) cases rose from 0.2 to 1.5. (See Appendix A for definitions of DAFW and RWAO cases.)

*Minnesota vs. the U.S.* Also according to the BLS survey —

- Minnesota's total and LWD case rates were below their U.S. counterparts until the early 1990s, but have been above the U.S. rates since that time. For the private sector in 1998, the total case rate was 7.7 for the state vs. 6.7 for the nation, while the LWD case rate was 3.5 for the state vs. 3.1 for the nation.
- The state DAFW case rate was below the national rate through 1995, but roughly equal to it starting in 1996. In 1998, the private-sector DAFW case rate was 1.9 for the state vs. 2.0 for the nation.

*Workers' compensation data* from DLI and the insurance industry show that —

- Minnesota's total rate of paid workers' compensation claims fell from 10.3 per 100 FTE covered workers in 1984 to 8.5 in 1997.
- The rate of paid indemnity claims fell from 2.9 to 1.7 between 1984 and 1998. (See Appendix A for a definition of indemnity claims.)

- The rate of medical-only claims changed relatively little, from 7.4 to 6.8 over 1984-1997. (See Appendix A for a definition of medical-only claims. 1997 is the last year with data available for total and medical-only claims.)
- Between 1991 and 1997, indemnity claims fell from a 27 percent share of total paid claims to 20 percent.

#### ***BLS survey data vs. workers' compensation data.***

The declining trend in the DAFW case rate parallels the decrease over time in the indemnity claims rate. It is unknown to what degree these trends reflect improved safety or other factors, such as more active medical treatment and claims management, more effective return-to-work programs, and certain 1992 law changes.

Since 1984, total case rates from the BLS survey have consistently indicated lower injury and illness rates than have total paid claims rates from the workers' compensation data. Only minor definitional differences exist between total BLS cases and total paid claims. One possible explanation for the discrepancy is different response incentives in the BLS survey and the workers' compensation reporting system. See Appendix C for a discussion of differences between the two data sources.

## **Injury and Illness Incidence by Industry**

### **Industry Divisions**

***BLS survey data*** averaged for 1996-1998 indicate that among industry divisions (the broadest industry grouping) —

- Minnesota's highest total injury and illness rates per 100 FTE workers were in:
  - (1) state-government construction [district offices of the Department of Transportation engaged in road maintenance and repair] (13.3),
  - (2) private-sector construction (12.3),
  - (3) manufacturing (10.5), and
  - (4) agriculture, forestry, and fishing (10.3).
- These same industries also had the highest LWD case rates, ranging from 4.7 to 5.5.

#### ***Workers' compensation indemnity claims data***

indicate for 1996-1998, the highest indemnity claims rate were in —

- (1) Construction (private and public sectors combined) (4.4),
- (2) mining (3.4), and
- (3) transportation, communication, and utilities (3.0).

(The workers' compensation data do not provide an estimate for agriculture, forestry, and fishing.)

### **Trends Within Industry Divisions**

- The BLS total case rate in construction has shown a clear downward trend, from an average of 15.0 cases per 100 FTE workers for 1984-1986 to 12.3 for 1996-1998. This follows a nationwide trend in construction.
- In all industry divisions, the DAFW case rate has fallen while the RWAO case rate has risen, both absolutely and relative to the LWD case rate.
- The downward trend in the overall indemnity claims rate since 1990 has been experienced, to varying degrees, in all industry divisions.

### **Major Industry Groups**

***BLS survey data*** averaged for 1996-1998 indicate that among major industry groups (the next more detailed industry grouping) —

- Eight of the ten highest total case rates were in manufacturing, one was in construction, and one in agriculture, forestry, and fishing.



- The highest DAFW case rates were in:
  - (1) transportation equipment manufacturing (5.7 per year per 100 FTE workers),
  - (2) trucking and warehousing (4.9), and
  - (3) state-government health services (4.9).

**Indemnity claims data** indicate that for 1996-1998 —

- Of the ten major industry groups with the highest indemnity claims rates, three were in construction; two in transportation, communication, and public utilities; two in manufacturing; and one each in mining, services, and agriculture, forestry, and fishing.
- The highest indemnity claims rates were in:
  - (1) trucking and warehousing (5.3),
  - (2) general building contractors (4.6),
  - (3) special trade contractors (4.4), and
  - (4) local and interurban passenger transit (4.4).
- The largest numbers of indemnity claims were in:
  - (1) health services (3,380 per year),
  - (2) special trade contractors (2,330),
  - (3) business services (1,700), and
  - (4) trucking and warehousing (1,540).

### More Detailed Industries

While the BLS incidence rate estimates are from a sample, the indemnity claims incidence rates are calculated from the universe of paid claims. Therefore, indemnity claims rates are available for a far higher number of the more detailed industry groupings than are BLS case rates. This report presents available BLS case rates and indemnity claims rates for these more detailed industries.

## Incidence by Establishment Size

The BLS survey data also reveal substantial variation in injury and illness rates by establishment size.

- For Minnesota's private sector during 1996-1998, the total case rate was:
  - (1) 3.4 for establishments with 1-10 employees,
  - (2) 6.8 for 11-49 employees,
  - (3) 10.4 for 50-249 employees,
  - (4) 8.5 for 250-999 employees, and
  - (5) 7.4 for 1,000 or more.
- For DAFW cases in the private sector, the rate was:
  - (1) 1.3 for establishments with 1-10 employees,
  - (2) 1.9 for 11-49 employees,
  - (3) 2.5 for 50-249 employees,
  - (4) 2.0 for 250-999 employees, and
  - (5) 1.8 for 1,000 or more.

## Characteristics and Causes of Injuries and Illnesses

**Characteristics.** BLS survey data for 1996-1998 indicate that —

- Traumatic injuries and disorders accounted for 89 percent of Minnesota's DAFW cases. Most common among these were:
  - (1) sprains, strains, and tears of muscles, tendons, and joints (46 percent of the total),
  - (2) open wounds (8 percent),
  - (3) surface wounds and bruises (8 percent),
  - (4) back and other pain (8 percent), and
  - (5) fractures and dislocations (7 percent).
- Nine percent of the DAFW cases involved systemic diseases and disorders, primarily of the musculo-skeletal system [including tendinitis] (3 percent) and of the nervous

system and sense organs [including carpal tunnel syndrome] (3 percent).

- The most common body parts affected in DAFW cases were:
  - (1) the back (30 percent of the total),
  - (2) upper extremities [usually fingers, wrists, and hands] (21 percent), and
  - (3) lower extremities [usually knees, ankles, and feet] (19 percent).

**Causes.** The BLS survey data describe the causes of injuries and illnesses in terms of two items:

- Event or exposure — the manner in which the injury or illness was produced, and
- Source — the object, substance, person, or environmental condition that directly produced or inflicted the injury or illness.

BLS survey data for 1996-1998 indicate that —

- The most frequent event or exposure for DAFW cases was bodily reaction and exertion (52 percent of the total). This included:
  - (1) overexertion (36 percent of the total),
  - (2) bodily reaction, such as bending, slips, and trips (11 percent), and
  - (3) repetitive motion (5 percent).
- The next most frequent events and exposures were:
  - (1) contact with objects and equipment, such as being struck by, struck against, or caught in (23 percent),
  - (2) falls (15 percent),
  - (3) exposure to harmful substances or environments (4 percent),
  - (4) transportation incidents (4 percent), and
  - (5) assaults and violent acts (2 percent).
- The most frequent source of Minnesota's DAFW cases was persons (25 percent), primarily the injured or ill worker in cases

involving bodily motion or position (16 percent) and health care patients and facility residents (7 percent).

## Fatal Occupational Injuries

The nationwide Census of Fatal Occupational Injuries (CFOI) is conducted annually by the BLS in cooperation with state agencies. The CFOI covers all fatal work injuries in the private and public sectors regardless of program coverage; thus, it includes federal workers and self-employed workers along with all others. However, fatal *illnesses* (such as asbestosis) are excluded. The CFOI indicates —

- In 1998, 88 Minnesota workers were fatally injured on the job. For 1994-1998, Minnesota had an average of 84 fatal work injuries per year, consisting of 58 per year for wage-and-salary workers and 26 for the self-employed.
- For 1994-1998, 31 percent of fatal injuries were to self-employed workers, far higher than the 7 percent self-employed share of total employment.
- During 1994-1998, Minnesota had an average of 3.2 fatal workplace injuries per year per 100,000 workers.
- Among industry divisions, the highest fatal injury rates were in:
  - (1) agriculture, forestry, and fishing (19.5),
  - (2) construction (13.2), and
  - (3) transportation, communication, and utilities (7.1).
- The highest *numbers* of fatal injuries for 1994-1998 were in:
  - (1) agriculture, forestry, and fishing (24 per year),
  - (2) construction (15), and
  - (3) wholesale and retail trade (10).
- The most frequent causes of Minnesota's fatal work injuries for 1994-1998 were:

- (1) transportation accidents [including highway accidents; accidents on farm, industry, and construction sites; and workers struck by vehicles] (43 percent),
  - (2) contact with objects and equipment (26 percent),
  - (3) falls (11 percent),
  - (4) exposure to harmful substances or environments (8 percent),
  - (5) homicide (7 percent), and
  - (6) fires and explosions (3 percent).
- Homicide, the fifth leading cause of fatal workplace injuries in the state, was the third leading cause nationwide, responsible for 15 percent of the national total for 1994-1998.

## Department Programs and Services

DLI has a variety of programs and services to help employers maintain a safe and healthful workplace and thereby contain workers' compensation costs.

**Occupational Safety and Health Compliance (MNOSHA Compliance)** enforces the Minnesota Occupational Safety and Health Act by issuing safety and health standards and inspecting workplaces to ensure compliance with these standards and with statutory requirements.

**The Minnesota First program**, under MNOSHA Compliance, targets larger manufacturing employers with above-average injury and illness rates for compliance inspections. Employers who develop and implement a two-year safety and health plan may receive up to a 70 percent reduction in assessed penalties and a two-year exemption from programmed compliance inspections.

**Workplace Safety Consultation (WSC)** offers consultations on request to small private-sector employers and some public-sector employers, to help them prevent workplace accidents and diseases. The consultations are voluntary, free, confidential, and entirely separate from MNOSHA Compliance; no citations are issued and no penalties proposed.

**MNSHARP**, under WSC, is a voluntary program that assists small high-hazard employers in achieving safety and health improvements and recognizes them for doing so. Employers who develop and carry out a safety and health plan and meet injury and illness reduction goals receive a MNSHARP Certificate of Recognition, which exempts them from programmed MNOSHA inspections for one year and is renewable through continued fulfillment of program requirements.

**MNSTAR**, another voluntary program under WSC, is available to Minnesota employers of all sizes. It has more rigorous requirements and confers a higher level of recognition on certified employers than does MNSHARP. MNSTAR recognition exempts the employer from programmed MNOSHA inspections for three years.

## Workers' Compensation Safety and Health Incentives

The workers' compensation system provides strong safety and health incentives. These are greatest for self-insured employers, who directly bear their workers' compensation costs, but are also strong for insured employers.

In the voluntary market and Assigned Risk Plan (ARP)<sup>1</sup> —

- Experience rating adjusts premium according to the employer's recent claims costs relative to the average within its insurance class.
- Deductible plans allow the employer to accept responsibility for losses up to a per-claim amount in return for a lower premium.

In the voluntary market —

- Schedule rating modifies the premium to reflect the employer's safety and health practices.

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<sup>1</sup>The ARP provides workers' compensation insurance for employers unable to obtain it in the voluntary market.

- Retrospective rating adjusts the premium after the policy period to reflect actual losses.
- Dividend plans pay dividends when losses fall below a target.

In the ARP —

- Merit rating provides a premium credit or debit for non-experience-rated employers reflecting their recent indemnity claims experience.

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# 1

## Introduction

Workplace injuries and illnesses continue to be a major concern both in Minnesota and nationwide. The latest figures show that about 450 Minnesotans are hurt at work or become ill from job-related causes each day. This amounts to roughly 165,000 cases per year. About 33,000 of these involve a loss of more than three days of work. An average of 84 Minnesotans per year were killed on the job from 1994 through 1998.

These injuries, illnesses, and deaths exact a toll on workers and their families; they also affect business costs and productivity. Workers' compensation in Minnesota cost an estimated \$1.0 billion in 1998, or \$1.46 per \$100 of covered payroll. This includes indemnity benefits (for lost wages, functional impairment, or death), medical treatment, rehabilitation, litigation, claims administration, and other system costs. In 1996 (the latest data available), the average cost of an insured claim was \$3,540 (in 1998 dollars) for medical treatment plus indemnity benefits (indemnity benefits are paid in about 20 percent of all cases). For those claims with indemnity benefits (i.e., eliminating medical-only claims), the average medical and indemnity cost was much higher — \$16,210. Workplace injuries and illnesses also carry other costs which are difficult to measure, such as delayed production, hiring and training of new workers, pain and suffering, and those economic losses to injured workers and their families that are not covered by workers' compensation.

This *Minnesota Workplace Safety Report* is part of an annual series. It gives information through 1998 on Minnesota's job-related injuries, illnesses, and fatalities — their incidence, nature, and causes; the industries in which they occur; and changes in their incidence over time. This information is important for improving the safety and health of Minnesota's workplaces

and thereby reducing the burden of occupational injuries and illnesses on workers, families, and employers.

### Data Sources

This report presents data through 1998 from three sources: (1) the U.S. Bureau of Labor Statistics (BLS) annual Survey of Occupational Injuries and Illnesses; (2) the Minnesota workers' compensation system; and (3) the BLS annual Census of Fatal Occupational Injuries (CFOI). An introduction to the BLS survey and workers' compensation data follows. An introduction to the CFOI is provided in Chapter 5.

### BLS Survey Data

The BLS survey, conducted jointly by the BLS and state agencies, is the primary source of workplace injury and illness data nationwide. Approximately 4,800 Minnesota employers participated in 1998. The survey includes all cases on the Occupational Safety and Health Administration (OSHA) 200 log, on which employers with eleven or more employees are required to record workplace injuries and illnesses.<sup>2</sup> Data come both from the log and from an additional set of questions regarding relatively serious cases — those with at least one day off the job. The survey provides a large

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<sup>2</sup>OSHA-recordable cases include all nonfatal occupational illnesses and those nonfatal occupational injuries that result in loss of consciousness; medical treatment other than first aid; or any lost time from work, restricted work activity, or transfer to another job after the day of injury.

volume of information for the U.S. and individual states.<sup>3</sup>

The survey defines different types of cases according to whether or not they have days off the job and/or work restrictions:

- “Lost-workday” (LWD) cases are those with “lost workdays” — days when the worker is off the job or working with restrictions. LWD cases consist of —
  - (1) “days-away-from-work” (DAFW) cases — those with any days off the job (with or without additional days of restricted work), and
  - (2) “restricted-work-activity-only” (RWAO) cases — those with restricted work but no days off.
- “Cases without lost workdays” are cases with no days off the job and no work restrictions.

These case types are more precisely defined in Appendix A.

An important issue with the BLS survey data is sampling error — the random error in survey statistics that occurs because they are estimated from a sample. This sampling error is greater for smaller categories, such as particular industries, because of smaller sample size. Because of sampling errors, most state-level survey statistics in this report are averaged over three years.

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<sup>3</sup>This information includes the number and incidence of injuries and illnesses by industry and establishment size and, for cases resulting in time off the job, characteristics of injuries and illnesses, how they occur, severity (number of days away from work), length of time on the job when injured, occupation, and worker characteristics. The national data, because of larger sample sizes, include more detailed categories than the state data and contain smaller sampling errors.

Survey data for Minnesota and the U.S. are available from DLI’s Research and Statistics unit at 651-297-4595. National data, plus state-level incidence rates by industry, are also available at the BLS Occupational Safety and Health Statistics home page, <http://stats.bls.gov/oshhome.htm>.

## Workers’ Compensation Data

Workers’ compensation claims provide additional data on Minnesota’s workplace injuries and illnesses. Like the BLS data, the workers’ compensation data do not give a complete picture of work-related injuries and illnesses because some workers are not covered.<sup>4</sup>

Paid claims are typically divided into indemnity and medical-only claims, a distinction used in this report.

- Indemnity claims are those with paid indemnity benefits — benefits that compensate for wage loss, permanent functional impairment, or death.
- Medical-only claims are those in which only medical costs are paid.

Further information is provided in Appendix A, along with a comparison of BLS case categories and workers’ compensation claim categories.

The claims data in this report are presented by “injury year,” meaning that the claims are counted in the year of injury or onset of illness. Most of these data, from the DLI claims database, pertain to indemnity claims. Because of the time taken for some indemnity claims to materialize after the injury and because of reporting lags, the number of identified indemnity claims for any given injury year grows, or “develops,” over time. However, the indemnity claims numbers in this report are “developed,” meaning that they are estimates (based on historical rates of claim development) of what the numbers will be at full claim maturity. Appendix B describes sources and estimation procedures for the workers’ compensation paid claims rates in this report.

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<sup>4</sup>Workers outside the scope of state workers’ compensation include, among others, federal and railroad employees, who are covered under federal programs, and self-employed persons, independent contractors, small-farm employees, some household workers, and immediate family members of sole proprietors and partners, who are exempt from workers’ compensation coverage.

## **BLS Survey Data vs. Workers' Compensation Data**

Since 1984, BLS survey estimates have consistently indicated lower injury and illness rates for Minnesota than have the workers' compensation data. Definitional differences do not seem to explain the discrepancy. One possible explanation is different reporting incentives in the two systems, although this is not certain. This issue is discussed in Appendix C.

## **Organization of Report**

Chapter 2 presents data on the incidence of Minnesota's workplace injuries and illnesses

over time. Chapter 3 gives statistics on injury and illness rates by industry and by establishment size. Both chapters use data from both the BLS survey and the workers' compensation system. Chapter 4 describes the characteristics and causes of workplace injuries and illnesses, using BLS survey data. Chapter 5 gives information on the state's fatal workplace injuries from the Census of Fatal Occupational Injuries. Chapter 6 describes DLI programs and services to help employers achieve safe and healthful workplaces. Chapter 7 describes safety and health incentives in the workers' compensation system.

# 2

## Incidence of Workplace Injuries and Illnesses Over Time

This chapter presents data on the incidence of Minnesota's workplace injuries and illnesses over time. Data are from the BLS Survey and the Minnesota workers' compensation system.

### BLS Survey Data for Minnesota

Figure 1 shows BLS survey estimates of the incidence of nonfatal injuries and illnesses for Minnesota for 1984-1998, expressed as cases per 100 full-time-equivalent (FTE) workers. Both the private sector and state and local government are included, but not the federal government.

The figure shows that total case incidence rose from a range of 7.3-7.6 per 100 FTE workers in the mid-1980s to 8.3-8.6 for 1992-1996 but then dropped sharply to 7.5 in 1997 and 1998. The decline between 1996 and 1997 was entirely attributable to a drop in the rate of cases without lost workdays from 4.8 to 4.0, with the rate of lost-workday (LWD) cases steady at 3.5. More years of data will be necessary to determine whether the sharp 1997 decrease is a statistical aberration or part of a longer trend.

Figure 1 also shows that the rate of LWD cases remained steady at 3.6-3.7 over 1988-1995 and decreased slightly to 3.4 by 1998. LWD cases made up 42-47 percent of the total over the entire period.

Within LWD cases, the relative numbers of cases with days away from work (DAFW cases) and cases with restricted work activity only (RWAO cases) have changed substantially over time. The DAFW case rate fell from 3.1 in 1984 to 1.9 in 1998, while RWAO case rate rose from 0.2 to 1.5. As a proportion of total cases, DAFW cases fell from 41 to 25 percent over

1984-1998, while RWAO cases rose from 3 to 20 percent. As a share of LWD cases, DAFW cases fell from 93 to 56 percent over the entire period, while RWAO cases rose from 7 to 44 percent.

The explanation for these trends is not clear. It could involve (1) a decrease in the severity of LWD cases, (2) changes in what happens after an injury or illness occurs (e.g. promptness of medical treatment, prevalence of return-to-work and light-duty programs, or availability of work with other employers), or (3) changes in reporting.

### BLS Survey Data for Minnesota and the United States

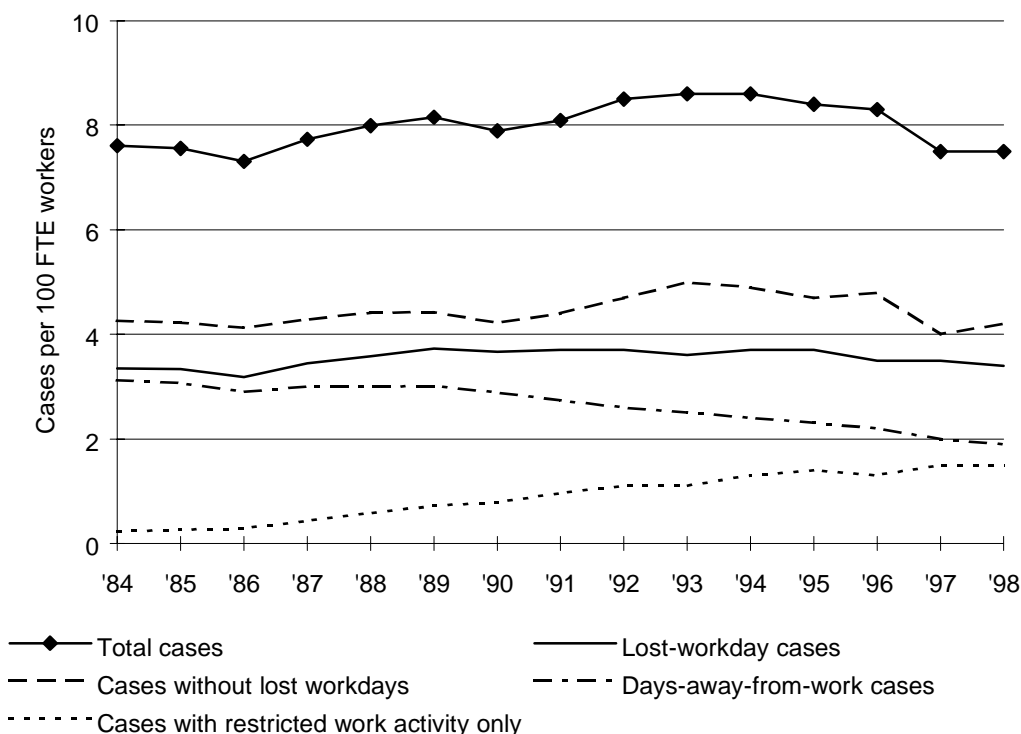
How do Minnesota's occupational injury and illness rates compare with those of the nation? Figure 2 shows the rates of total cases, LWD cases, and DAFW cases in the private sector for Minnesota and the United States for 1984-1998. The data, from the BLS survey, are limited to the private sector because the U.S. data are only available for the private sector.<sup>5</sup>

Figure 2 shows that Minnesota's total case rate for the private sector stayed slightly below its national counterpart from 1984 through 1992, but has been above the U.S. rate since 1993. For 1998, Minnesota's total rate was 7.7 per 100 FTE workers, while the U.S. rate was 6.7.

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<sup>5</sup>In the BLS survey, participating states have the option to include their public sectors. Because not all states choose this option, public-sector data are not available at the national level.

**Figure 1**  
BLS Survey Case Incidence, Minnesota, 1984-1998 [1]

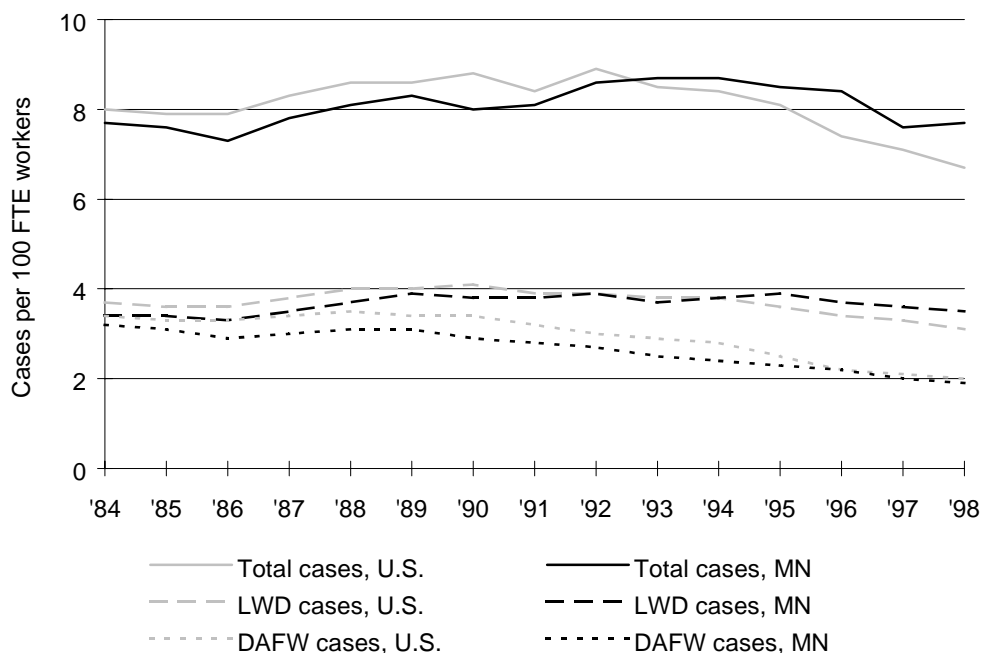


	Total Cases per 100 FTE Workers	Lost-Workday Cases						Cases Without Lost Workdays	
		Total Lost-Workday Cases		Days-Away-From-Work Cases		Cases With Restricted Work Activity Only		Rate per 100 FTE Workers	% of Total
		Rate per 100 FTE Workers	% of Total	Rate per 100 FTE Workers	% of Total	Rate per 100 FTE Workers	% of Total		
1984	7.6	3.3	44%	3.1	41%	0.2	3%	4.3	56%
1985	7.6	3.3	44%	3.1	41%	0.3	3%	4.2	56%
1986	7.3	3.2	44%	2.9	40%	0.3	4%	4.1	56%
1987	7.7	3.4	44%	3.0	39%	0.4	6%	4.3	56%
1988	8.0	3.6	45%	3.0	38%	0.6	7%	4.4	55%
1989	8.2	3.7	46%	3.0	37%	0.7	9%	4.4	54%
1990	7.9	3.7	46%	2.9	37%	0.8	10%	4.2	54%
1991	8.1	3.7	46%	2.7	34%	1.0	12%	4.4	54%
1992	8.5	3.7	44%	2.6	31%	1.1	13%	4.7	55%
1993	8.6	3.6	42%	2.5	29%	1.1	13%	5.0	58%
1994	8.6	3.7	43%	2.4	28%	1.3	15%	4.9	57%
1995	8.4	3.7	44%	2.3	27%	1.4	17%	4.7	56%
1996	8.3	3.5	42%	2.2	27%	1.3	16%	4.8	58%
1997	7.5	3.5	47%	2.0	27%	1.5	20%	4.0	53%
1998	7.5	3.4	45%	1.9	25%	1.5	20%	4.2	56%

1. Includes injuries and illnesses in the private sector and state and local government.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

**Figure 2**  
**BLS Survey Case Incidence**  
**for Minnesota and the United States, Private Sector, 1984-1998 [1]**



(Note: LWD cases = lost-workday cases; DAFW cases = days away-from-work cases.)

	Cases per 100 Full-Time-Equivalent Workers					
	Total Cases		Lost-Workday Cases		Days-Away-From-Work Cases	
	Minnesota	U.S.	Minnesota	U.S.	Minnesota	U.S.
1984	7.7	8.0	3.4	3.7	3.2	3.4
1985	7.6	7.9	3.4	3.6	3.1	3.3
1986	7.3	7.9	3.3	3.6	2.9	3.3
1987	7.8	8.3	3.5	3.8	3.0	3.4
1988	8.1	8.6	3.7	4.0	3.1	3.5
1989	8.3	8.6	3.9	4.0	3.1	3.4
1990	8.0	8.8	3.8	4.1	2.9	3.4
1991	8.1	8.4	3.8	3.9	2.8	3.2
1992	8.6	8.9	3.9	3.9	2.7	3.0
1993	8.7	8.5	3.7	3.8	2.5	2.9
1994	8.7	8.4	3.8	3.8	2.4	2.8
1995	8.5	8.1	3.9	3.6	2.3	2.5
1996	8.4	7.4	3.7	3.4	2.2	2.2
1997	7.6	7.1	3.6	3.3	2.0	2.1
1998	7.7	6.7	3.5	3.1	1.9	2.0

1. Includes injuries and illnesses.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

Similarly, Minnesota's LWD case rate was lower than the U.S. rate for 1984-1990, about the same as the U.S. rate for 1991-1994, and higher than the national rate beginning in 1995. Minnesota's LWD case rate for 1998 was 3.5, as opposed to 3.1 for the nation.

With DAFW cases, Minnesota had a lower rate than the U.S. through 1995, with virtually no difference for 1996-1998.

## Workers' Compensation Data for Minnesota

Figure 3 shows the estimated incidence of Minnesota workers' compensation paid claims per 100 FTE covered workers, divided into indemnity and medical-only claims, for 1984-1998. Since medical-only claims are not reported to DLI, the number of medical-only claims is estimated using the ratio of medical-only to indemnity claims from insurance data. This ratio is currently available only through 1997, and so medical-only and total claims are only given through that year.

From 1984 to 1998, the estimated incidence of total paid claims fell from 10.3 to 8.5 per 100 FTE covered workers. From 1984 to 1998, the incidence of indemnity claims fell from 2.89 to 1.66. Most of the decline in the indemnity claims rate was after 1991, when it stood at 2.57; the decrease from 1991 to 1998 was 35 percent. The rate of medical-only claims does not show a significant trend.<sup>6</sup>

Through 1991, indemnity claims made up a stable 27-28 percent of the total. After 1991, the relative number of indemnity claims fell steadily, reaching 20 percent in 1996 and 1997. This trend parallels the decreasing share of DAFW cases relative to the total in the BLS survey data.

What accounts for the decreasing share of indemnity claims relative to the total since 1991? Are injuries becoming less severe? Other possible explanations include more active medical treatment, better claims management, and more effective return-to-work programs. Another factor might be certain 1992 law changes, such as the authorization of managed care (to the extent that managed care returns injured workers to the job more quickly) and the substantial reduction of the minimum temporary total disability (TTD) benefit (which would reduce the incentive of lower-wage injured workers to claim TTD benefits).<sup>7</sup> However, the 1992 law changes would not have had a significant effect on these numbers until 1993, since the benefit provisions took effect for injuries occurring on or after October 1, 1992, and the certified managed care organizations became active in early 1993.

As indicated in the previous chapter, the workers' compensation data suggest higher injury and illness rates in Minnesota's workplaces than do the BLS survey data. In addition, while both data sources suggest a falling overall incidence rate since 1994, the BLS survey data suggest a rising rate over 1984-1994 while the workers' compensation data suggest the opposite. This is discussed in more detail in Appendix C.

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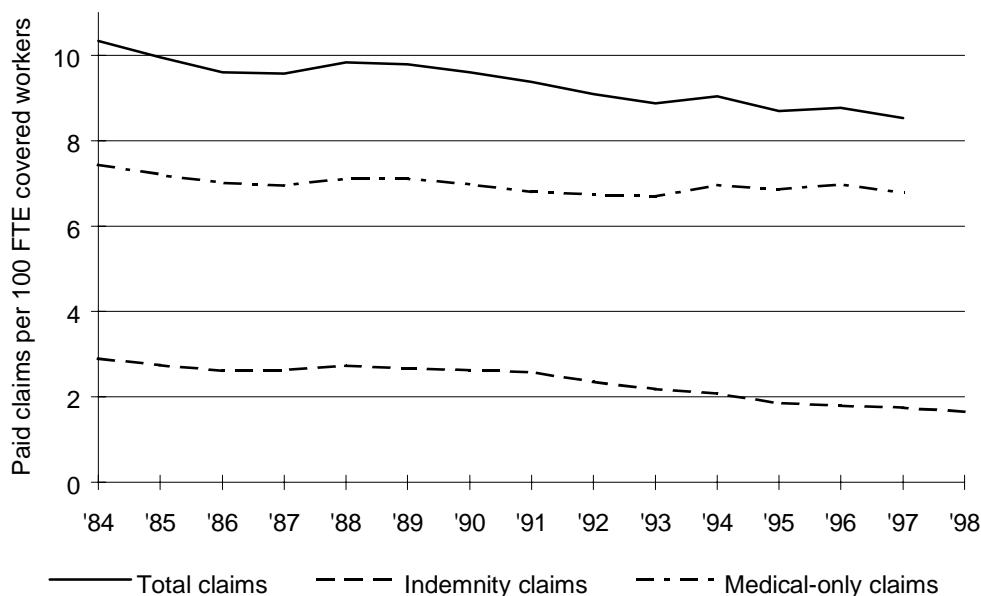
<sup>6</sup>In contrast with the indemnity claims rate, the medical-only and total claims rates are expressed with only one decimal digit because they are less accurate. See Appendix B for details.

All of the claims incidence rates are lower than in previous reports, because of a revision in the estimation of FTE workers' compensation covered employment. The reduction relative to previous reports is the same, proportionately, for all years, and so the trends are unaffected. See Appendix B for details.

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<sup>7</sup>Prior to the 1992 law change, the minimum TTD benefit was the lesser of 50 percent of the statewide average weekly wage (SAWW) or the worker's pre-injury wage, but no less than 20 percent of the SAWW. Under the 1992 law, the minimum is the lesser of 20 percent of the SAWW or the worker's pre-injury wage.

**Figure 3**  
**Incidence of Workers' Compensation**  
**Paid Claims, Minnesota, Injury-Years 1984-1998 [1]**



Injury Year	Total Paid Claims per 100 FTE Workers	Indemnity Claims		Medical-Only Claims	
		Rate per 100 FTE Workers	% of Total	Rate per 100 FTE Workers	% of Total
1984	10.3	2.89	28%	7.4	72%
1985	10.0	2.75	28%	7.2	72%
1986	9.6	2.61	27%	7.0	73%
1987	9.6	2.62	27%	6.9	73%
1988	9.8	2.72	28%	7.1	72%
1989	9.8	2.67	27%	7.1	73%
1990	9.6	2.62	27%	7.0	73%
1991	9.4	2.57	27%	6.8	73%
1992	9.1	2.35	26%	6.7	74%
1993	8.9	2.19	25%	6.7	75%
1994	9.0	2.08	23%	7.0	77%
1995	8.7	1.84	21%	6.9	79%
1996	8.8	1.80	20%	7.0	80%
1997 [2]	8.5	1.74	20%	6.8	80%
1998 [2]	[3]	1.66	[3]	[3]	[3]

1. Indemnity claims figures are from the DLI claims database. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Medical-only and total claims are estimated by applying a ratio from insurance data to the indemnity claims figure. Full-time-equivalent (FTE) covered employment is estimated from employment and hours data from other sources. Details in Appendix B.
2. Preliminary.
3. Not yet available.



# 3

## Incidence of Workplace Injuries and Illnesses by Industry and Establishment Size

This chapter presents data on the incidence of Minnesota's workplace injuries and illnesses by industry and by establishment size. Data are from the BLS survey and the DLI workers' compensation indemnity claims database. As will be seen, the indemnity claims data, which are developed to represent full claim maturity, are available for more detailed industries than are the state-level BLS data.<sup>8</sup>

### Incidence by Industry Division

#### BLS Total Cases and Lost-Workday Cases

Figure 4 shows the incidence of BLS total cases and LWD cases per 100 FTE workers by industry division,<sup>9</sup> averaged for 1996-1998. The three-year average is used to reduce the effects of year-to-year fluctuations attributable to sampling variation. Industries are in the private sector except as otherwise indicated. They are ranked by their total case rate. For each industry, the bars for the two rates are overlapping: both start at zero, but part of the bar for total cases is beneath the one for LWD cases.

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<sup>8</sup>The BLS data are available for more detailed industries for the U.S. than for the state. The national data are available from DLI Research and Statistics (651-297-4595) and at the BLS Occupational Safety and Health Statistics homepage, <http://stats.bls.gov/oshhome.htm>.

<sup>9</sup>"Industry division" is the most aggregated industry grouping in the Standard Industrial Classification (SIC), which is established by the U.S. Government and used for industry-based economic statistics in the United States.

The SIC uses a 4-digit hierarchical code in which each successive digit indicates a finer level of detail. Hence, industry data may be analyzed at the industry division level or at the 2-, 3-, or 4-digit level. The 2- and 3-digit categories are referred to as "major industry groups" and "industry groups," respectively.

Where total cases are concerned, the highest injury and illness rates were in state government construction (13.3 cases per year per 100 FTE workers); private sector construction (12.3); manufacturing (10.5); and agriculture, forestry, and fishing (10.3). The lowest rate was in finance, insurance, and real estate (1.9).

For LWD cases, the ranking is slightly different. The highest rates were in private sector construction (5.5); state government construction (5.4); and manufacturing 4.9.

#### BLS Lost-Workday Cases and Days-Away-From-Work Cases

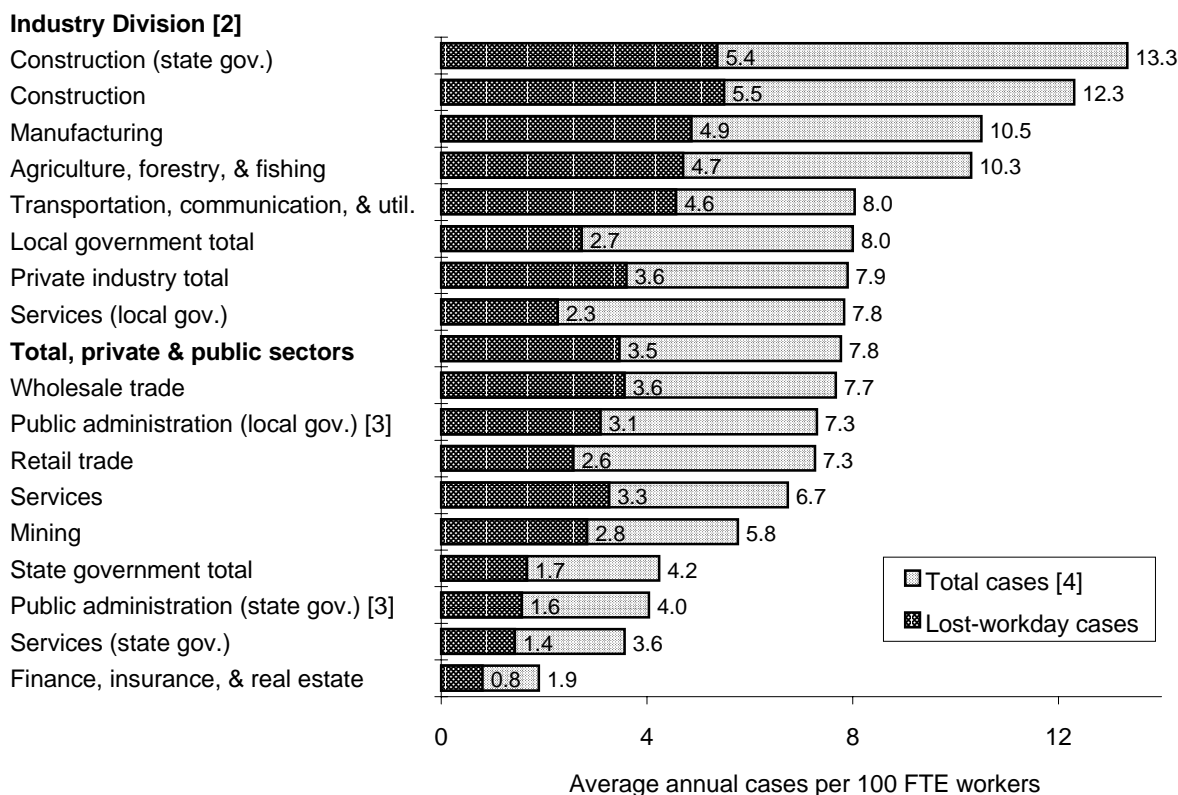
Figure 5 is similar to Figure 4, except that it shows the rates of LWD cases and DAFW cases, with the industry divisions ranked by their LWD case rates. As in Figure 4, the two bars for each industry are overlapping with both starting at zero. Thus, the portion of the LWD cases bar that extends beyond the DAFW cases bar represents restricted-work-activity-only (RWAO) cases.<sup>10</sup> For example, for private-sector construction, the RWAO case rate is 1.1 per year per 100 FTE workers (5.5 – 4.4).

Figure 5 shows that private-sector construction had the highest DAFW case rate (4.4 cases per year per 100 FTE workers), while three other industries — agriculture, forestry, and fishing; state-government construction; and transportation, communication, and utilities — had DAFW case rates from 3.0 to 3.2.

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<sup>10</sup>See chart and accompanying explanation of case types in previous chapter.

**Figure 4**  
**Incidence of Total Cases and Lost-Workday Cases (BLS Survey)**  
**by Industry Division, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry divisions are in the private sector unless otherwise noted. Only some industries within state and local government are shown separately (others do not have estimates available).
3. The public administration division is limited to public employees not classifiable under other industry divisions (e.g. construction, services).
4. The bar for total cases starts at zero and lies partly behind the bar for lost-workday cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

The figure also shows great variation in the composition of LWD cases with regard to DAFW and RWA cases. The proportion of LWD cases accounted for by DAFW cases ranges from 46 percent in manufacturing to 84 percent in state-government services. This causes a far different industry ranking with DAFW cases than with LWD cases. The explanation may involve industry differences in any of several factors, such as the nature and severity of injuries, claims administration, and return-to-work opportunities. Notably, the ratio of DAFW to LWD cases (Figure 5) varies

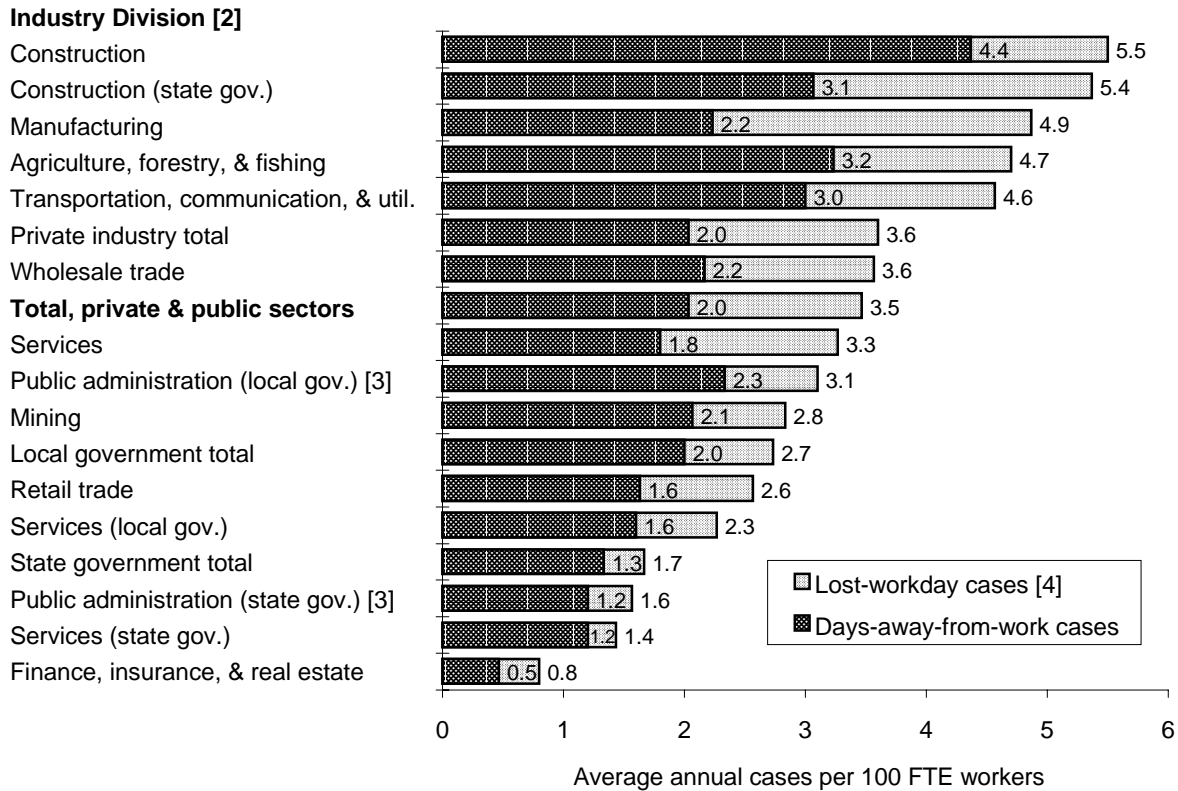
substantially more than does the ratio of LWD cases to total cases (Figure 4).<sup>11</sup>

### Indemnity Claims

Figure 6 shows the rate of workers' compensation paid indemnity claims by industry division, averaged for 1996-1998. Industries

<sup>11</sup>For the ratio of the LWD cases rate to the total case rate, the standard deviation across industry divisions is .063; for the ratio of the DAFW case rate to the LWD case rate, it is .104.

**Figure 5**  
**Incidence of Lost-Workday Cases and Days-Away-From-Work Cases (BLS Survey)**  
**by Industry Division, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry divisions are in the private sector unless otherwise noted. Only some industries within state and local government are shown separately (others do not have estimates available).
3. The public administration division is limited to public employees not classifiable under other industry divisions (e.g. construction, services).
4. The bar for lost-workday cases starts at zero and lies partly behind the bar for days-away-from-work cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

other than public administration include the private sector plus state and local government.

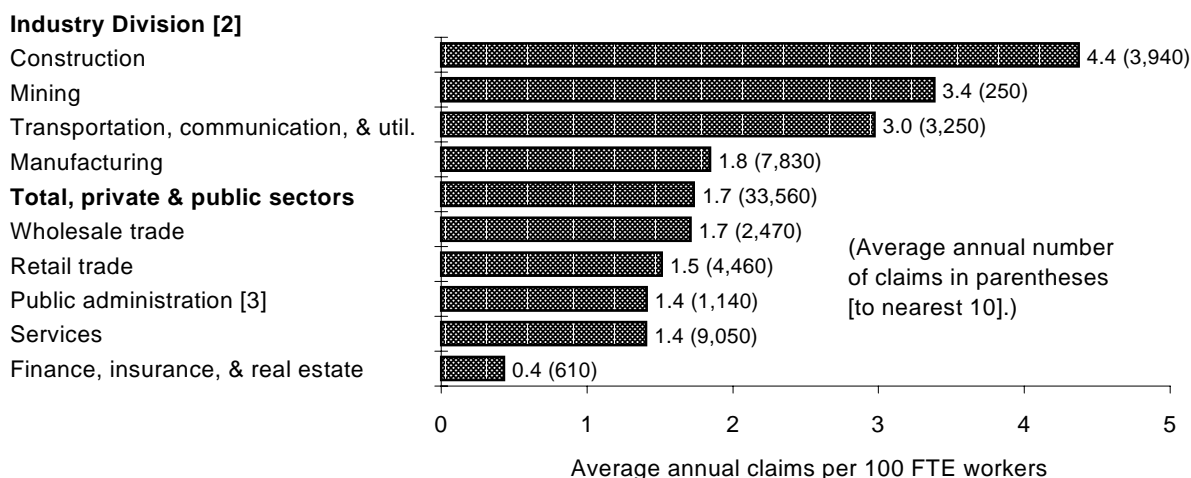
Construction had by far the highest rate of indemnity claims (4.4 per year per 100 FTE workers), followed by mining (3.4) and transportation, communication, and utilities (3.0). The highest *numbers* of indemnity claims were in services (9,050 per year) and manufacturing (7,830 per year).

The ranking of industries is different by indemnity claims incidence than by BLS case

incidence. Figures 5 and 6 show the differences in ranking by DAFW case rates and indemnity claim rates (DAFW cases are the closest BLS case type to indemnity claims with regard to severity level<sup>12</sup>). The most notable difference is that mining is second by indemnity claims incidence but about average by DAFW case incidence.

<sup>12</sup>DAFW cases have at least one day off the job after the day of injury, while indemnity cases usually involve more than three days off the job.

**Figure 6**  
**Incidence of Paid Indemnity Claims (Workers' Compensation)**  
**by Industry Division, Minnesota, 1996-1998 Average [1]**



1. Indemnity claims figures are from the DLI claims database. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment for the incidence rates is estimated from employment and hours data from other sources. Details in Appendix B.
2. Industry divisions other than public administration include the private sector plus state and local government. The public administration division includes only those state and local government employees that cannot be classified under another industry division. Because of statistical issues, an indemnity claims incidence rate was not computed for the agriculture, forestry, and fishing division (see Appendix B).
3. The public administration division is limited to public employees not classifiable under other industry divisions (e.g. construction, services).

The different rankings by DAFW cases and indemnity claims are not unexpected given a combination of two factors: (1) indemnity claims generally represent a higher severity threshold than DAFW cases (see Appendix A) and (2) industries probably vary in factors such as nature and severity of injuries, claims administration, and return-to-work opportunities which affect the amount of time off the job after an injury. However, some of the difference in rankings may be explained by reporting issues in the two systems (see Appendix C), to the extent that these issues affect some industries more than others.

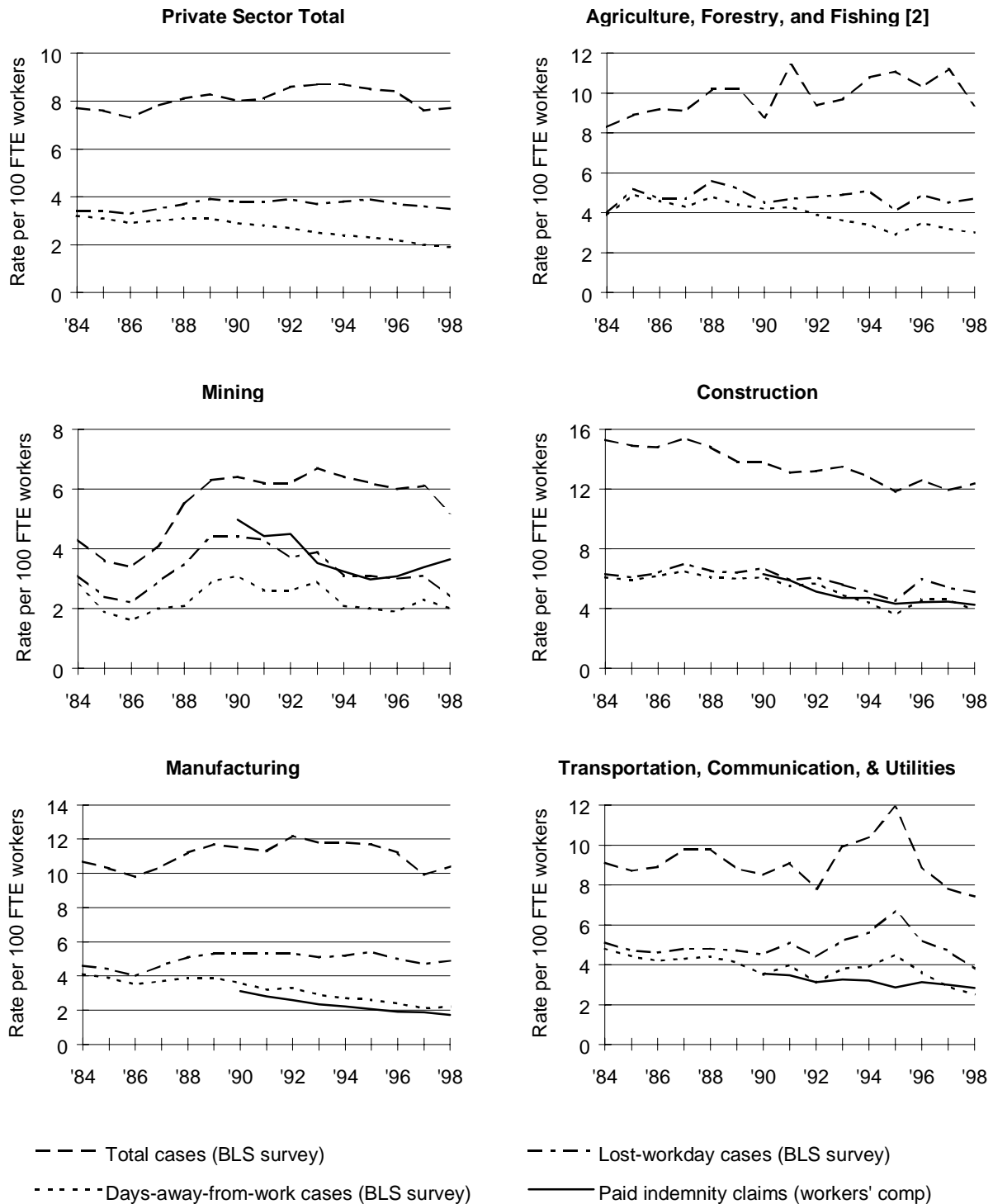
## Incidence Trends by Industry Division

Figure 7 shows the trends in Minnesota's rates of BLS total cases, LWD cases, DAFW cases,

and paid indemnity claims by industry division for 1984-1998. The numbers behind these trends are in Appendix D. The trends from the BLS survey should be viewed with caution, because some of the annual fluctuations, especially in the smaller sectors, may represent sampling variation rather than actual changes in case incidence.

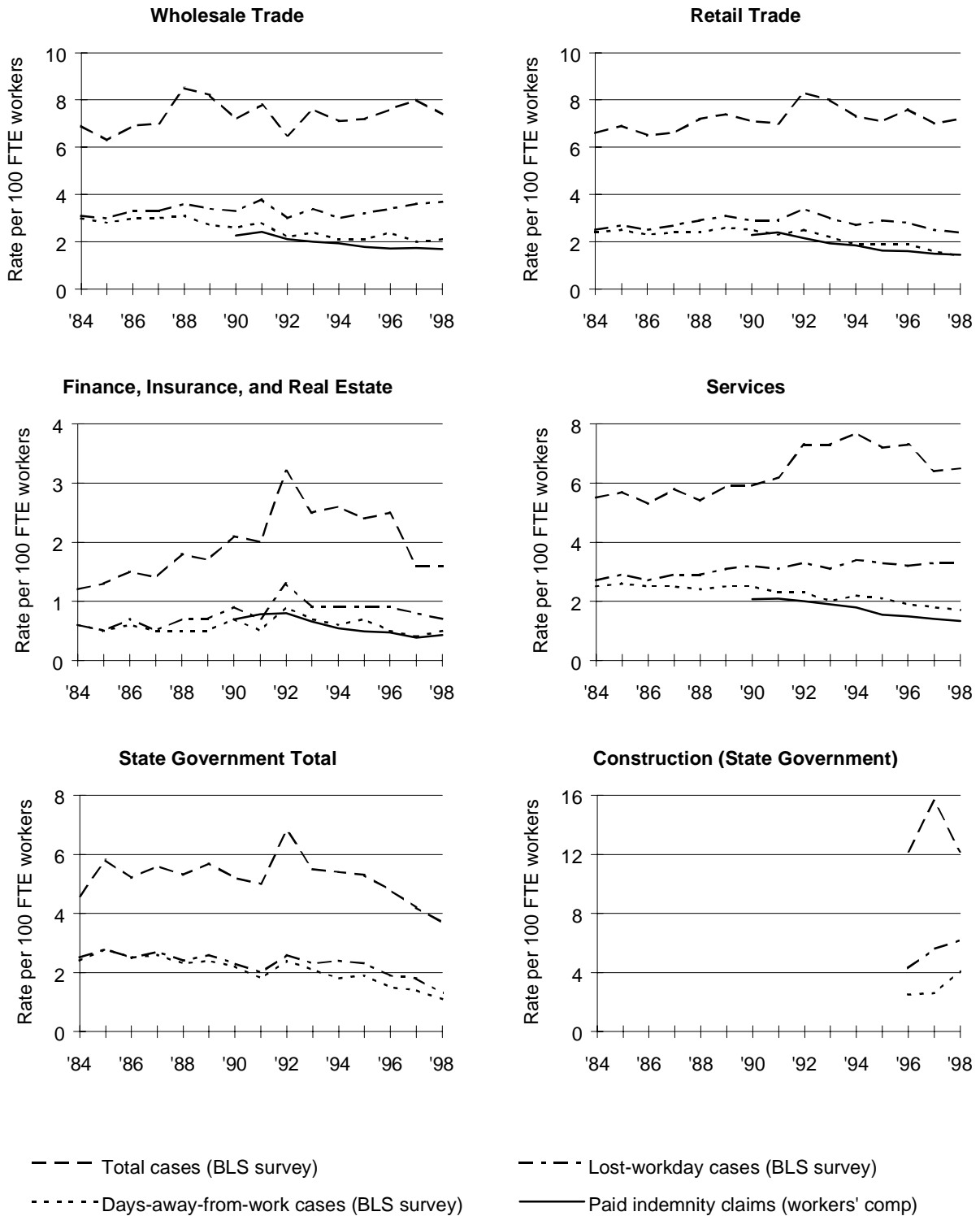
Some sectors — such as agriculture, forestry, and fishing; services; and retail trade — have noticeable upward trends in their BLS total case rates. Some have no clear trend. One industry division — construction — has a noticeable downward trend in its total case rate, from an average of 15.0 for 1984-1986 to 12.3 for 1996-1998, an 18 percent decline. This is part of a national trend. For the U.S., the total case rate in construction fell from 14.2 in 1990 to 8.8 in 1998.

**Figure 7**  
**Incidence of BLS Survey Cases and Paid Indemnity Claims**  
**by Industry Division, Minnesota, 1984-1998 [1]**



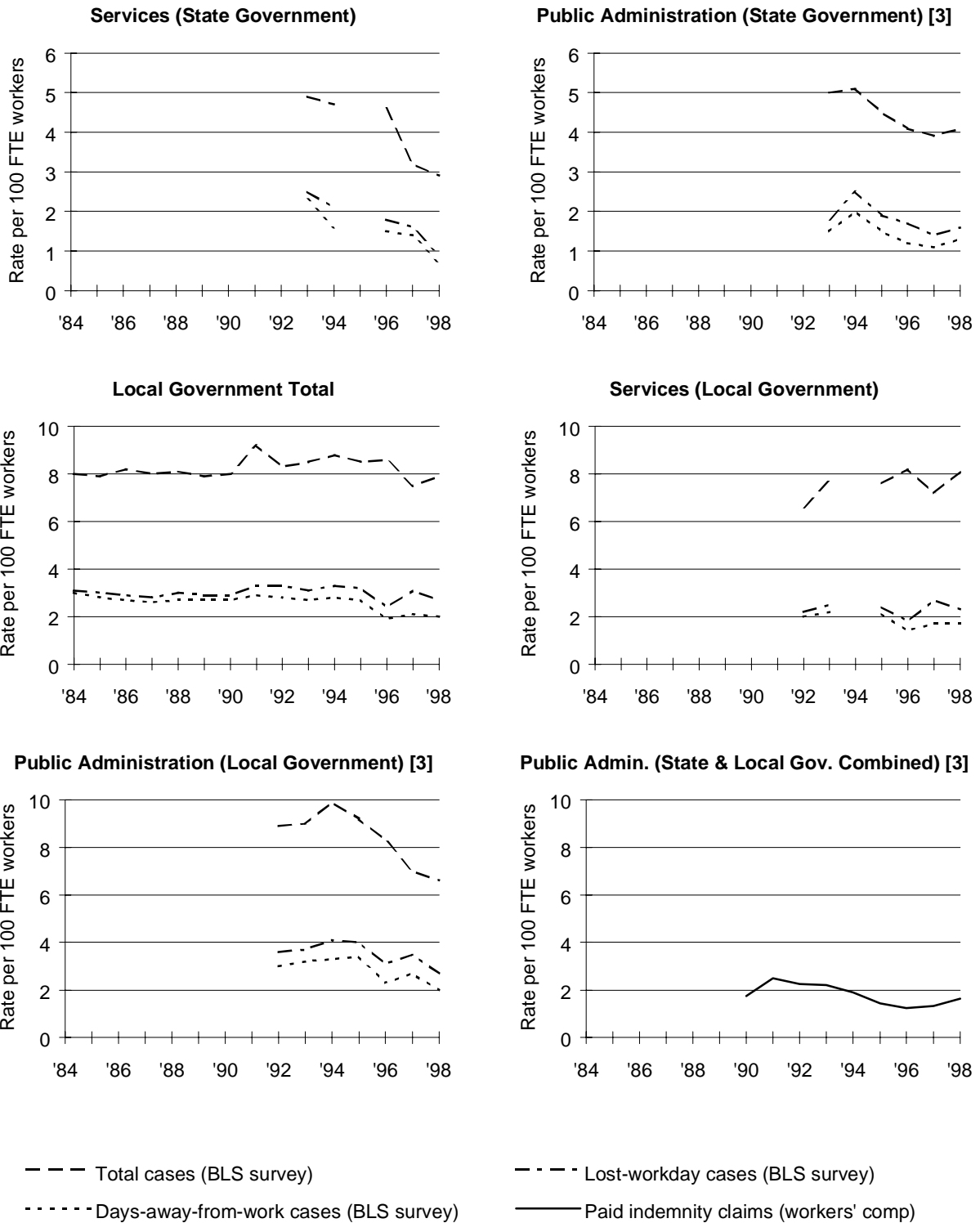
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Figure 7  
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Figure 7  
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## Notes to Figure 7:

1. The numerical values of the incidence rates are shown in Appendix D. Incidence rates of BLS survey cases are from the Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics), and include both injuries and illnesses. Indemnity claims figures are from the DLI claims database and are presented by injury year. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment for the indemnity claims incidence rates is estimated from employment and hours data from other sources. Details in Appendix B. For industries not designated as being within state or local government, the BLS data include the private sector only, while the indemnity claims data include the private sector plus state and local government. Absence of data indicates unavailability.
2. An indemnity claims incidence rate was not computed for the agriculture, forestry, and fishing division because of statistical issues (see Appendix B).
3. The public administration division is limited to public employees not classifiable under other industry divisions (e.g. construction, services).

Figure 7 also shows that as with all industries combined (Figure 1), DAFW case incidence is falling in most industry divisions, both absolutely and relative to LWD and total cases. In addition, the downward trend in the indemnity claims rate since 1990 (Figure 3) has been experienced, to varying degrees, in all industry divisions for which it is computed. In most industries, the indemnity claims rate trend is somewhat below the DAFW case rate trend, which is expected because indemnity claims generally represent a higher severity threshold than do DAFW cases (see Appendix A).

Notably, the indemnity claims rate trends for industry divisions are generally smoother than the trends in BLS case incidence. This is probably because the BLS case rates are subject to sampling errors.

## Incidence by Major Industry Group

### BLS Total Cases and Lost-Workday Cases

Figure 8 shows the incidence of BLS total cases and LWD cases per 100 FTE workers by major industry group (2-digit SIC<sup>13</sup>), averaged for 1996-1998. As with industry divisions, three-year averages are used in order to reduce the effects of random year-to-year fluctuations. The industry division to which each major group belongs is indicated by the code in the left column (see Appendix E for key). The

industries are ranked by total case rate, with only the top 35 shown. Except as otherwise indicated, each industry category represents only the private sector within that industry. For each industry, the bars for the two rates are overlapping: both start at zero, but the bar for total cases is partly hidden beneath the one for LWD cases.

Appendix F contains the estimated rates and numbers of Minnesota's workplace injuries and illnesses from the BLS survey for all industries with available data.

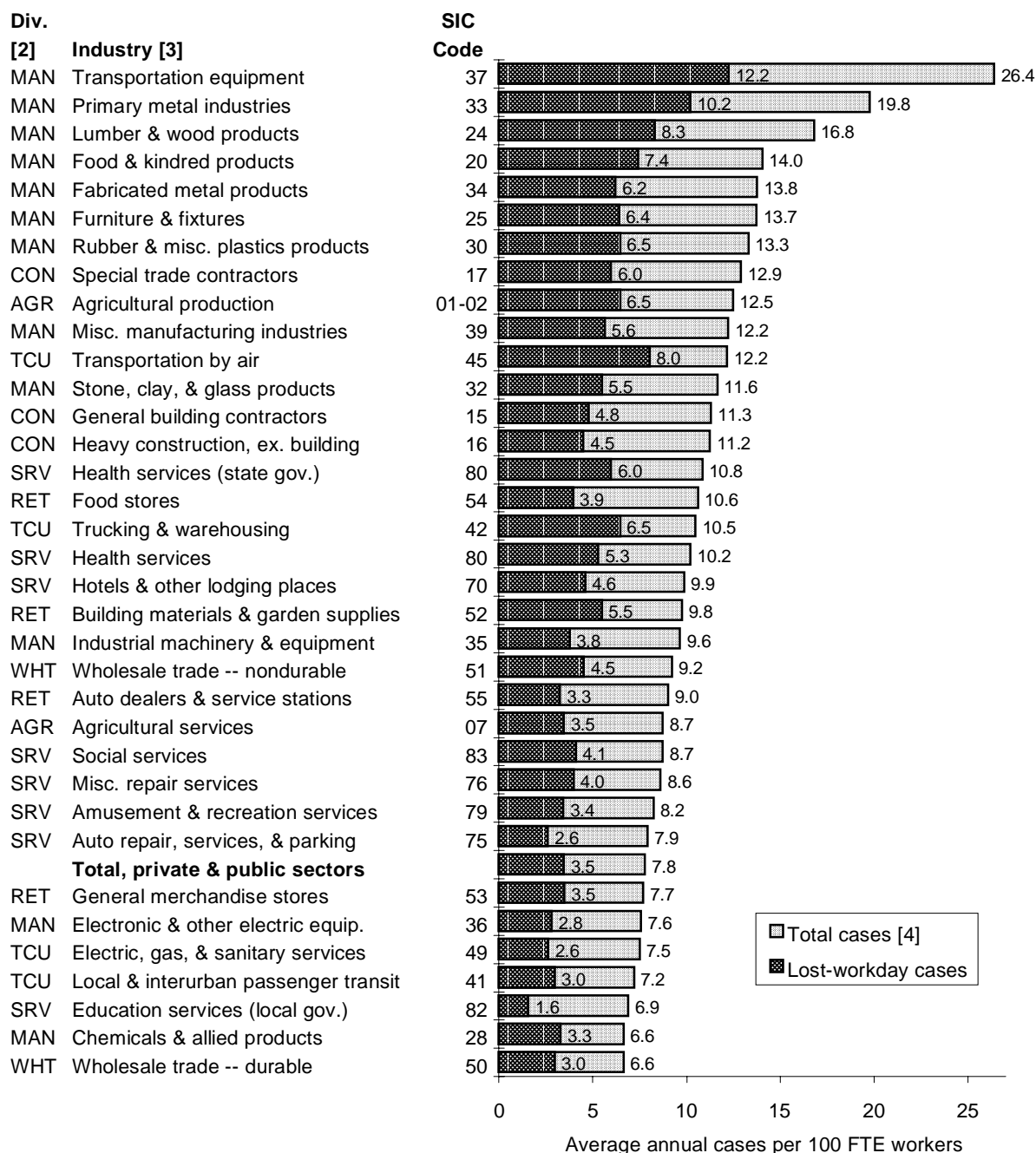
Of the ten major industry groups with the highest total case rates, eight were in manufacturing, one in construction, and one in agriculture, forestry, and fishing. Three industries had total case rates substantially higher than the others: transportation equipment manufacturing (26.4 per year per 100 FTE workers), primary metal industries (19.8), and lumber and wood products manufacturing (16.8).

These three industries also had the highest rates of LWD cases — 12.2 for transportation equipment manufacturing, 10.2 for primary metal industries, and 8.3 for lumber and wood products. However, the overall ranking of industries by case incidence differs when the LWD case rate is used rather than the total case rate. For example, transportation by air, with

<sup>13</sup>See note 9.



**Figure 8**  
**Incidence of Total Cases and Lost-Workday Cases (BLS Survey)**  
**by Major Industry Group, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry division. See Appendix E for key.
3. Industries are in the private sector except where otherwise noted. Only the top 35 by total case incidence rate are shown. Industries without at least two years of data are excluded.
4. The bar for total cases starts at zero and lies partly behind the bar for lost-workday cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

the 11th-highest total rate (12.2), had the 4th-highest LWD case rate (8.0).

### BLS Lost-Workday Cases and Days-Away-From-Work Cases

Figure 9 is similar to Figure 8 except that it shows the rates of LWD cases and DAFW cases, with the major industry groups ranked by their LWD case rates. The portion of the LWD case bar that extends beyond the DAFW case bar represents the rate of RWAO cases.

Figure 9 shows that the highest DAFW case rates were in transportation equipment manufacturing (5.7 cases per year per 100 FTE workers), trucking and warehousing (4.9), and state-government health services (4.9). The latter two of these are several places down from the top of the ranking by LWD case incidence, because of a high degree of variation in the ratio of the DAFW case rate to the LWD case rate. This ratio ranges from 35 percent in food and kindred products manufacturing to 85 percent in heavy construction (except building). As with industry divisions, this may reflect any of several factors, including nature and severity of injuries, claims administration, and return-to-work opportunities. Again, DAFW cases vary much more as a proportion of LWD cases than do LWD cases as a proportion of total cases.<sup>14</sup>

### Indemnity Claims

Figure 10 shows the incidence of paid indemnity claims by major industry group, averaged for 1996-1998. The industries are ranked by their indemnity claims rate, with the top 35 shown. Appendix G contains the rates and numbers of Minnesota's paid indemnity claims for both broad and detailed industry classifications.

Of the ten major groups with the highest indemnity claims rates, three were in construction; two in transportation, communication, and public utilities; two in manufacturing; and one each in mining, services, and agriculture, forestry, and fishing. The highest indemnity claims rates were in trucking and warehousing (5.3 per year per 100 FTE workers), general building contractors (4.6), special trade contractors (4.4), and local and interurban passenger transit (4.4). The largest numbers of indemnity claims were in health services (3,380 per year), special trade contractors (2,330), business services (not shown in the figure) (1,700), and trucking and warehousing (1,540).

As with industry divisions, the ranking of major industry groups by indemnity claims rates is different than the ranking by BLS survey case rates. Again, this is to be expected because indemnity claims generally represent a higher severity level than DAFW cases, although reporting issues (see Appendix C) may be part of the explanation if they affect some industries more than others.

## Incidence by Industry Group

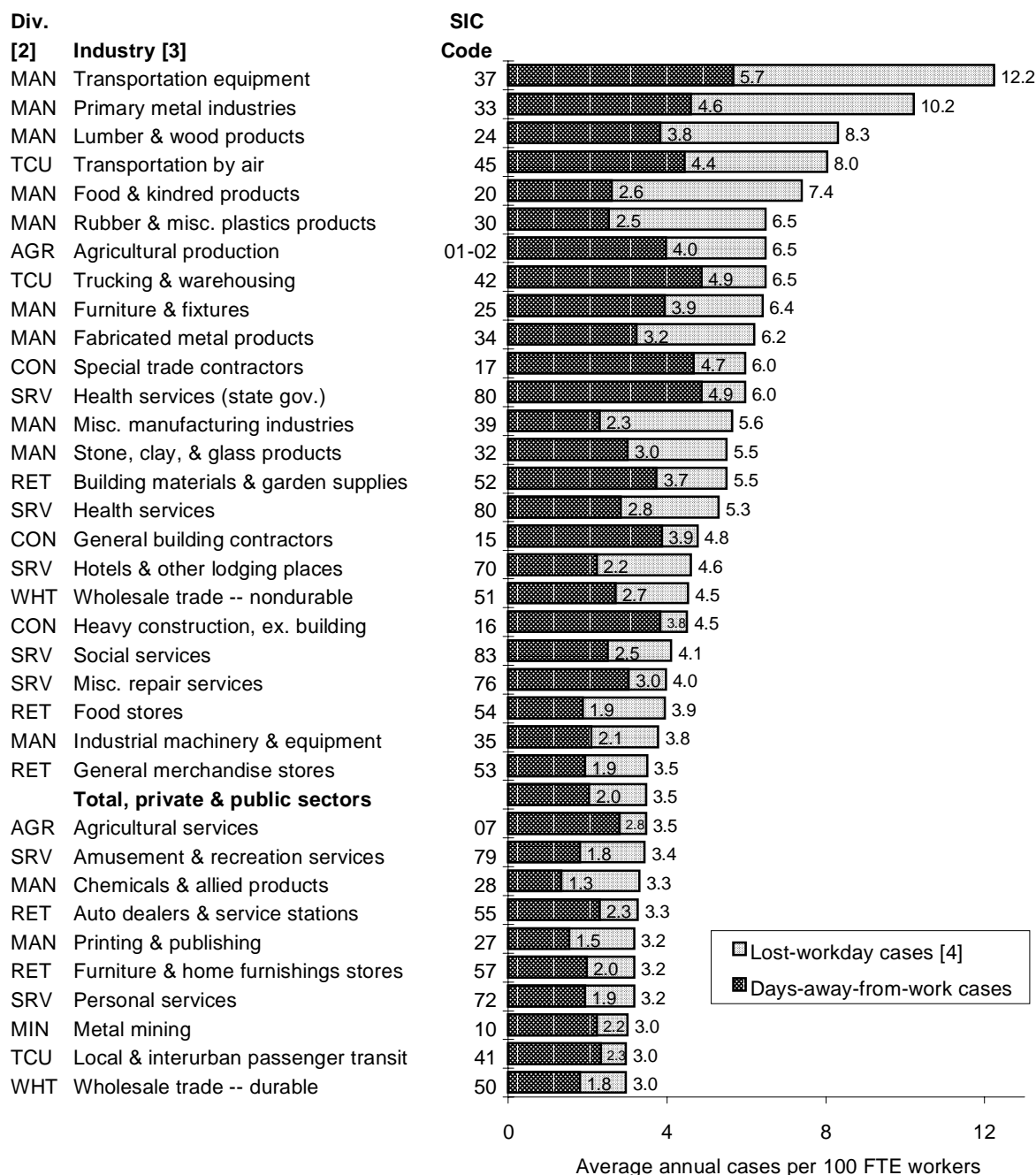
### BLS Total Cases and Lost-Workday Cases

Figure 11 advances to the next level of industry detail. It shows the incidence of BLS total cases and LWD cases by 3-digit industry group for Minnesota, averaged for 1996-1998. The industries are again ranked by their total case rate, with the top 35 shown. Available data for all industries appear in Appendix F.

Motor vehicles and equipment manufacturing and meat products manufacturing had by far the highest total case rates, 36.3 and 26.2 per year per 100 FTE workers. Among the 20 industries with the highest total case rates, nine were in manufacturing, five in construction, four in health services (all involving direct patient care in hospitals or residential settings), and one each in retail trade and wholesale trade.

<sup>14</sup>For the ratio of the LWD cases rate to the total case rate, the standard deviation across major industry groups is .081; for the ratio of the DAFW case rate to the LWD case rate, it is .138.

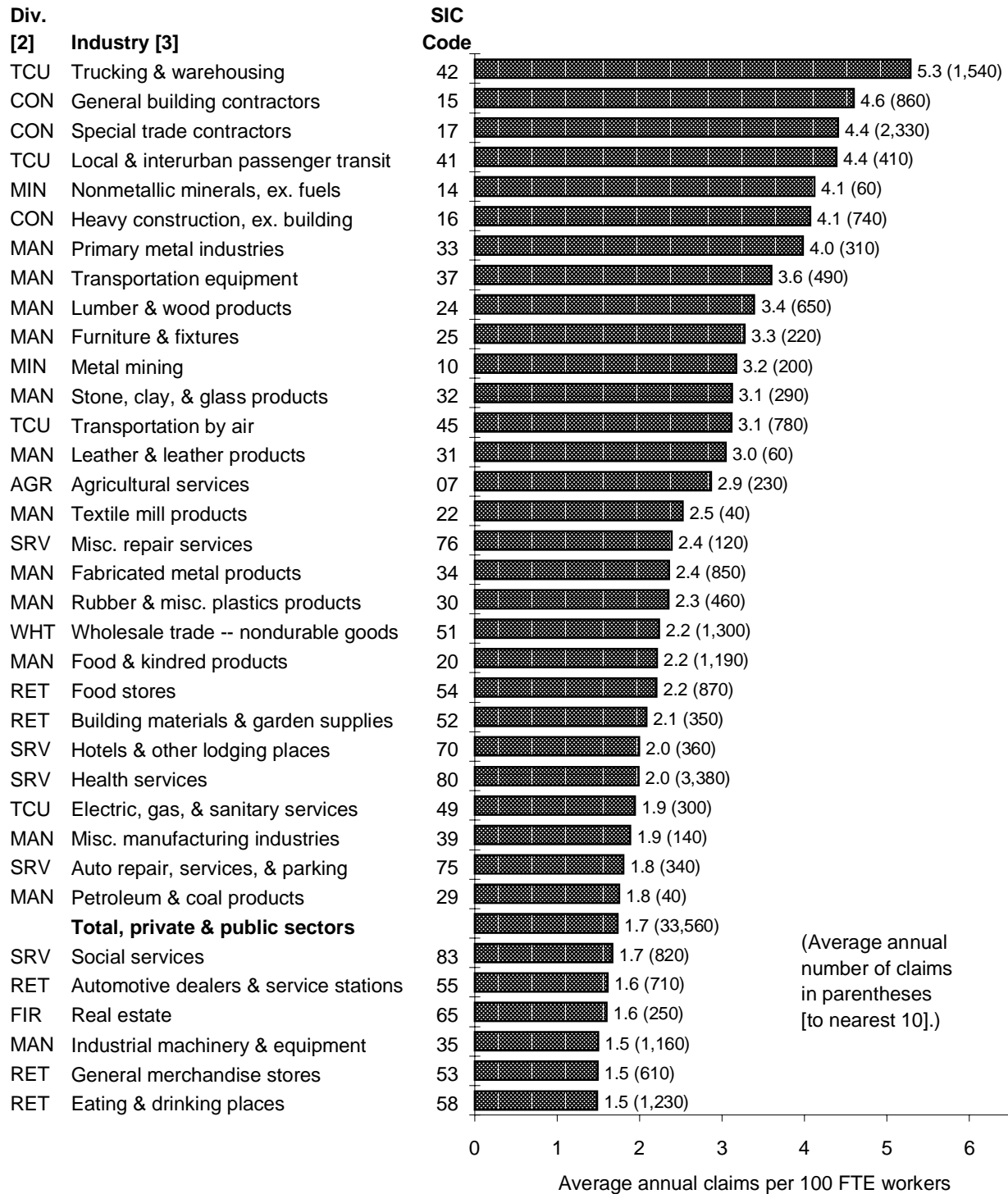
**Figure 9**  
**Incidence of Lost-Workday Cases and Days-Away-From-Work Cases (BLS Survey)**  
**by Major Industry Group, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry division. See Appendix E for key.
3. Industries are in the private sector except where otherwise noted. Only the top 35 by lost-workday case incidence rate are shown. Industries without at least two years of data are excluded.
4. The bar for lost-workday cases starts at zero and lies partly behind the bar for days-away-from-work cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

**Figure 10**  
**Incidence of Paid Indemnity Claims (Workers' Compensation)**  
**by Major Industry Group, Minnesota, Injury-Years 1996-1998 Average [1]**



(Notes on next page.)

## Notes to Figure 10:

1. Indemnity claims figures are from the DLI claims database. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment for the incidence rates is estimated from employment and hours data from other sources. Details in Appendix B.
2. Industry division. See Appendix E for key.
3. Industries include the private sector plus state and local government. Only the top 35 industries by indemnity claims incidence rate are shown. Because of statistical issues, indemnity claims incidence rates were not computed for agricultural production, domestic services, or any industry groups within the public administration division (see Appendix B).

As at the 2-digit level, the ranking of industries by LWD case incidence is somewhat different than by total case incidence. The top four LWD case rates were in motor vehicles and equipment manufacturing (15.6), meat products manufacturing (13.3), nursing and personal care facilities (11.5), millwork, plywood, and structural members manufacturing (9.6).

### BLS Lost-Workday Cases and Days-Away-From-Work Cases

Figure 12 is similar to Figure 11, except that it shows the rates of LWD cases and DAFW cases, with the 3-digit industry groups ranked by their LWD case rates. The portion of the LWD case bar that extends beyond the DAFW case bar represents RWAO cases.

Among 3-digit industry groups, the highest DAFW case rates were in motor vehicles and equipment manufacturing (7.5 cases per year per 100 FTE workers); masonry, stonework, and plastering (6.7); and nursing and personal care facilities (805).

As at the 2-digit industry level, the ratio of DAFW cases to LWD cases varies widely across industries, from 19 percent in meat products manufacturing to 92 percent in masonry, stonework, and plastering. Again, DAFW cases vary more as a proportion of LWD cases than do LWD cases as a proportion of total cases.<sup>15</sup>

The ratio of DAFW cases to LWD cases in meat products manufacturing — 19 percent — is notable because it is far below the range for other industries. Among 3-digit industries, the next lowest ratio of DAFW to LWD cases is in medical instruments and supplies manufacturing, 35 percent. In other words, RWAO cases constitute 81 percent of all LWD cases in meat products manufacturing but only 65 percent in the next highest industry. Apparently, among LWD cases (those where the injury has any effect on work activity), the proportion where the worker stays on the job (RWAO cases) is far higher in meat products manufacturing than in any other industry with survey data available.<sup>16</sup>

### Indemnity Claims

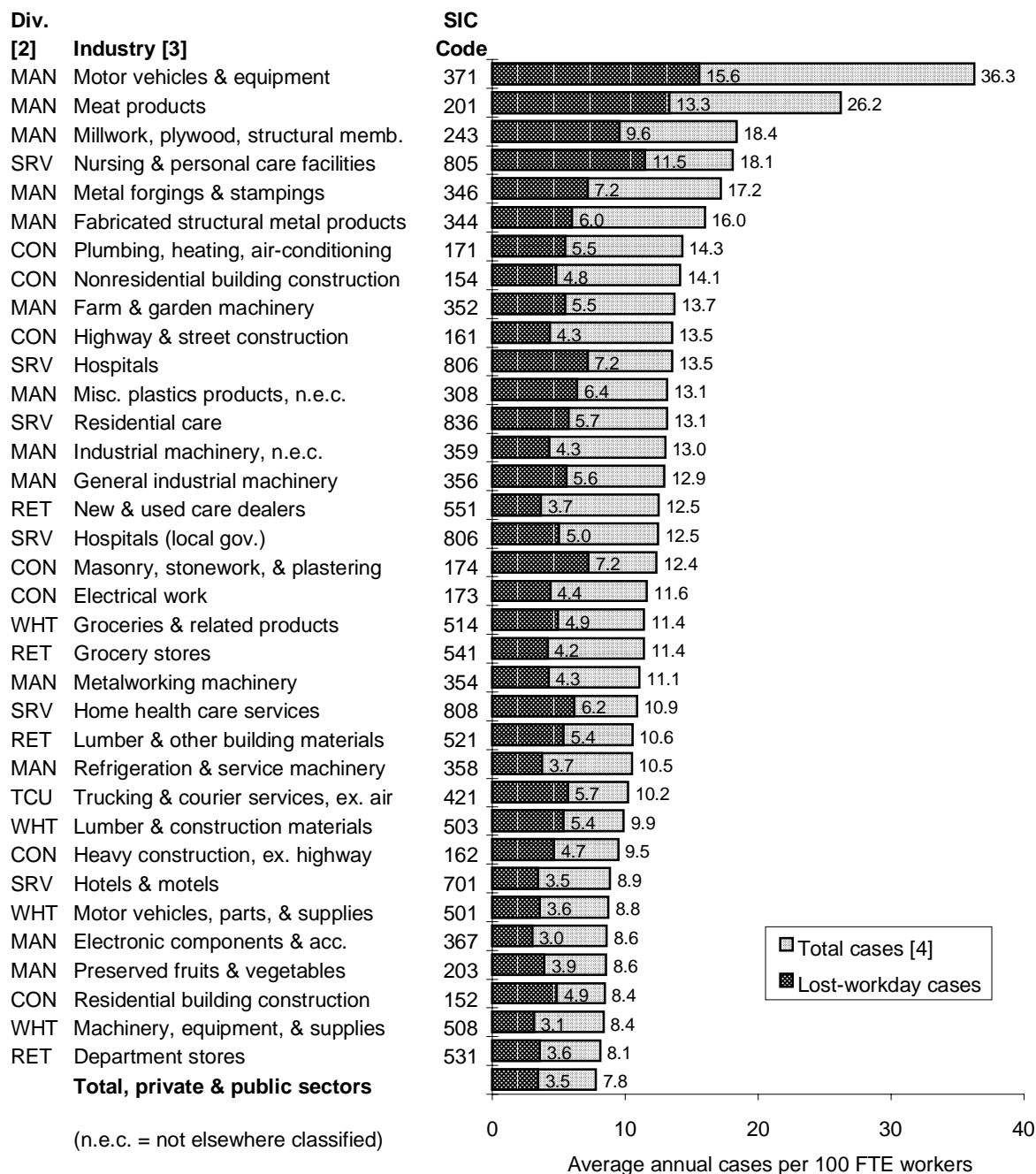
Figure 13 shows the incidence of paid indemnity claims by 3-digit industry group, averaged for 1996-1998. The industries are ranked by their indemnity claims rate, with the top 35 shown. Indemnity claims data for all industries appear in Appendix G.

Among 3-digit industries with the highest indemnity claims rates, four were in manufacturing; three in transportation, communication, and utilities; and three in construction. The three highest indemnity

<sup>15</sup>For the ratio of the LWD cases rate to the total case rate, the standard deviation across 3-digit industry groups is .085; for the ratio of the DAFW case rate to the LWD case rate, it is .149.

<sup>16</sup>Notably, in poultry slaughtering and processing — a 4-digit industry within meat products manufacturing — DAFW and RWAO cases constitute 12 and 88 percent of LWD cases, respectively.

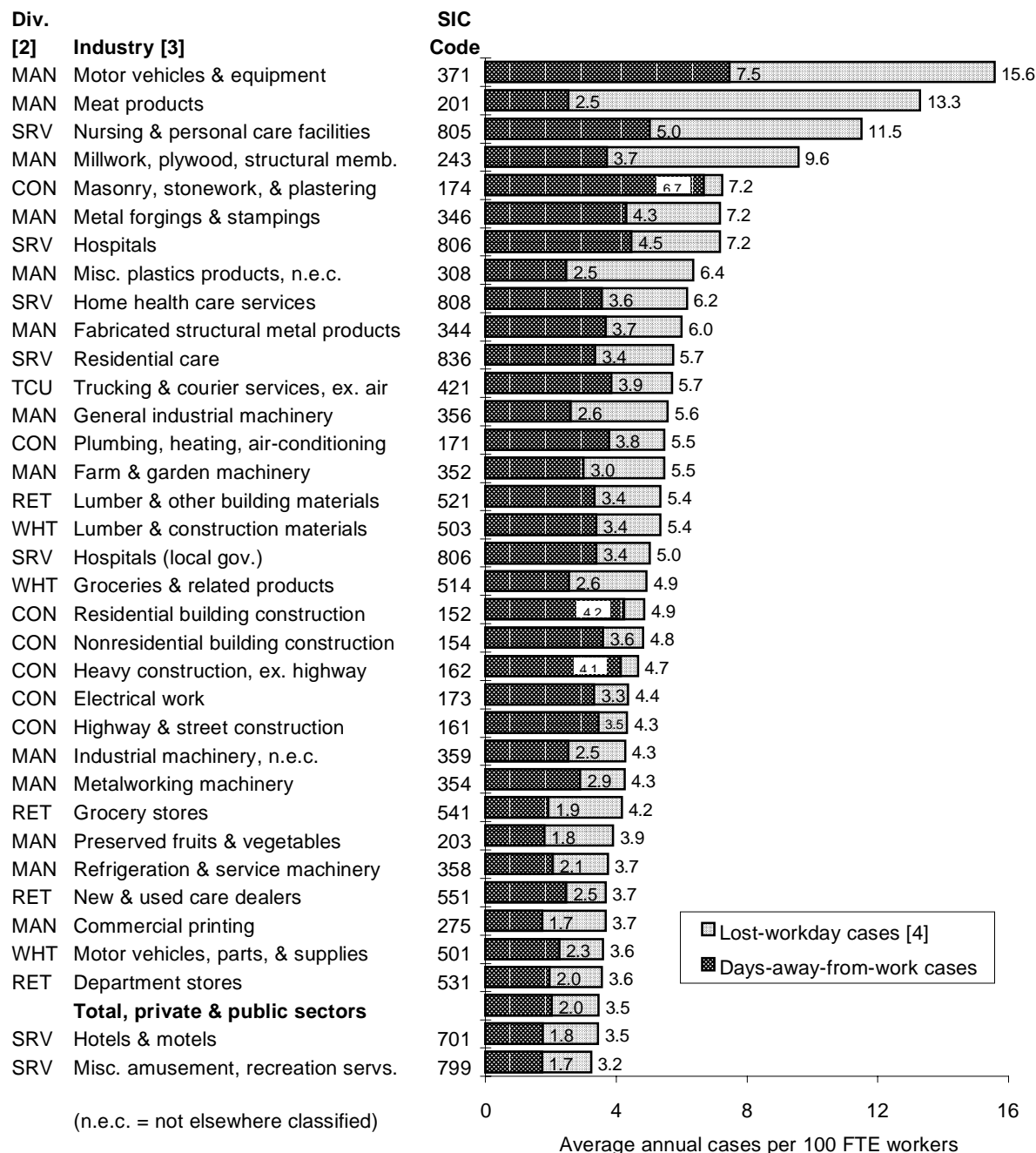
**Figure 11**  
**Incidence of Total Cases and Lost-Workday Cases (BLS Survey)**  
**by 3-Digit Industry Group, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry division. See Appendix E for key.
3. Industries are in the private sector except where otherwise noted. Only the top 35 by total case incidence rate are shown. Industries without at least two years of data are excluded.
4. The bar for total cases starts at zero and lies partly behind the bar for lost-workday cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

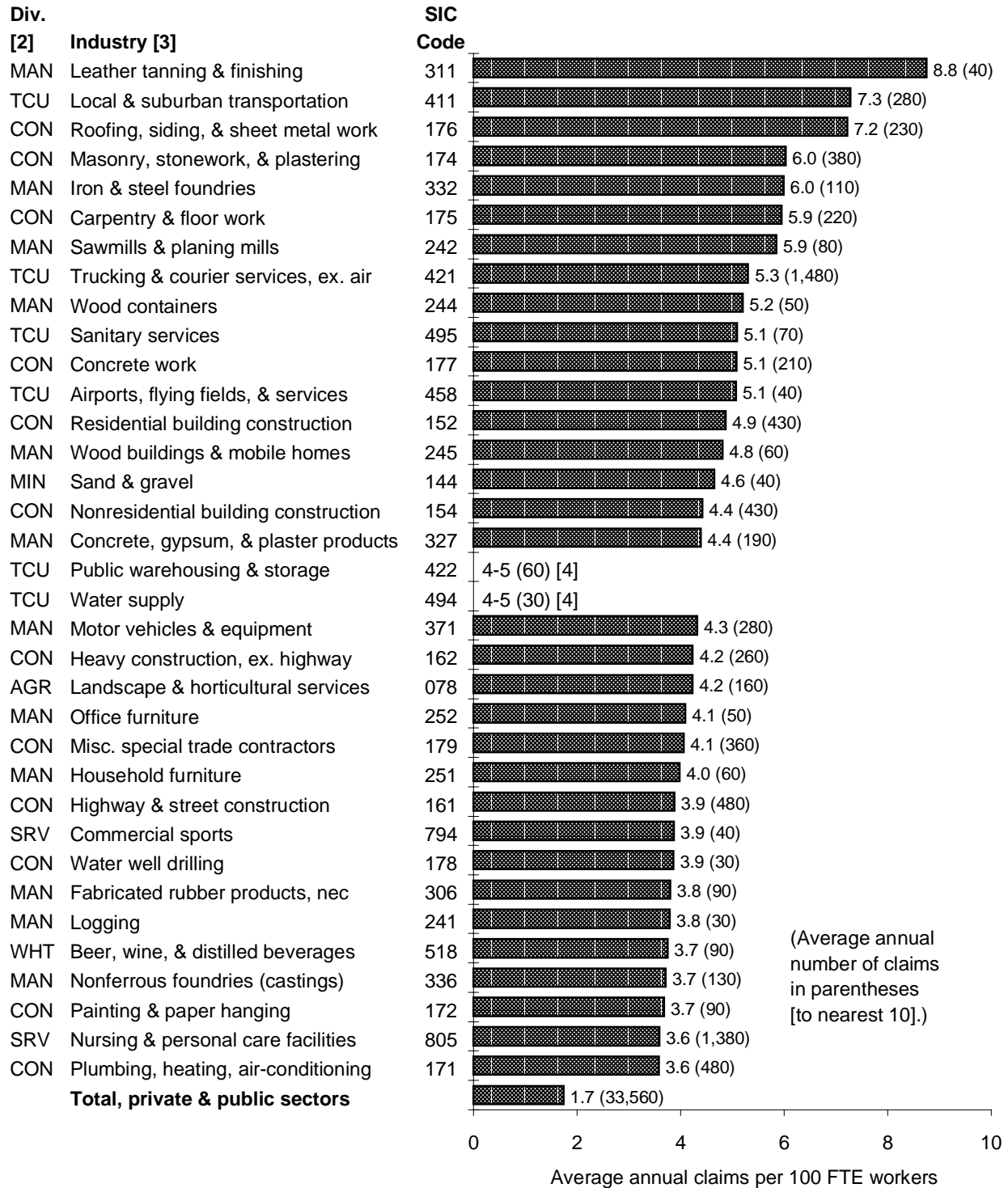
**Figure 12**  
**Incidence of Lost-Workday Cases and Days-Away-From-Work Cases (BLS Survey)**  
**by 3-Digit Industry Group, Minnesota, 1996-1998 Average [1]**



1. Includes injuries and illnesses.
2. Industry division. See Appendix E for key.
3. Industries are in the private sector except where otherwise noted. Only the top 35 by lost-workday case incidence rate are shown. Industries without at least two years of data are excluded.
4. The bar for lost-workday cases starts at zero and lies partly behind the bar for days-away-from-work cases.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

**Figure 13**  
**Incidence of Paid Indemnity Claims (Workers' Compensation)**  
**by 3-Digit Industry Group, Minnesota, Injury-Years 1996-1998 Average [1]**



(Notes on next page.)



## Notes to Figure 13:

1. Indemnity claims figures are from the DLI claims database. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment for the indemnity claims incidence rates is estimated from employment and hours data from other sources. Details in Appendix B.
2. Industry division. See Appendix E for key.
3. Industries include the private sector plus state and local government. Only the top 35 industries by indemnity claims incidence rate are shown. Industries with fewer than 25 indemnity claims per year for 1996-1998 are excluded. Because of statistical issues, incidence rates were not computed for industry groups within agricultural production or within the public administration division, or for domestic services (see Appendix B).
4. To protect confidentiality of employment data, incidence rate is expressed as a range (e.g. 4-5 for SIC 422). Industry is arbitrarily ranked mid-way among industries within this range.

claims rates were in leather tanning and finishing (8.8); local and suburban transportation (7.3); and roofing, siding, and sheet metal work (7.2). The indemnity claims rates of the top 35 industries range from twice to five times the statewide rate of 1.7. The largest numbers of indemnity claims were in hospitals (not shown in the figure) (1,500 per year); trucking and courier services, except air (1,480); and nursing and personal care facilities (1,380).

Notably, BLS incidence rate estimates exist for only nine of the 35 industries shown, and for only two of the top 10. This is because sample sizes in the BLS survey are too small to produce reliable estimates for the industries concerned. The use of the indemnity claims rate enables far more industries to enter into the ranking.

## Incidence by Detailed Industry

### BLS Survey Estimates

Because of sample-size limitations, the BLS survey does not provide sufficient data for ranking Minnesota industries by injury and illness rates at the detailed industry level (4-digit SIC). In the first place, the BLS survey produces estimates for 4-digit industries only within manufacturing, even at the national level. For Minnesota, BLS survey estimates were

available for only three 4-digit industries for 1996-1998.<sup>17</sup>

### Indemnity Claims

Figure 14 shows the average annual rate of paid indemnity claims per 100 FTE covered workers for detailed (4-digit) industries for 1996-1998. The 35 industries with the highest indemnity claims rates are shown.

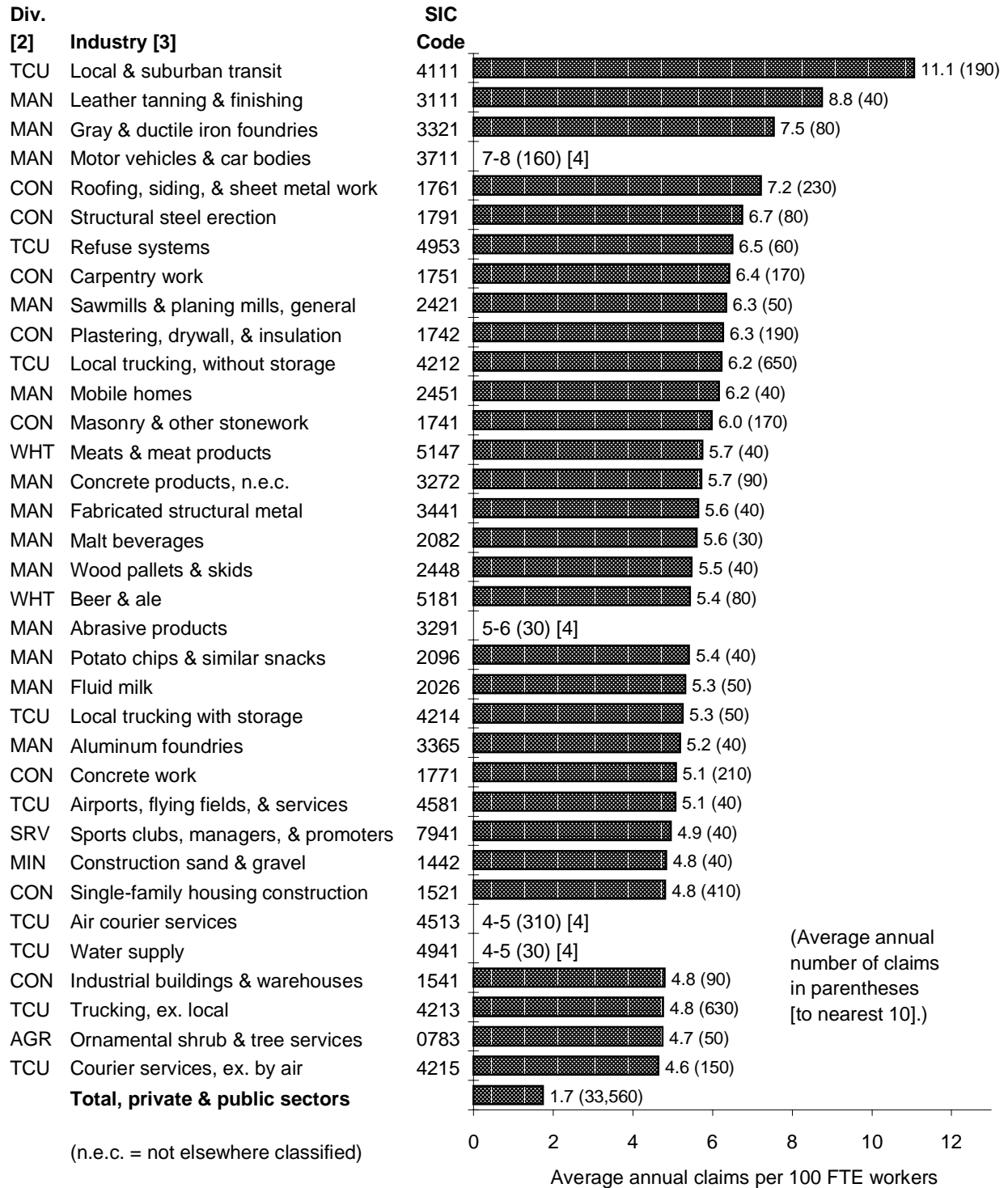
Of the ten industries with the highest rates of indemnity claims, four were in manufacturing, four were in construction, and two in transportation, communication, and utilities. The five highest rates were in local and suburban transit (11.1 per year per 100 FTE workers), leather tanning and finishing (8.8), gray and ductile iron foundries (7.5), motor vehicles and car bodies manufacturing (7-8), and roofing, siding, and sheet metal work (7.2). Among the top 35 industries at the 4-digit level, the paid indemnity claims rate ranged from 2-2/3 to 6 times the statewide average of 1.7.

### Incidence by Establishment Size

The incidence of workplace injuries and illnesses also varies by establishment size. Figure 15 shows the incidence of total cases, LWD cases, and DAFW cases by establishment size for Minnesota private industry, averaged

<sup>17</sup>For statistical reliability reasons, DLI Research and Statistics only counts industries with at least two years of survey estimates.

**Figure 14**  
**Incidence of Paid Indemnity Claims (Workers' Compensation)**  
**by Detailed Industry, Minnesota, Injury-Years 1996-1998 Average [1]**



(Notes on next page.)

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Notes to Figure 14:

1. Indemnity claims figures are from the DLI claims data base. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment for the indemnity claims incidence rates is estimated from employment and hours data from other sources. Details in Appendix B.
  2. Industry division. See Appendix E for key.
  3. Industries include the private sector plus state and local government. Only the top 35 industries by indemnity claims incidence rate are shown. Industries with fewer than 25 indemnity claims per year for 1996-1998 are excluded. Because of statistical issues, incidence rates were not computed for agricultural production, for industries within the public administration division, or for the following SICs: 5963 (door-to-door sales), 6411 (insurance agents), 6531 (real estate agents), 7993 (coin-operated amusement devices), 7999 (amusement and recreation services, nec), 8111 (domestic services), and 8661 (religious organizations) (see Appendix B).
  4. To protect confidentiality of employment data, incidence rate is expressed as a range (e.g. 7-8 for SIC 3711). Industry is arbitrarily ranked mid-way among industries within this range.
- 

for 1996-1998. The data are from the BLS survey.

For the private sector overall, the rates of all three case types were lowest for the smallest establishments (1-10 employees), highest for mid-size establishments (50-249 employees), and intermediate for the largest establishments (1,000 or more employees). The total case rate was 3.4 per year per 100 FTE workers for establishments of 1-10 employees, 10.4 for the 50-249 size class, and 7.4 for establishments of 1,000 or more. For DAFW cases, the rates were 1.3 for the smallest establishments, 2.5 for the middle group, and 1.8 for the largest.

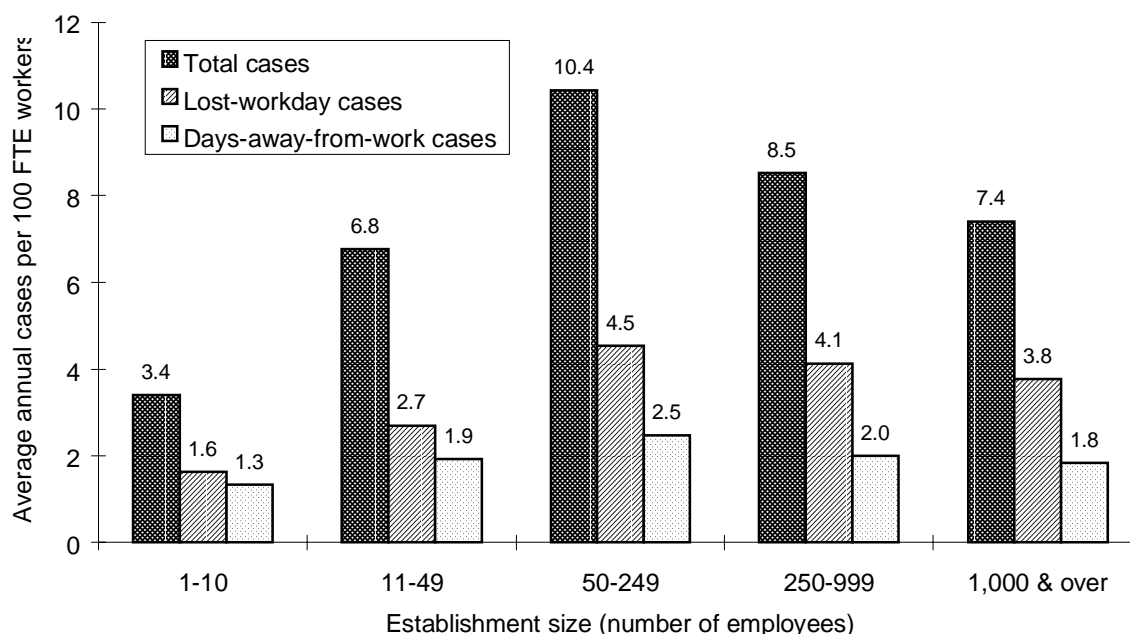
Figure 15 also shows the rates of DAFW cases by establishment size for industry divisions.

Some cells are blank because the numbers do not meet BLS publication standards. In all industry divisions with data shown, the smallest establishments (1-10 employees) have lower incidence rates than do the mid-size ones. In some industries — manufacturing, construction, and retail trade — the largest establishments (1,000 or more workers) also tend to have lower rates than the mid-size ones, but in others — transportation, communication, and utilities and services — the opposite is true. In services, this is at least partly attributable to relatively high incidence rates in hospitals, where a majority of employees are in the largest establishment size class.<sup>18</sup>

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<sup>18</sup>Shown by unpublished data from the BLS survey.

**Figure 15**  
**Incidence of BLS Survey Cases by Establishment Size**  
**for Private Industry, Minnesota, 1996-1998 Average [1]**



Case Type and Industry Division	Average Annual Cases per 100 Full-Time-Equivalent Workers by Establishment Size (Number of Employees) [2]					
	All Sizes	1-10	11-49	50-249	250-999	1,000+
Total cases	7.9	3.4	6.8	10.4	8.5	7.4
Lost-workday cases	3.6	1.6	2.7	4.5	4.1	3.8
Days-away-from-work cases	2.0	1.3	1.9	2.5	2.0	1.8
<i>DAFW cases by industry division:</i>						
Agriculture, forestry, & fishing	3.4	2.3	3.7			
Mining	2.1	0.9	1.8		2.0	
Construction	4.4	3.6	5.1	4.4	3.3	
Manufacturing	2.2	1.1	3.1	2.9	2.0	1.4
Transportation, communication, & util.	3.0		2.8	3.0	2.3	4.1
Wholesale trade	2.2	0.7	2.6	2.6		
Retail trade	1.6	1.4	1.2	2.1	1.9	0.7
Finance, insurance, & real estate	0.5		0.5	0.5	0.3	0.5
Services	1.8	0.9	1.1	2.4	2.0	2.5

1. Includes injuries and illnesses.

2. Only data meeting BLS publication standards are used. Cells without at least two years of data are blank.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

# 4

## Characteristics and Causes of Injuries and Illnesses

This chapter presents information from the BLS survey on the characteristics and causes of Minnesota's workplace injuries and illnesses. Characteristics include the nature of injury or illness and the part of body affected; causes consist of the event or exposure leading to the injury or illness and the source of injury or illness — the object, substance, person, or environmental condition that directly produced or inflicted it.

### Characteristics

#### Nature of Injury or Illness

Figure 16 shows the nature of injury or illness for Minnesota's DAFW cases, averaged for 1996-1998. Traumatic injuries and disorders accounted for 89 percent of all DAFW cases. Half of these (46 percent of the total) were sprains, strains, and tears of muscles, tendons, and joints. The next most common types of traumatic injuries and disorders were open wounds (8 percent); surface wounds and bruises (8 percent); fractures and dislocations (7 percent); burns (2 percent); and multiple traumatic injuries and disorders (4 percent). Also significant was back and other pain, combining two categories under "other traumatic injuries and disorders" (8 percent).

Most of the remaining cases (10 percent of the total) were systemic diseases and disorders. These included musculoskeletal system diseases and disorders (3 percent) (including tendinitis, 1 percent); nervous system and sense organs diseases (3 percent) (including carpal tunnel syndrome, 2 percent); and digestive system diseases and disorders (2 percent) (primarily hernias).

#### Part of Body

As shown in Figure 17, the most common body part affected in DAFW cases for 1996-1998 was the trunk (42 percent of the total). A majority of these cases (30 percent of the total) involved the back. Somewhat less than half of the back cases (12 percent of the total) did not specify the region of the back affected. Most of the remaining back cases (15 percent of the total) indicated the lumbar, or lower-back, region. Second most common among trunk areas were the shoulders (5 percent).

Upper extremities were involved in 21 percent of DAFW cases, most commonly the fingers (8 percent of total), wrists (5 percent), and hands (except fingers) (4 percent). Lower extremities accounted for 19 percent of DAFW cases, most often the knees (7 percent), ankles (4 percent), and feet (except toes) (3 percent). Another 6 percent of DAFW cases involved the head, most often the eyes (3 percent); 2 percent involved the neck and throat; 9 percent involved multiple body parts.

### Causes

#### Event or Exposure

Figure 18 shows the types of events and exposures leading to DAFW cases for 1996-1998. Slightly more than half of DAFW cases (52 percent) were caused by bodily reaction and exertion. This took the form of overexertion (36 percent of total), most frequently in lifting (17 percent); bodily reaction (e.g. slips, trips, bending, reaching) (11 percent); and repetitive motion (5 percent). The next most frequent cause was contact with objects and equipment (23 percent); this included being struck by an object (12 percent of total), struck against an

**Figure 16**  
**Nature of Injury or Illness**  
**for Days-Away-From-Work Cases, Minnesota, 1996-1998 Average**

Nature of Injury or Illness	Percent- age of Cases [1]	Nature of Injury or Illness	Percent- age of Cases [1]
<b>Traumatic injuries &amp; disorders</b>	<b>89.2%</b>	Other traumatic injuries & disorders	11.3%
		Nonspecified injuries & disorders	10.9
Traumatic injuries to muscles, tendons, joints, etc.	46.5	Back pain, hurt back	3.8
Strains, sprains, & tears	46.4	Soreness, pain, hurt, except back	3.8
		Crushing injuries	0.9
Open wounds	8.3	Multiple nonspec. injuries & disorders	0.4
Cuts & lacerations	5.6	Nonspec. injuries & disorders, n.e.c.	2.0
Punctures, except bites	1.5	Electrocutions, electric shocks	0.2
Amputations	0.8	Other poisonings & toxic effects	0.1
Amputations, fingertip	0.3		
		<b>Systemic diseases &amp; disorders</b>	<b>9.7</b>
Surface wounds & bruises	8.3	Musculoskeletal system diseases & disorders	3.0
Bruises & contusions	6.0	Rheumatism, except the back	1.6
Foreign bodies (superf. splinters, chips)	1.5	Tendinitis	0.9
Abrasions & scratches	0.7	Dorsopathies	1.3
Traumatic injuries to bones, nerves, & spinal cord	6.8	Nervous system & sense organs diseases	3.4
Fractures	5.7	Disorders of peripheral nervous system	2.8
Dislocations	1.1	Carpal tunnel syndrome	2.1
		Disorders of the eye, adnexa, vision	0.5
Burns	1.9	Digestive system diseases & disorders	2.3
Heat burns, scalds	1.1	Hernia	2.3
Chemical burns	0.6		
Intracranial injuries	0.4	Disorders of skin & subcutaneous tissue	0.5
Concussions	0.3		
		Respiratory system diseases	0.3
Multiple traumatic injuries & disorders	4.3		
Sprains & bruises	1.3	<b>Symptoms, signs, &amp; ill-defined conditions</b>	<b>0.8</b>
Fractures & other injuries	1.3		
Cuts, abrasions, & bruises	1.0	<b>Infectious &amp; parasitic diseases</b>	<b>0.0</b>

1. Percentages are relative to the number of classifiable cases. Nonclassifiable cases were 8.0% of the total.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics). Figures computed from published data by DLI Research and Statistics.

object (5 percent), and caught in or compressed by equipment or objects (4 percent).

Fifteen percent of DAFW cases resulted from falls, primarily falls on same level (9 percent of the total) and to a lower level (5 percent). Five percent of DAFW cases were caused by

exposure to harmful substances or environments, primarily exposure to caustic or allergenic substances and contact with temperature extremes. Transportation incidents were responsible for 3 percent of DAFW cases, and assaults and violent acts, 1.4 percent.

**Figure 17**  
**Part of Body Affected by Injury or Illness**  
**for Days-Away-From-Work Cases, Minnesota, 1996-1998 Average**

Part of Body	Percent- age of Cases [1]	Part of Body	Percent- age of Cases [1]
<b>Trunk</b>	<b>41.9%</b>	<b>Lower extremities</b>	<b>18.7%</b>
Back, including spine, spinal cord	29.9	Leg(s)	9.2
Lumbar region	15.2	Knee(s)	6.7
Thoracic region	1.7	Lower leg(s)	0.8
Coccygeal region	0.1	Thigh(s)	0.3
Multiple back regions	0.8	Leg(s), unspecified	1.4
Back, unspecified	12.1		
		Ankle(s)	4.3
Shoulder	5.2	Foot(feet), except toe(s)	3.2
		Toe(s), toenail(s)	1.2
Abdomen	2.6	Multiple lower extremities locations	0.7
Internal location of diseases & disorders	2.3		
Abdomen, except internal location of diseases & disorders	0.3	<b>Head</b>	<b>5.7</b>
		Face	4.1
Chest	1.6	Eye(s)	3.1
		Nose, nasal cavity	0.3
Pelvic region	1.5	Mouth	0.1
Hip(s)	0.6	Tooth (teeth)	0.1
Groin	0.6	Forehead	0.1
		Multiple face locations	0.2
Multiple trunk locations	0.9		
		Cranial region	0.4
<b>Upper extremities</b>	<b>21.4</b>	Brain	0.3
Finger(s), fingernail(s)	7.6		
Wrist(s)	4.9	Ear(s)	0.1
		Head, unspecified	1.0
Arm(s)	4.0		
Elbow(s)	1.4	<b>Neck, including throat</b>	<b>2.1</b>
Forearm(s)	0.6		
Upper arm(s)	0.3	<b>Multiple body parts [2]</b>	<b>9.2</b>
Arm(s), unspecified	1.4		
		<b>Body systems [3]</b>	<b>1.2</b>
Hand(s), except finger(s)	3.8		
Multiple upper extremities locations	0.9		

1. Percentages are relative to the number of classifiable cases. Nonclassifiable cases were 5.3% of the total.
2. Injuries and illnesses involving multiple body parts are counted in this category only.
3. This category applies when the functioning of an entire body system (e.g. circulatory system) is affected without injury to a particular body part.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics). Figures computed from published data by DLI Research and Statistics.

**Figure 18**  
**Event or Exposure Leading to Injury or Illness**  
**for Days-Away-From-Work Cases, Minnesota, 1996-1998 Average**

Event or Exposure	Percent- age of Cases [1]	Event or Exposure	Percent- age of Cases [1]
<b>Bodily reaction &amp; exertion</b>	<b>52.3%</b>	Fall to lower level	4.7%
Overexertion	36.4	Fall down stairs or steps	1.0
Overexertion in lifting	17.1	Fall from nonmoving vehicle	0.8
Overexertion in pulling or pushing objects	4.2	Fall from ladder	0.8
Overexertion in holding, carrying, turning or welding objects	1.3	Fall from floor, dock, or ground level	0.2
		Fall from roof	0.2
		Fall from scaffold, staging	0.1
Bodily reaction	11.0		
Slip, trip, loss of balance--without fall	3.0	Jump to lower level	0.2
Bending, climbing, reaching, & twisting	2.9		
Walking--without other incident	0.4	<b>Exposure to harmful substances or environments</b>	<b>4.2</b>
Standing	0.1	Exposure to caustic or allergenic subst.	2.3
Sitting	0.1	Contact with skin or other exposed tissue	1.0
		Inhalation of substance	0.5
Repetitive motion	4.8		
Repetitive use of tools	1.0	Contact with temperature extremes	1.3
Typing or keyentry	0.9	Contact with hot objects or substances	1.1
Repetitive placing, grasping, or moving of objects, ex. tools	0.4		
		Contact with electric current	0.3
<b>Contact with objects &amp; equipment</b>	<b>23.4</b>		
Struck by object	11.7	Exposure to radiation	0.3
Struck by falling object	4.5	Exposure to welding light	0.3
Struck by swinging or slipping object	1.9		
Struck by flying object	0.7	<b>Transportation incidents</b>	<b>3.5</b>
		Highway incident	2.5
Struck against object	5.2	Collision between vehicles, mobile equip.	1.6
Caught in or compressed by equipment or objects	3.7	Pedestrian, nonpassenger struck by vehicle	0.5
Caught in running equip. or machinery	1.2	Pedestrian struck by vehicle or mobile equipment in non-roadway area	0.3
Compressed by rolling or sliding objects	0.6		
		Nonhighway incident except rail, air, water	0.3
Rubbed or abraded by friction or pressure	1.9	Noncollision incident	0.2
Rubbed, abraded by foreign matter in eye	1.6		
		<b>Assaults &amp; violent acts</b>	<b>1.7</b>
Rubbed, abraded, or jarred by vibration	0.4	Assaults and violent acts by person(s)	1.5
-- by vibration of vehicle or motor equip.	0.3	Assaults by animals	0.1
<b>Falls</b>	<b>14.6</b>	<b>Fires &amp; explosions</b>	<b>0.2</b>
Fall on same level	9.3		
Fall to floor, walkway, or other surface	7.5		
Fall onto or against objects	1.1		

1. Percentages are relative to the number of classifiable cases. Nonclassifiable cases were 9.1% of the total.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics). Figures computed from published data by DLI Research and Statistics.



### Source of Injury or Illness

As shown in Figure 19, the most frequent source for Minnesota's 1996-1998 DAFW cases was persons, plants, animals, and minerals (26 percent), most commonly the injured or ill worker in cases involving bodily motion or position (16 percent of total) or a health care patient or facility resident (7 percent).

Other sources were structures and surfaces (usually floors, walkways, and ground surfaces) (17 percent); containers (14 percent); parts and materials (12 percent); vehicles (8 percent); machinery (7 percent); tools, instruments, and equipment (7 percent); furniture and fixtures (4 percent); and chemicals and chemical products (2 percent).

**Figure 19**  
**Source of Injury or Illness**  
**for Days-Away-From-Work Cases, Minnesota, 1996-1998 Average**

Source	Percent- age of Cases [1]	Source	Percent- age of Cases [1]
<b>Persons, plants, animals &amp; minerals</b>	<b>25.9%</b>	<b>Vehicles</b>	<b>8.1%</b>
Person--injured or ill worker	15.9	Highway vehicle, motorized	5.2
Bodily motion or position of injured or ill worker	15.7	Truck	2.0
Person, other than injured or ill worker	8.7	Automobile	1.5
Health care patient or facility resident	7.2	Bus	0.5
Animals & animal products	0.5	Van--passenger or light delivery	0.2
Mammals, except humans	0.3	Plant & industrial vehicle--nonpowered	1.6
Plants, trees, & vegetation--not processed	0.2	Cart, dolly, handtruck	1.5
Food products--fresh or processed	0.2	Plant & industrial powered vehicles, tractors	1.0
Nonmetallic minerals, except fuel	0.2	Forklift	0.8
<b>Structures &amp; surfaces</b>	<b>16.5</b>	<b>Machinery</b>	<b>6.7</b>
Floors, walkways, & ground surfaces	14.0	Metal, woodworking, & special material machinery	2.1
Floors	5.7	Material handling machinery	1.1
Ground	3.9	Special process machinery	1.1
Stairs, steps	1.1	Heating, cooling, & cleaning machinery	0.7
Parking lots	0.8	Constr., logging, & mining machinery	0.4
Other structural elements	1.9	Office & business machinery	0.2
Structures (incl. scaffolds, towers, poles)	0.5	<b>Tools, instruments, &amp; equipment</b>	<b>6.9</b>
<b>Containers</b>	<b>14.3</b>	Handtools--nonpowered	3.2
Containers--nonpressurized	10.5	Cutting handtools--nonpowered	1.3
Boxes, crates, cartons	5.0	Handtools--powered	1.5
Bags, sacks, totes	1.6	Ladders	0.4
Containers--variable restraint	1.6	Handtools--power not determined	0.3
Skids & pallets	1.0	<b>Furniture &amp; fixtures</b>	<b>3.7</b>
Containers--pressurized	0.5	Furniture	2.3
Luggage & handbags	0.3	Cases, cabinets, racks, & shelves	0.9
<b>Parts &amp; materials</b>	<b>11.9</b>	<b>Chemicals &amp; chemical products</b>	<b>1.9</b>
Building materials--solid elements	4.3	<b>Other sources</b>	<b>4.0</b>
Structural metal materials	1.6	Scrap, waste, & debris	2.1
Wood & lumber	1.0	Chips, particles & splinters	1.9
Vehicle & mobile equipment parts	1.8	Steam, vapors, & liquids n.e.c.	0.4
Machine, tool, & electric parts	1.8	Atmospheric & environmental conditions	0.3
Fasteners, connectors, ropes, & ties	1.3		
Metal materials, nonstructural	0.5		

1. Percentages are relative to the number of classifiable cases. Nonclassifiable cases were 11.6% of the total.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics). Figures computed from published data by DLI Research and Statistics.

# 5

## Fatal Occupational Injuries

In 1998, 88 Minnesota workers were fatally injured on the job. This is up from the 1997 total of 72, but close to the annual average of 89 for 1993-1997. The increase from 1997 included both wage-and-salary and self-employed workers. Nationwide, 6,026 workers were fatally injured during 1998. This is down about 3 percent from the revised 1997 total of 6,238 and 4 percent from the 1993-1997 average of 6,335. These and other findings are from the nationwide Census of Fatal Occupational Injuries (CFOI), conducted by BLS with state and other federal agencies.

The CFOI covers all fatal work injuries in the private and public sectors, whether the workplaces concerned are covered by the Occupational Safety and Health Act or other federal or state laws, or are outside the scope of regulatory coverage. For example, the CFOI includes federal employees and resident armed forces, even though they have different legal and regulatory coverage than other workers. It also includes self-employed and unpaid family workers, including family farm workers. Work-related fatal *illnesses* are excluded from the CFOI because many occupational illnesses have long latency periods and are difficult to link to work.

The CFOI provides a complete count of fatal work injuries by using multiple sources to identify, verify, and profile these incidents. Information is obtained from several sources, including death certificates, coroners' reports, workers' compensation reports, news media, and others. Because of larger numbers, the national data have greater detail and greater statistical reliability than state data.<sup>19</sup>

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<sup>19</sup>Available national-level tables present such data as nature of the fatal injury, how it occurred, industry, occupation, and worker characteristics. Other nationwide

This chapter presents CFOI data for Minnesota showing trends for 1991-1998, incidence by industry division, and event or exposure causing the fatal injury.

### Number of Fatal Injuries Over Time

As shown in Figure 20, Minnesota had between 72 and 113 fatal work injuries per year from 1991 to 1998. For wage-and-salary workers, the annual fatality toll was between 54 and 64 except for 1993, when it reached 80. For self-employed workers, the annual fatality figure ranged from 18 to 44.

For 1994-1998, the fatality toll averaged 84 per year, consisting of 58 per year for wage-and-salary workers and 26 for self-employed workers. Fatal injuries for the self-employed were 31 percent of the total, far higher than the 7 percent self-employed share of total state employment for the period.<sup>20</sup>

### Incidence by Industry Division

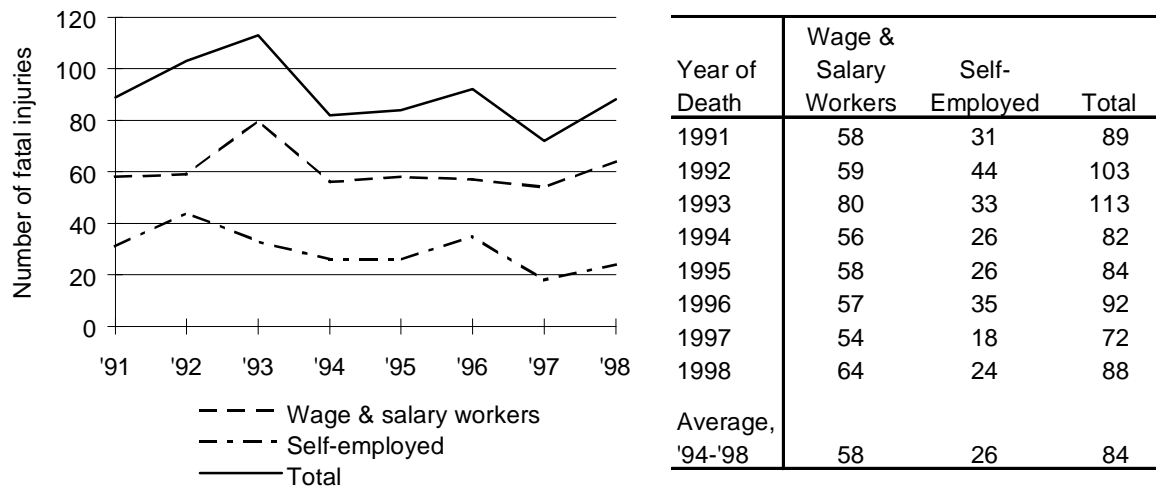
Figure 21 shows the incidence of Minnesota's fatal work injuries by industry division, averaged for 1994-1998. Overall, Minnesota had an average of 3.2 fatal workplace injuries per year per 100,000 workers. The highest fatality rates were in agriculture, forestry, and fishing (19.5), construction (13.2), and

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tabulations focus on special topics such as fatalities involving cranes, falls, electrocutions, and excavation and trenching cave-ins. For national data, call the BLS at 202-606-6175 or visit the Internet site <http://stats.bls.gov/oshhome.htm>. For state or national data, call Research and Statistics at 651-297-4595.

<sup>20</sup>Unpublished Current Population Survey data from BLS.

**Figure 20**  
**Fatal Work Injuries in Minnesota, 1991-1998 [1]**



1. Includes private sector plus local, state, and federal government (including resident armed forces). Includes self-employed and unpaid family workers, including family farm workers. Excludes fatal illnesses.

Source: Census of Fatal Occupational Injuries (U.S. Bureau of Labor Statistics in cooperation with state and other federal agencies).

transportation, communication, and utilities (7.1). The highest annual *numbers* of fatal injuries (shown in parentheses) were in agriculture, forestry, and fishing (24 per year); construction (15); and wholesale and retail trade (10).

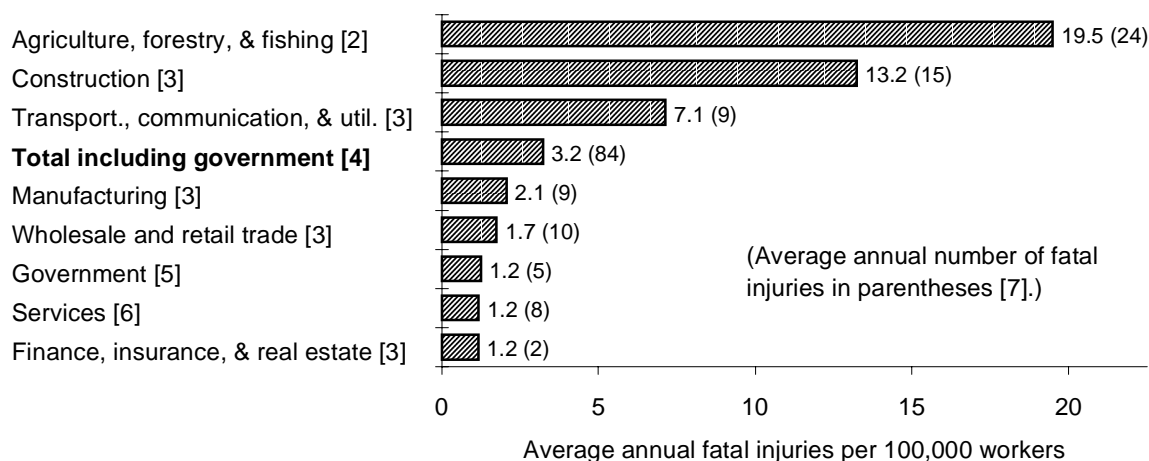
### Causes of Fatal Injuries

Figure 22 shows the event or exposure causing fatal work injuries in Minnesota during 1994-1998. The most common cause of fatal injuries was transportation accidents, accounting for 43 percent of the total. These consisted primarily of highway accidents, but also included nonhighway accidents and workers being struck by vehicles.

The second most common cause was contact with objects and equipment (26 percent). These cases included workers being struck by an object, caught in or compressed by equipment or objects, and caught in or crushed by collapsing materials. The next most frequent fatality events were falls (11 percent), assaults and violent acts (9 percent), exposure to harmful substances or environments (8 percent), and fires and explosions (3 percent).

Primary among assaults and violent acts was homicide, accounting for 7 percent of the total and thus the fifth leading cause of fatal workplace injuries for the state. By contrast, homicide was responsible for 15 percent of the national total for 1994-1998, making it the third leading cause of fatal workplace injuries nationwide.

**Figure 21**  
**Incidence of Fatal Work Injuries by Industry Division,**  
**Minnesota, 1994-1998 Average [1]**



1. Includes private sector plus federal, state, and local government. Excludes fatal illnesses. Mining is not shown separately because of statistical issues concerning the employment estimates for that industry.
2. Incidence rate includes self-employed and family workers, and excludes forestry and fishing. Average annual number of cases includes forestry and fishing.
3. Incidence rate excludes self-employed and family workers.
4. Includes private sector plus all levels of government. Incidence rate includes the self-employed, family workers, and private household workers, and excludes military personnel. Average annual number of cases includes resident military personnel.
5. Includes all public-sector employees regardless of industry. Incidence rate excludes military personnel. Average annual number of cases includes resident military personnel.
6. Incidence rate excludes the self-employed, family workers, and private household workers, and includes forestry and fishing. Average annual number of cases excludes forestry and fishing.
7. The average annual number of cases includes the self-employed, family workers, private household workers, and resident military personnel.

Source: Computed by DLI Research and Statistics with data from the Census of Fatal Occupational Injuries (U.S. Bureau of Labor Statistics).

**Figure 22**  
**Event or Exposure Causing Fatal Work Injury,**  
**Minnesota, 1994-1998 Average [1]**

Event or Exposure	Average Annual Number of Fatalities	Percentage of Total
<b>Total</b>	<b>84</b>	<b>100%</b>
<b>Transportation accidents</b>	<b>36</b>	<b>43</b>
Highway accident	21	26
Nonhighway accident, except air, rail, water [2]	7	9
Worker struck by vehicle	3	4
<b>Contact with objects &amp; equipment</b>	<b>22</b>	<b>26</b>
Struck by object	10	12
Struck by falling object	7	8
Caught in or compressed by equipment or objects	6	8
Caught in running equipment or machinery	3	4
Caught in or crushed by collapsing materials	5	6
<b>Falls</b>	<b>9</b>	<b>11</b>
<b>Assaults and violent acts</b>	<b>8</b>	<b>9</b>
Homicide	6	7
<b>Exposure to harmful substances or environments</b>	<b>7</b>	<b>8</b>
Contact with electric current	4	4
<b>Fires and explosions</b>	<b>2</b>	<b>3</b>

1. Includes private sector plus local, state, and federal government (including resident armed forces). Includes self-employed and unpaid family workers, including family farm workers. Excludes fatal illnesses.

2. Includes accidents on farms, industrial premises, and construction sites.

Source: Census of Fatal Occupational Injuries (U.S. Bureau of Labor Statistics in cooperation with state and other federal agencies).

# 6

## Programs and Services of the Department of Labor and Industry

The Department of Labor and Industry has a variety of programs and services to help employers maintain a safe and healthful workplace and thereby contain workers' compensation costs. These are administered by Occupational Safety and Health Compliance and Workplace Safety Consultation.

### Occupational Safety and Health Compliance

***The Occupational Safety and Health Act.*** The U.S. Congress passed the Occupational Safety and Health Act in 1970 “...to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources.” Minnesota has an approved state plan under the federal Act, with supporting legal authority under the Minnesota Occupational Safety and Health Act of 1973 (OSHA). DLI administers the state Act through its Occupational Safety and Health Compliance Division (MNOSHA Compliance). It issues safety and health standards and conducts workplace inspections to ensure compliance.

Under the “general duty” clause of the state Act, employers must provide a workplace and working conditions free from recognized hazards that cause or are likely to cause death or serious injury or harm. In addition, employers are required to comply with safety and health standards issued by the department; to evaluate their workplaces to identify safety and health hazards; to establish methods to control or eliminate identified hazards and promote safe work practices; and to provide necessary protective equipment at no cost to employees.

Employers with 11 or more employees must also keep injury and illness records for each establishment and must post summary injury and illness information for each calendar year during the month of February of the following year. The required form for this record-keeping, the OSHA 200-log, is the basis for the annual survey of occupational injuries and illnesses for sampled employers.

Employees are required to comply with those safety and health standards that apply to their own jobs. Employees may refuse to perform assigned tasks they reasonably believe to pose an imminent danger of death or serious injury. Employees may also file a complaint with the department requesting an inspection if they believe unsafe or unhealthful conditions exist in their workplace. Employers may not discharge or otherwise take retaliatory actions against employees for exercising these or other rights under the Act.

***Employee Right-to-Know.*** Under the Employee Right-to-Know Act — part of the state's Occupational Safety and Health Act — employers must evaluate their workplaces for the presence of hazardous substances, harmful physical agents, and infectious agents; determine which employees are routinely exposed to these substances and agents; provide these employees with appropriate training; provide written information on identified hazardous substances and agents to employees in their work areas in readily accessible form; and label containers, work areas, and equipment to warn employees of associated hazardous substances or agents.

***AWAIR Act.*** Under “A Workplace Accident and Injury Reduction” Act (AWAIR) — also

part of the state's Occupational Safety and Health Act — employers in high-hazard industries must develop and implement a written safety and health plan to reduce workplace injuries and illnesses.

**Labor-management safety committees.** The state Act also requires all public and private employers with more than 25 employees, and smaller employers in high-hazard industries, to establish and use a joint labor-management safety committee. Employee representatives on the committee must be chosen by employees, and the committee must meet regularly.

**Workplace inspections.** The state Act authorizes the department to conduct workplace inspections to determine whether employers are complying with safety and health standards. The department's inspectors are trained in OSHA standards and in recognition of safety and health hazards. With certain exceptions, the state Act requires inspections to be without advance notice. Employers are required to allow the inspector to enter work areas without delay and must otherwise cooperate with the inspection.

MNOSHA Compliance has a system of inspection priorities. The priorities, highest to lowest, are imminent danger (established from reports by employees or the public or from observation by a MNOSHA investigator), fatal accidents and catastrophes (accidents causing hospitalization of three or more employees), employee complaints (not concerning imminent danger), programmed inspections (which target employers in high-hazard industries), and follow-up inspections (for determining whether previously cited violations have been corrected).

Employers found to have violated OSHA standards receive citations for the violations and are assessed penalties based on the seriousness of the violations. These employers are also required to correct the violations. Citations, penalties, and time periods allowed for correcting violations may be appealed by employers or employees.

## Minnesota First

Minnesota First (safety is the FIRST priority in Minnesota workplaces), under MNOSHA Compliance, is an enforcement-based inspection program for employers with 75 or more workers in manufacturing industries who have injury and illness rates above the current average for all Minnesota employers. MNOSHA Compliance staff target these employers for an unannounced comprehensive inspection. Employers choosing to participate in the program then work with MNOSHA staff to develop a two-year action plan. The plan specifies measures to decrease workplace hazards and addresses safety and health program development, safety committee formation, and employee involvement. Employers submitting an acceptable plan may receive up to a 70 percent reduction in assessed penalties and a two-year exemption from programmed compliance inspections. (However, MNOSHA Compliance will continue to conduct inspections in the event of fatalities, serious injuries, complaints, or referrals.)

## Further Information

For further information on OSHA requirements, standards, and procedures, or on Minnesota First, contact the department's MNOSHA Compliance unit at 1-877-470-6742 or 651-296-2116, or by FAX at 651-297-2527; or e-mail [OSHA.Compliance@state.mn.us](mailto:OSHA.Compliance@state.mn.us); or visit the department's website at [www.doli.state.mn.us/mnosha.html](http://www.doli.state.mn.us/mnosha.html).

## Workplace Safety Consultation

Where possible, DLI prefers a cooperative approach, rather than an adversarial one, to achieve a safe and healthful workplace. Minnesota Workplace Safety Consultation (WSC) is a means to that end.

**Consultation service.** WSC offers a free consultation service on request to help employers prevent workplace accidents and diseases by recognizing and correcting safety and health hazards. This service is targeted primarily toward smaller businesses in high-hazard industries but is also available to public-



sector employers. It is voluntary, confidential, and completely separate from the department's MNOSHA Compliance unit.

On-site consultations are conducted by safety and health professionals. During consultations, businesses are assisted in determining how to improve workplace conditions and practices in order to comply with regulations and to reduce accidents and illnesses and their associated costs. The consultant makes recommendations dealing with all aspects of an effective safety and health program. A written report with recommendations is sent to the employer after the consultation.

No citations are issued or penalties proposed as a result of the consultation. The employer is only obligated to correct in a timely manner any serious safety and health hazards found. No information about the employer is reported to MNOSHA Compliance unless the employer fails to correct the detected safety and health hazards within a specified period of time. This has happened only once in the past five years.

WSC also provides assistance in understanding and complying with safety and health regulations and in developing and implementing mandatory programs, including Employee Right-to-Know, AWAIR, and the Labor-Management Safety Committee Program. This assistance takes place through training sessions throughout the state and responses to phone calls and written enquiries.

***The Labor-Management Safety Committee Program*** was developed jointly by the department and the State Bureau of Mediation Services. Services are available if requested by both management and labor representatives. Services include interpretation of OSHA standards, training in self-inspection techniques, and help in preparing and implementing education and training programs.

***The Loggers' Safety Education Program***, under WSC, provides safety training through eight-hour seminars throughout the state. In order to receive workers' compensation premium rebates from the Targeted Industry

Fund, logger employers must maintain current workers' compensation insurance and they or their employees must have attended during the previous year a logging safety seminar sponsored or approved by the department.

***The Workplace Violence Prevention Program***, also under WSC, helps employers and employees reduce the incidence of violence in their workplaces by providing on-site consultation, telephone assistance, education and training seminars, a resource center, and an informal process for handling complaints about working conditions presenting risks of violence. This program is targeted toward workplaces at high risk of violence, such as convenience stores, service stations, taxi and transit operations, restaurants and bars, motels, guard services, patient and residential care facilities, schools, social services, and correctional institutions.

#### **MNSHARP**

MNSHARP (Minnesota Safety and Health Achievement Recognition Program), under WSC, is a voluntary program that assists small high-hazard employers in achieving safety and health improvements and recognizes them for doing so. Eligibility is limited to employers with up to 250 workers at the worksite concerned and 500 nationwide; priority is given to employers with fewer than 100 workers. For program purposes, high-hazard employers are those in high-hazard or special-emphasis industries and those with higher-than-average lost-workday injury and illness rates for their industry.

MNSHARP participants receive a free and comprehensive safety and health consultation survey from WSC, which results in a one-year action plan. Within a year, in consultation with WSC, participants must correct hazards identified in the initial survey and develop and implement an effective safety and health program with full employee involvement. The goal is to reduce the employer's total injury and illness rate and lost-workday case rate to a point below the national industry average for at least one year. Participants must also consult in

advance with WSC on changes in work processes or conditions that might introduce new hazards.

After a year, a second on-site visit occurs to determine whether the employer has met these requirements and the injury and illness reduction goal. If so, the employer receives a MNSHARP Certificate of Recognition, and is exempted from the programmed inspection schedule of MNOSHA Compliance for one year. (Inspections will occur, however, in the event of imminent danger, fatalities or other catastrophes, formal complaints, or referrals, or as follow-ups on previously cited violations.)

Certified MNSHARP employers may apply annually for certification renewal. If an on-site survey by WSC determines that the employer continues to meet program requirements, the employer's certification is renewed and it continues to be exempt from programmed MNOSHA Compliance inspections.

## MNSTAR

MNSTAR is a voluntary program patterned after the federal Voluntary Protection Program.<sup>21</sup> It is available to Minnesota employers of all sizes. In comparison with MNSHARP, MNSTAR has more rigorous requirements and confers a higher level of recognition on certified employers. MNSTAR relies mainly on employer self-assessment and requires an extensive application, including submission of written safety and health policies and procedures. After one or more on-site safety and health surveys, the employer will qualify for MNSTAR status if all eligibility requirements have been met, including an injury and illness rate below the state and national averages for the industry. MNSTAR recognition exempts the employer from programmed MNOSHA inspections for three years.

## Safety Grants Program

The Safety Grants Program, under WSC, awards funds up to \$10,000 to qualifying employers for projects designed to reduce the risk of injury and illness to their employees. To qualify, an employer must meet the following conditions:

- The employer must come under the jurisdiction of Minnesota OSHA.
- A qualified safety and health professional must have conducted an on-site safety inspection and produced a written report with recommendations based on the inspection.
- The project must be consistent with the recommendations of the safety and health inspection, must reduce the risk of injury or disease to employees, and must be feasible.
- The employer must have the knowledge and experience to complete the project, and must be committed to its implementation.
- The employer must be able to match the grant money awarded, and all estimated project costs must be covered by available funds (safety grant, employer match, and any other funds).
- The project must be supported by all public entities involved, and must comply with federal, state, and local regulations.

If the number of qualified applicants exceeds the availability of funds, priority is given first to businesses in manufacturing, second to projects at sites where jobs have been lost or are jeopardized because of problems relating to safety shortcomings, and third to other projects.

## Further Information

For further information on WSC services and programs, contact WSC at 1-800-657-3776 or 651-297-2393, or by FAX at 651-297-1953; or e-mail OSHA.Consultation@state.mn.us; or visit the department's website at [www.doli.state.mn.us/wsc.html](http://www.doli.state.mn.us/wsc.html).

<sup>21</sup>See <http://www.osha.gov/oshprogs/vpp/>.

## 7

## Workers' Compensation Safety and Health Incentives

The workers' compensation system provides employers with strong financial incentives for minimizing workplace injuries and illnesses. This is true not only for self-insured employers, who bear the cost of workers' compensation claims directly, but also for insured employers.

**Experience rating.** One of the strongest safety and health incentives for insured employers is experience rating. All insurers and the Assigned Risk Plan (ARP) are required to use experience rating, following a standard formula, for those employers with at least \$3,000 of premium annually.

Under experience rating, premium is adjusted, by means of an experience modification factor, to reflect the employer's recent claims costs. This factor is calculated annually by the Minnesota Workers' Compensation Insurers Association (MWCIA) for every insured employer. It is based on claims costs, which reflect both the incidence of claims and the average cost per claim. The "mod factor" reflects the employer's claims costs for the most recent three years relative to the average for all employers in the same insurance class. It is greater than, equal to, or less than 1.0, depending on whether the employer's claims costs per \$100 of payroll are, respectively, greater than, equal to, or less than the average for the employer's insurance class. Actual claims costs are a better indicator of underlying injury and illness tendencies for larger employers than for smaller ones; therefore, the modification factor is more sensitive to actual claims costs for larger employers than for smaller ones.

The modification factor enters multiplicatively into the formula the insurance carrier uses to

calculate the employer's premium. Thus, experience rating increases premiums for employers with higher-than-average claims costs, and reduces premiums for those with lower-than-average costs. *Insured employers can greatly diminish their workers' compensation costs by reducing the frequency and severity of their workplace injuries and illnesses and thereby reducing their experience modification factor.*

Other devices, or "plans," that voluntary-market insurers may use to adjust premiums for individual employers are optional for the insurer and subject to approval by the Department of Commerce. These include schedule rating, retrospective rating, dividend plans, and deductible plans.

**Schedule rating.** Under schedule rating, the insurer adapts the premium to characteristics of the individual employer that affect the potential for loss. Characteristics that would reduce the loss potential include safety standards and training, safety equipment, proper maintenance of equipment and premises, and access to emergency medical treatment. Insurers approved for schedule rating may grant lower rates to employers who have a lower potential for losses.

**Retrospective rating and dividend plans.** Under retrospective rating, the insurer adjusts the premium after the policy period to reflect the employer's losses for claims during the period. Under dividend plans, the insurer pays dividends to the employer when losses are lower than a target.

**Deductible plans.** Under deductible plans, the employer accepts responsibility for losses up to

a specified limit, or “deductible,” for each claim, and the initial premium is reduced accordingly. When claims occur, the insurer pays all costs, including those below the deductible, and the employer reimburses the insurer for costs below the deductible. Thus, with a deductible provision, the employer is effectively self-insured for losses below the deductible amount.

Schedule rating, retrospective rating, and dividend plans are not available in the ARP; the ARP does, however, offer several deductible plans.

**Merit rating** is a further safety and health incentive available in the ARP. For non-experience-rated employers who have been insured with the ARP for the most recent three years, merit rating provides a 33 percent credit if the employer has had no indemnity claims during the rating period (last three years for which data are available), no adjustment if there has been one indemnity claim, and a 10 percent

debit if there have been two or more indemnity claims. For non-experience-rated employers who have *not* been with the ARP for the most recent three years, the credit for not having any indemnity claims during the rating period is 10 percent rather than 33 percent, and the remainder of the formula is the same.

Employers can obtain their current experience modification factor, or their merit rating credit or debit if they are in the ARP and not experience-rated, by contacting the MWCIA at 612-897-1737 or by FAX at 612-897-6495. For information about schedule rating, retrospective rating, dividend plans, or deductible plans in the voluntary market, employers should contact individual insurance carriers or agents. Employers will benefit from contacting several carriers to find the rating plans that suit their needs. For information about deductible plans in the ARP, employers should contact the Park Glen National Insurance Company (the ARP administrator) at 612-924-6972 or by FAX at 612-922-5423.

# Appendix A

## Definitions of BLS Survey Case Types and Workers' Compensation Claim Types

### BLS Survey Case Types

The U.S. Bureau of Labor Statistics (BLS) conducts the annual Survey of Occupational Injuries and Illnesses to provide nationwide and state-level information on workplace injuries and illnesses, including their number and incidence.<sup>22</sup>

The survey includes all cases recorded by employers on their OSHA 200 logs. These “OSHA-recordable” cases include all nonfatal occupational illnesses and those nonfatal occupational injuries that result in loss of consciousness; medical treatment other than first aid; or any lost time from work, restricted work activity, or transfer to another job after the day of injury.

The survey defines different types of injury and illness cases according to whether or not they have “days away from work” and/or “days of restricted work activity”:

- “Days away from work” are days after the injury or onset of illness when the employee would have worked but does not because of the injury or illness.
- “Days of restricted work activity” are days after the injury or onset of illness when the employee works reduced hours, has restricted duties, or is temporarily assigned to another job because of the injury or illness.
- “Lost workdays,” a combined category, includes days away from work *and* days of restricted work activity.

Using this classification, the survey divides total cases into two types:

- “Lost-workday” (LWD) cases are cases with any lost workdays.
- “Cases without lost workdays” are those with medical treatment but no lost workdays.

Lost-workday cases in turn are divided into two types:

- “Days-away-from-work” (DAFW) cases are cases with any days away from work. These cases may have days of restricted work activity in addition to days away from work.
- “Restricted-work-activity-only” (RWAO) cases have days of restricted work activity but no days away from work.

### Workers' Compensation Claim Types

Workers' compensation paid claims include those cases in which the workers' compensation system makes a payment for indemnity benefits or medical treatment. Workers' compensation claim types are defined according to the type of payments made.

- Indemnity benefits are payments to the injured or ill worker or his or her survivors to compensate for lost wages, permanent functional impairment, or death.
- Medical costs are payments for the injured worker's medical treatment.

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<sup>22</sup>See pp. 1-2 for more background on the survey.

In workers' compensation claims reporting, claims are divided into two types:

- Indemnity claims are those with any indemnity benefits. These claims generally include medical costs.
- Medical-only claims are those with medical costs but no indemnity benefits.

Most indemnity claims have wage-loss benefits. The worker qualifies for these if the injury or illness causes more than three days of full or partial wage loss, counting any wage loss on the day of injury.

## Comparison of BLS and Workers' Compensation Categories

Definitionally, BLS total cases and workers' compensation total paid claims are nearly identical, primarily because both categories essentially encompass those injuries and illnesses that involve medical treatment. (In the BLS system, some of these cases also involve days away from work or days of restricted work activity, and in workers' compensation, some of these cases also involve indemnity benefits.) However, exceptions are possible.

For example, an injury would generate a medical-only claim but would not be OSHA-recordable — and thus not reported in the BLS survey — if there were medical costs for diagnosis or first aid but not for treatment, and there were no effects on work activity after the

day of the incident and no loss of consciousness. On the other hand, an injury would be OSHA-recordable but would not generate a workers' compensation claim if the injured worker missed work or had restricted work activity for just one or two days after the incident, and there was no permanent impairment or medical cost (though possibly first aid that did not generate medical cost).

Other than between total BLS cases and total paid claims, no close correspondences exist between BLS case types and the workers' compensation claim types. The nearest similarity is between DAFW cases and indemnity claims. DAFW cases are generally a broader category than indemnity claims because they represent a lower severity threshold. That is, they include all cases with one or more days off the job while indemnity claims generally involve more than three days of wage loss. More precisely, DAFW cases are not indemnity cases if there are only 1-2 days off the job — and thus no temporary total disability (TTD) benefits — and the injured worker receives no temporary partial disability (TPD) or permanent partial disability (PPD) benefits either. However, some indemnity cases are not DAFW cases because there are TPD or PPD benefits but no days away from work.

Appendix C presents comparisons between the rates of BLS total cases and total paid workers' compensation claims and between the rates of DAFW cases and indemnity claims.

# Appendix B

## Data Sources and Estimation Procedures

This appendix describes data sources and estimation procedures for figures involving paid workers' compensation claims.

### Figure 3

The annual number of paid indemnity claims was tabulated by date of injury from the DLI claims database. The tabulated numbers were "developed," using historical rates of claim development in the DLI database, to produce estimated figures at full claim maturity. Since the developed numbers are estimates, they are always subject to revision; however, revisions are expected to be small for numbers more than three years prior to the latest published year.

The annual number of paid medical-only claims was estimated by applying the ratio of medical-only to indemnity claims for insured claims to the number of paid indemnity claims. This ratio came from the Minnesota Workers' Compensation Insurers Association (MWCIA), the state's workers' compensation data service organization and rating bureau. At publication time, the ratio was only available through 1997, and so it was not possible to compute the number of medical-only or total claims for 1998.

The number of full-time-equivalent (FTE) workers covered by workers' compensation was estimated as total nonfederal Unemployment Insurance (UI) covered employment (from the Minnesota Department of Economic Security), times average annual hours per employee (from the BLS survey of occupational injuries and illnesses) divided by 2,000.

**Change from previous reports.** The estimation of FTE workers' compensation covered employment reflects a change from previous reports. Previously, the UI employment figure was adjusted by the ratio of workers'

compensation covered payroll to UI covered payroll, on the assumption that this ratio was equal, or nearly equal, to the ratio of workers' compensation covered employment to UI covered employment. This procedure was used for several years by the Social Security Administration in state and national estimates. However, after careful consideration, Research and Statistics decided that this adjustment, though conceptually appropriate, probably made the resulting estimate of workers' compensation covered employment less, rather than more, accurate. Therefore, the adjustment is no longer made.

Several factors entered into this decision. First, the ratio of workers' compensation payroll to nonfederal UI payroll is approximately .9. When the coverage provisions of the two programs are put side by side, although there are some differences, they do not seem large enough to cause workers' compensation coverage to be 10 percent less than that of UI. Indeed, the comparison suggests that workers' compensation coverage may be the greater of the two, since there are some significant groups of employees covered under workers' compensation but not UI. These include, for example, several categories of volunteer workers and students working at the schools they attend or in work-study programs.

Another consideration was that in workers' compensation, in some industries, such as construction, some employers avoid premium through the use of minimum-premium policies. Under these policies, a business initially without covered workers pays a "minimum premium" to obtain coverage in the event that it hires employees. This premium covers administrative costs. The policy provides that if workers are hired, the premium is adjusted accordingly.

Often, however, workers are hired and the premium is not adjusted.<sup>23</sup>

More generally, employers have an incentive to avoid premium in both UI and workers' compensation. In both systems, payroll audits occur. In UI, there is one insurer — the Department of Economic Security. In workers' compensation, there are many insurers in a competitive market. In that situation, an insurer may be reluctant to vigorously audit payroll for fear of losing a customer.

For these reasons, Research and Statistics decided to discontinue the payroll adjustment. As a result, estimated FTE workers' compensation covered employment is now higher for all injury years than in previous reports, so that the claims incidence rates are all lower, by about 10 percent. Since all injury years are changed by the same proportion, the trends are unaffected.

### Figures 6, 7, 10, 13, and 14 and Appendices D and G

The numbers of paid indemnity claims by detailed industry (4-digit SIC) were tabulated from the DLI database. In developing these numbers, the rate of claim development was assumed to be the same for all industries. That is, the overall development factor for each injury year was applied to all industry-specific claim numbers for that year.

FTE workers' compensation covered employment by detailed industry and year was computed in the same manner as total FTE workers' compensation covered employment for Figure 3, with data from the same sources. Public employees in industries outside of public administration (such as construction, health services, and education) were classified under those other industries.

Because of different coverage provisions under workers' compensation and UI, some industries were excluded in computing incidence rates. These were SICs 01 (agricultural production — crops), 02 (agricultural production — livestock), 5963 (door-to-door sales), 6411 (insurance agents), 6531 (real estate agents), 7993 (coin-operated amusement devices), 7999 (amusement and recreation services, nec), 8111 (domestic services), and 8661 (religious organizations). SIC 82 (education services) also has different coverage provisions under the two programs, in that student workers are covered under workers' compensation but not under UI. An adjustment was made for this industry, using background data from the BLS injury and illness survey.

Industry classification issues occur within the public administration division. Specifically, some (usually smaller) public entities may use different SIC codes in workers' compensation reporting than under UI. Consequently, incidence rates were not computed for industries within the public administration division. (However, a rate was computed for public administration as a whole, and this division was included in the all-industry rate.)

Even though the indemnity claims data are based on a complete count of cases (rather than a sample), sample-size issues exist in the computation of incidence rates since, in this report, these rates are intended to represent the underlying propensity for injuries and illnesses, rather than simply those injuries and illnesses that actually occurred. Therefore, indemnity claims rates were computed only where the FTE employment figure in the denominator was at least 1,200. In the three-year averages, annual-average FTE employment had to be at least 400. Thus, for some industries, rates were computed for three-year periods but not for single years.

**Employment data confidentiality.** The UI employment data used in the denominators of the indemnity claims rates are subject to nondisclosure provisions. Specifically, to protect the confidentiality of data for individual firms, the employment data may not be disclosed for industries in which there are fewer than three establishments or one establishment

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<sup>23</sup>“Report to the Legislature on Reducing Premium Fraud in the Workers' Compensation System” and “Report to the Legislature on Independent Contractors in the Workers' Compensation System,” Department of Labor and Industry, Research and Statistics, March 1993 and January 1994 respectively.



accounts for more than 80 percent of total employment. In this report, indemnity claims rates are expressed in a range for those industries, because otherwise they could be combined with claims data to derive the employment figure.

## **Appendix F**

Appendix F shows (in part) the average annual rates of DAFW cases of different severity levels, measured by the number of days away from work, by industry for 1996-1998. The incidence rate for each severity level by industry was computed as the product of two factors from published BLS survey data. One factor

was the average annual incidence of DAFW cases by industry for 1996-1998. Industries without at least two years of data were excluded. The second factor was the percentage of DAFW cases by industry that were at or above the given severity level, i.e., that had at least the number of days away from work corresponding to that level. This factor was averaged over 1994-1998 (five years) in order to reduce sampling variation in the presence of small cell sizes in the distribution of DAFW cases by severity level. Because of sample-size concerns, incidence rates by severity level were only computed if at least three years of severity data were available for 1994-1998.

# Appendix C

## Comparison of Injury and Illness Rates from the BLS Survey and Workers' Compensation Data

Clearly, a strong relationship should exist between the incidence rates from the BLS survey and from the workers' compensation data. Figure C-1 compares the rates from the two sources. It shows, for 1984-1998, the rates of —

- (a) total cases from the BLS survey,
- (b) DAFW cases from the BLS survey,
- (c) total claims from the workers' compensation data, and
- (d) indemnity claims from the workers' compensation data.

These rates are from Figures 1 and 3.

The BLS total case rate and workers' compensation total claims rate should, definitionally, be almost identical, although exceptions are possible (see Appendix A). However, as shown in Figure C-1, the incidence of BLS total cases has been less than that of workers' compensation total claims, although in recent years the gap has narrowed. It seems unlikely that definitional differences could explain more than a small portion of this discrepancy.

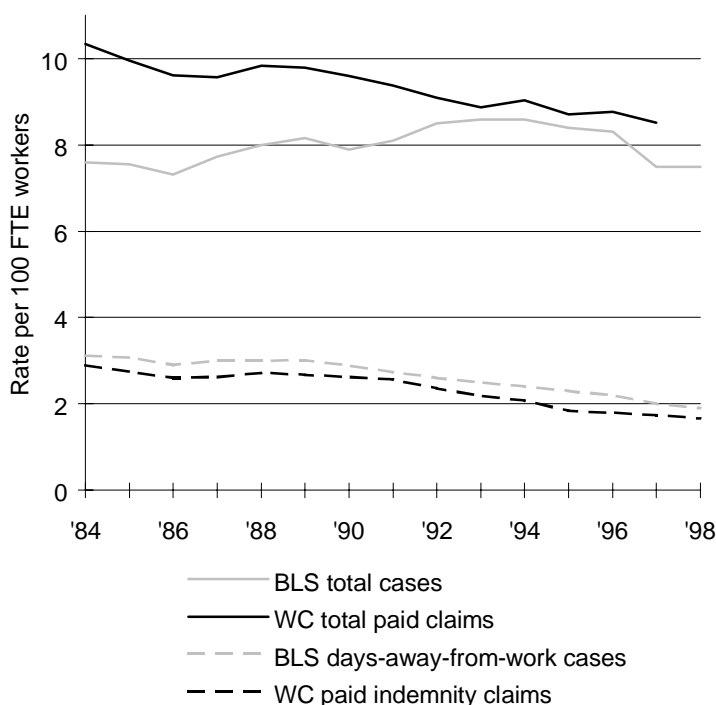
A possible explanation for the discrepancy is that the workers' compensation data are more complete because injured workers have a financial incentive to file claims, whereas employers have no financial incentive to maintain their OSHA 200 logs. Also, employers may be reluctant to reveal injury and illness information to employees or OSHA inspectors, or may be unaware of record-keeping requirements. Furthermore, employers may not be inclined to record cases involving workers' compensation claims that were initially denied but eventually paid.

The difference in financial incentives between the two systems may lead either to under-reporting on the OSHA 200 log — and thus in the BLS survey — or to over-reporting in workers' compensation. The latter may involve workers filing claims for non-work-related injuries or even in the absence of injuries. Some of the reporting difference between the two systems may involve honest differences of opinion between workers and employers as to whether an injury or illness is work-related. However, the workers' compensation claims rates in this report relate to paid rather than filed claims, which reduces the importance of over-reporting in workers' compensation as a possible contributing factor to the different incidence rates in the two systems.

It should also be noted that some injured workers may refrain from filing a claim out of fear of employer retaliation or damage to their standing in the business. It is thus possible that injuries are under-reported in both systems but more so on the OSHA 200 log and the BLS survey than in workers' compensation.

The other comparison in Figure C-1 is between the rates of DAFW cases and paid indemnity claims. From 1984 through 1998, the DAFW case rate was higher than the indemnity claims rate by about 13 percent. The DAFW case rate should be the higher of the two because DAFW cases include cases with 1-2 days away from work while indemnity claims generally do not (see Appendix A). However, an analysis of BLS survey data and DLI claims data estimates that the definitional differences between the two categories should cause the DAFW case rate to be about 30 percent higher (not just 13 percent

**Figure C-1**  
**Incidence of BLS Survey Cases**  
**and Workers' Compensation Paid Claims, Minnesota, 1984-1998 [1]**



	Rate per 100 Full-Time-Equivalent Workers			
	WC		WC	
	BLS Total Cases	Total Paid Claims	BLS DAFW Cases	Indemnity Claims
1984	7.6	10.3	3.1	2.9
1985	7.6	10.0	3.1	2.7
1986	7.3	9.6	2.9	2.6
1987	7.7	9.6	3.0	2.6
1988	8.0	9.8	3.0	2.7
1989	8.2	9.8	3.0	2.7
1990	7.9	9.6	2.9	2.6
1991	8.1	9.4	2.7	2.6
1992	8.5	9.1	2.6	2.4
1993	8.6	8.9	2.5	2.2
1994	8.6	9.0	2.4	2.1
1995	8.4	8.7	2.3	1.8
1996	8.3	8.8	2.2	1.8
1997	7.5	8.5	2.0	1.7
1998	7.5	[2]	1.9	1.7

1. Numbers are taken from Figures 1 and 3.
2. Not yet available.

higher) than the indemnity claims rate.<sup>24</sup> As with the comparison between total BLS cases

and total workers' compensation claims, reporting incentives may be part of the explanation.

<sup>24</sup>The analysis takes account of two types of cases: (1) injuries that are DAFW but not indemnity cases because the person has full earnings loss for only 1-2 days after the injury and does not have temporary partial disability (TPD) or permanent partial disability (PPD) benefits and (2) injuries that are indemnity but not DAFW cases because the person receives TPD or PPD benefits but has no days away from work.

# Appendix D

## Incidence of BLS Survey Cases and Paid Indemnity Claims for Industry Divisions, Minnesota, 1984-1998 [1]

	Rate per 100 Full-Time-Equivalent Workers											
	Private Sector Total				Agriculture, Forestry, & Fishing				Mining			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984	7.7	3.4	3.2		8.3	4.0	3.9		4.3	3.1	2.8	
1985	7.6	3.4	3.1		8.9	5.2	4.9		3.6	2.4	1.9	
1986	7.3	3.3	2.9		9.2	4.7	4.6		3.4	2.2	1.6	
1987	7.8	3.5	3.0		9.1	4.7	4.3		4.1	2.9	2.0	
1988	8.1	3.7	3.1		10.2	5.6	4.8		5.5	3.5	2.1	
1989	8.3	3.9	3.1		10.2	5.2	4.4		6.3	4.4	2.9	
1990	8.0	3.8	2.9		8.8	4.5	4.2		6.4	4.4	3.1	5.0
1991	8.1	3.8	2.8		11.4	4.7	4.3		6.2	4.3	2.6	4.4
1992	8.6	3.9	2.7		9.4	4.8	3.9		6.2	3.7	2.6	4.5
1993	8.7	3.7	2.5		9.7	4.9	3.6		6.7	3.9	2.9	3.5
1994	8.7	3.8	2.4		10.8	5.1	3.4		6.4	3.1	2.1	3.2
1995	8.5	3.9	2.3		11.1	4.1	2.9		6.2	3.1	2.0	3.0
1996	8.4	3.7	2.2		10.3	4.9	3.5		6.0	3.0	1.9	3.1
1997	7.6	3.6	2.0		11.2	4.5	3.2		6.1	3.1	2.3	3.4
1998	7.7	3.5	1.9		9.4	4.7	3.0		5.2	2.4	2.0	3.7

	Rate per 100 Full-Time-Equivalent Workers											
	Construction				Manufacturing				Transport., Commun'n, & Util.			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984	15.3	6.3	6.1		10.7	4.6	4.1		9.1	5.1	4.8	
1985	14.9	6.1	5.9		10.3	4.4	3.9		8.7	4.7	4.4	
1986	14.8	6.4	6.2		9.8	4.0	3.5		8.9	4.6	4.2	
1987	15.4	7.0	6.5		10.4	4.6	3.7		9.8	4.8	4.3	
1988	14.8	6.5	6.1		11.2	5.1	3.9		9.8	4.8	4.4	
1989	13.8	6.4	6.0		11.7	5.3	3.9		8.8	4.7	4.1	
1990	13.8	6.7	6.1	6.3	11.5	5.3	3.6	3.1	8.5	4.5	3.5	3.5
1991	13.1	5.9	5.5	5.9	11.3	5.3	3.2	2.8	9.1	5.1	4.0	3.5
1992	13.2	6.1	5.7	5.1	12.2	5.3	3.3	2.6	7.8	4.4	3.1	3.1
1993	13.5	5.6	4.9	4.7	11.8	5.1	2.9	2.3	9.9	5.2	3.8	3.3
1994	12.8	5.1	4.4	4.7	11.8	5.2	2.7	2.2	10.4	5.6	3.9	3.2
1995	11.8	4.5	3.6	4.3	11.7	5.4	2.6	2.1	11.9	6.7	4.5	2.9
1996	12.6	6.0	4.6	4.4	11.2	5.0	2.4	1.9	8.9	5.2	3.6	3.1
1997	11.9	5.4	4.6	4.4	9.9	4.7	2.1	1.9	7.8	4.7	2.9	3.0
1998	12.4	5.1	3.9	4.3	10.4	4.9	2.2	1.7	7.4	3.8	2.5	2.8

	Rate per 100 Full-Time-Equivalent Workers											
	Wholesale Trade				Retail Trade				Finance, Insurance, & Real Est.			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984	6.9	3.1	3.0		6.6	2.5	2.4		1.2	0.6	0.6	
1985	6.3	3.0	2.8		6.9	2.7	2.5		1.3	0.5	0.5	
1986	6.9	3.3	3.0		6.5	2.5	2.3		1.5	0.7	0.6	
1987	7.0	3.3	3.0		6.6	2.7	2.4		1.4	0.5	0.5	
1988	8.5	3.6	3.1		7.2	2.9	2.4		1.8	0.7	0.5	
1989	8.2	3.4	2.7		7.4	3.1	2.6		1.7	0.7	0.5	
1990	7.2	3.3	2.6	2.3	7.1	2.9	2.5	2.3	2.1	0.9	0.7	0.7
1991	7.8	3.8	2.8	2.4	7.0	2.9	2.3	2.4	2.0	0.7	0.5	0.8
1992	6.5	3.0	2.2	2.1	8.3	3.4	2.5	2.2	3.2	1.3	0.9	0.8
1993	7.6	3.4	2.4	2.0	8.0	3.0	2.2	1.9	2.5	0.9	0.7	0.7
1994	7.1	3.0	2.1	1.9	7.3	2.7	1.9	1.9	2.6	0.9	0.6	0.5
1995	7.2	3.2	2.1	1.8	7.1	2.9	1.9	1.6	2.4	0.9	0.7	0.5
1996	7.6	3.4	2.4	1.7	7.6	2.8	1.9	1.6	2.5	0.9	0.5	0.5
1997	8.0	3.6	2.0	1.7	7.0	2.5	1.6	1.5	1.6	0.8	0.4	0.4
1998	7.4	3.7	2.1	1.7	7.2	2.4	1.4	1.4	1.6	0.7	0.5	0.4

	Rate per 100 Full-Time-Equivalent Workers											
	Services				State Government Total				Construction (State Government)			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984	5.5	2.7	2.5		4.6	2.5	2.4					
1985	5.7	2.9	2.6		5.8	2.8	2.8					
1986	5.3	2.7	2.5		5.2	2.5	2.5					
1987	5.8	2.9	2.5		5.6	2.7	2.6					
1988	5.4	2.9	2.4		5.3	2.4	2.3					
1989	5.9	3.1	2.5		5.7	2.6	2.4					
1990	5.9	3.2	2.5	2.1	5.2	2.3	2.2					
1991	6.2	3.1	2.3	2.1	5.0	2.0	1.8					
1992	7.3	3.3	2.3	2.0	6.8	2.6	2.4					
1993	7.3	3.1	2.0	1.9	5.5	2.3	2.1					
1994	7.7	3.4	2.2	1.8	5.4	2.4	1.8					
1995	7.2	3.3	2.1	1.5	5.3	2.3	1.9					
1996	7.3	3.2	1.9	1.5	4.8	1.9	1.5		12.2	4.3	2.5	
1997	6.4	3.3	1.8	1.4	4.2	1.8	1.4		15.6	5.6	2.6	
1998	6.5	3.3	1.7	1.3	3.7	1.3	1.1		12.2	6.2	4.1	

	Rate per 100 Full-Time-Equivalent Workers											
	Services (State Government)				Public Admin. (State Gov.) [4]				Local Government Total			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984								8.0	3.1	3.0		
1985								7.9	3.0	2.8		
1986								8.2	2.9	2.7		
1987								8.0	2.8	2.6		
1988								8.1	3.0	2.7		
1989								7.9	2.9	2.7		
1990								8.0	2.9	2.7		
1991								9.2	3.3	2.9		
1992								8.3	3.3	2.8		
1993	4.9	2.5	2.3		5.0	1.8	1.5	8.5	3.1	2.7		
1994	4.7	2.1	1.6		5.1	2.5	2.0	8.8	3.3	2.8		
1995					4.5	1.9	1.5	8.5	3.2	2.7		
1996	4.6	1.8	1.5		4.1	1.7	1.2	8.6	2.4	1.9		
1997	3.2	1.6	1.4		3.9	1.4	1.1	7.5	3.1	2.1		
1998	2.9	0.9	0.7		4.1	1.6	1.3	7.9	2.7	2.0		

	Rate per 100 Full-Time-Equivalent Workers											
	Services (Local Government)				Public Admin. (Local Gov.) [4]				Public Admin. (State & Loc.) [4]			
	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]	BLS Survey Cases [2]			Indem. Claims [3]
	Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases		Total Cases	LWD Cases	DAFW Cases	
1984												
1985												
1986												
1987												
1988												
1989												
1990											1.7	
1991											2.5	
1992	6.6	2.2	2.0		8.9	3.6	3.0				2.3	
1993	7.7	2.5	2.2		9.0	3.7	3.2				2.2	
1994					9.9	4.1	3.3				1.9	
1995	7.6	2.4	2.1		9.2	4.0	3.4				1.4	
1996	8.2	1.8	1.4		8.3	3.1	2.3				1.2	
1997	7.2	2.7	1.7		7.0	3.5	2.7				1.3	
1998	8.1	2.3	1.7		6.6	2.7	2.0				1.6	

LWD cases = lost-workday cases.

DAFW cases = days-away-from-work cases.

1. In the BLS survey, employees are classified first by sector (private, state government, local government) and then by industry within sector. In the indemnity claims data, employees are classified by industry and not by sector. For industries not designated as being within state or local government, the BLS data include the private sector only, while the indemnity claims data include the private sector plus state and local government. Absence of data indicates unavailability.
2. From the Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics). Figures include injuries and illnesses.
3. Paid indemnity claims from the DLI claims data base. These numbers are "developed," meaning that they are estimates (based on historical rates of claim development) of what the final numbers will be when claims are mature. Full-time-equivalent (FTE) covered employment is estimated from employment and hours data from other sources. Not computed for the agriculture, forestry, and fishing division because of statistical issues, or for years before 1990 for other divisions because of unavailability of necessary employment data. Details in Appendix B.
4. The public administration division is limited to public employees not classifiable under other industries, such as education, health services, or construction.

# *Appendix E*

## Industry Division Codes

### Code Industry Division

AGR	Agriculture, forestry, and fishing
MIN	Mining
CON	Construction
MAN	Manufacturing
TCU	Transportation, communication, and utilities
WHT	Wholesale trade
RET	Retail trade
FIR	Finance, insurance, and real estate
SRV	Services
PUB	Public administration

# Appendix F

## Incidence of BLS Survey Cases by Case Type and Severity for Detailed Industries, Minnesota, 1993-1995 and 1996-1998 Averages [1]

Industry [2]	SIC Code	Average Annual Cases per 100 Full-Time-Equivalent Workers											Average Annual Number of Cases, 1996-1998 [5]	
		1993-1995 Avg. [3]			1996-1998 Average									
		Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Days-Away-From-Work Cases With Two or More Days Away by Number of Days Away [4]						
								2+	3+	6+	11+	21+		31+
<b>Total including state &amp; local gov.</b>		<b>8.5</b>	<b>3.7</b>	<b>2.4</b>	<b>7.8</b>	<b>3.5</b>	<b>2.0</b>	<b>1.6</b>	<b>1.3</b>	<b>0.8</b>	<b>0.5</b>	<b>0.3</b>	<b>0.2</b>	<b>151,150</b>
<b>Private industry</b>		<b>8.6</b>	<b>3.8</b>	<b>2.4</b>	<b>7.9</b>	<b>3.6</b>	<b>2.0</b>	<b>1.6</b>	<b>1.3</b>	<b>0.8</b>	<b>0.5</b>	<b>0.3</b>	<b>0.2</b>	<b>133,250</b>
Agriculture, forestry, & fishing		10.5	4.7	3.3	10.3	4.7	3.2	2.5	2.2	1.4	1.1	0.7	0.4	1,500
Agricultural production	01-02	12.9	5.6	3.2	12.5	6.5	4.0	3.1	2.6	1.7	1.3	0.7	0.6	800
Agricultural services	07	8.7	3.8	3.3	8.7	3.5	2.8	2.1	1.9	1.3	1.0	0.7	0.3	700
<b>Mining</b>		<b>6.4</b>	<b>3.4</b>	<b>2.3</b>	<b>5.8</b>	<b>2.8</b>	<b>2.1</b>	<b>1.9</b>	<b>1.8</b>	<b>1.5</b>	<b>1.3</b>	<b>1.1</b>	<b>1.0</b>	<b>450</b>
Metal mining	10	6.8	3.6	2.4	6.2	3.0	2.2	2.1	1.9	1.7	1.5	1.3	1.1	400
Iron ores	101				6.2	3.0	2.2	2.1	1.9	1.7	1.5	1.3	1.2	400
<b>Construction</b>		<b>12.7</b>	<b>5.1</b>	<b>4.3</b>	<b>12.3</b>	<b>5.5</b>	<b>4.4</b>	<b>3.6</b>	<b>3.1</b>	<b>2.1</b>	<b>1.5</b>	<b>1.1</b>	<b>0.7</b>	<b>10,050</b>
General building contractors	15	12.6	5.0	4.4	11.3	4.8	3.9	3.3	2.7	2.0	1.4	0.9	0.6	2,200
Residential building construction	152	10.4	4.5	4.1	8.4	4.9	4.2	3.7	2.9	2.1	1.5	0.9	0.6	750
Nonresidential building construction	154	14.8	5.5	4.7	14.1	4.8	3.6	3.0	2.6	1.9	1.3	0.9	0.7	1,400
Heavy construction, ex. building	16	11.0	3.7	3.3	11.2	4.5	3.8	3.1	2.5	1.7	1.2	0.8	0.7	1,250
Highway & street construction	161	11.6	3.6	3.4	13.5	4.3	3.5	2.8	2.4	1.6	1.2	0.8	0.6	650
Heavy construction, ex. highway	162	10.2	3.7	3.3	9.5	4.7	4.1	3.2	2.6	1.7	1.2	0.8	0.7	550
Special trade contractors	17	13.1	5.4	4.6	12.9	6.0	4.7	3.8	3.3	2.3	1.6	1.2	0.8	6,650
Plumbing, heating, air-conditioning	171	13.7	5.0	4.2	14.3	5.5	3.8	2.9	2.3	1.7	1.2	0.8	0.5	1,900
Electrical work	173	12.3	3.7	3.1	11.6	4.4	3.3	2.6	2.2	1.5	1.2	0.7	0.5	1,200
Masonry, stonework, & plastering	174	12.0	6.1	5.7	12.4	7.2	6.7	5.5	4.7	3.3	2.4	1.9	1.4	800
<b>Manufacturing</b>		<b>11.8</b>	<b>5.2</b>	<b>2.7</b>	<b>10.5</b>	<b>4.9</b>	<b>2.2</b>	<b>1.7</b>	<b>1.4</b>	<b>0.9</b>	<b>0.6</b>	<b>0.4</b>	<b>0.2</b>	<b>45,050</b>
Food & kindred products	20	19.4	9.1	3.6	14.0	7.4	2.6	2.1	1.8	1.2	0.8	0.5	0.3	7,600
Meat products	201	42.3	18.3	4.3	26.2	13.3	2.5	2.1	1.7	1.1	0.8	0.5	0.3	4,100
Poultry slaughtering & processing	2015	37.8	16.1	2.6	27.9	15.0	1.8	1.5	1.3	0.8	0.5	0.3	0.2	1,950
Dairy products	202	8.8	4.1	2.9	7.0	3.1	2.2	1.7	1.4	1.1	0.7	0.5	0.4	550
Preserved fruits & vegetables	203	11.5	5.8	2.5	8.6	3.9	1.8	1.6	1.4	0.8	0.6	0.3	0.2	550
Grain mill products	204	7.0	3.5	2.1	5.3	2.7	1.6	1.2	1.0	0.7	0.5	0.3	0.2	2,250
Lumber & wood products	24	17.8	8.7	4.6	16.8	8.3	3.8	3.0	2.4	1.4	0.8	0.5	0.4	3,250
Millwork, plywood, structural memb.	243	20.5	10.2	4.8	18.4	9.6	3.7	2.9	2.3	1.2	0.7	0.4	0.3	2,200
Millwork	2431	18.3	8.8	4.4	17.3	8.6	3.1	2.4	1.9	1.0	0.5	0.3	0.2	1,250
Furniture & fixtures	25	19.4	8.0	5.0	13.7	6.4	3.9	3.3	2.5	1.5	0.9	0.6	0.4	950
Paper & allied products	26	7.0	3.1	1.4	5.5	2.4	1.0	0.8	0.7	0.5	0.3	0.2	0.2	1,750
Paper mills	262	10.0	3.5	1.3	6.8	2.1	1.2	6.8	2.1	1.2				350
Printing & publishing	27	7.5	3.9	2.3	6.3	3.2	1.5	1.2	1.0	0.7	0.4	0.2	0.2	3,150
Newspapers	271	11.2	4.9	3.5	7.2	3.1	2.0	1.4	1.3	0.6	0.4	0.3	0.2	550
Commercial printing	275	7.7	4.2	2.4	7.1	3.7	1.7	1.3	1.1	0.8	0.4	0.3	0.1	1,650
Chemicals & allied products	28	7.4	3.7	1.5	6.6	3.3	1.3	1.0	0.8	0.5	0.4	0.2	0.2	450
Rubber & misc. plastics products	30	16.0	7.5	4.1	13.3	6.5	2.5	1.9	1.5	0.9	0.6	0.4	0.3	2,650



Industry [2]	SIC Code	Average Annual Cases per 100 Full-Time-Equivalent Workers											Average Annual Number of Cases, 1996-1998 [5]	
		1993-1995 Avg. [3]			1996-1998 Average									
		Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Days-Away-From-Work Cases With Two or More Days Away by Number of Days Away [4]						
								2+	3+	6+	11+	21+		31+
Misc. plastics products, n.e.c.	308	16.1	7.5	4.2	13.1	6.4	2.5	1.9	1.5	0.8	0.6	0.4	0.3	2,250
Stone, clay, & glass products	32	11.0	4.8	2.9	11.6	5.5	3.0	2.1	1.9	1.3	0.9	0.5	0.4	1,150
Primary metal industries	33	23.5	11.3	6.0	19.8	10.2	4.6	3.4	2.7	1.6	1.1	0.6	0.4	1,550
Fabricated metal products	34	14.3	6.0	3.6	13.8	6.2	3.2	2.4	1.8	1.2	0.8	0.5	0.3	4,900
Fabricated structural metal products	344	17.7	6.8	4.2	16.0	6.0	3.7	2.8	2.2	1.5	1.0	0.7	0.5	1,850
Metal forgings & stampings	346	17.3	7.9	4.4	17.2	7.2	4.3	3.1	2.4	1.5	1.0	0.6	0.3	850
Ordnance & accessories, n.e.c.	348	7.4	2.6	1.1	4.1	1.8	0.7	0.5	0.4	0.3	0.2	0.1	0.1	200
Industrial machinery & equipment	35	8.8	3.6	2.2	9.6	3.8	2.1	1.5	1.2	0.7	0.5	0.3	0.2	7,550
Farm & garden machinery	352	13.4	5.8	3.9	13.7	5.5	3.0	2.2	1.9	1.1	0.8	0.4	0.4	750
Metalworking machinery	354	10.9	3.8	2.5	11.1	4.3	2.9	1.8	1.5	0.9	0.6	0.4	0.3	850
General industrial machinery	356				12.9	5.6	2.6	2.1	1.8	1.3	0.8	0.6	0.3	1,300
Computer & office equipment	357	2.7	1.2	0.8	2.7	1.2	0.5							650
Refrigeration & service machinery	358	12.1	6.0	3.4	10.5	3.7	2.1	1.7	1.5	0.9	0.6	0.3	0.2	800
Industrial machinery, n.e.c.	359	11.7	4.2	2.8	13.0	4.3	2.5	2.0	1.6	1.0	0.7	0.5	0.3	1,750
Industrial machinery, n.e.c.	3599	12.5	4.8	3.1	13.4	4.5	2.7	2.1	1.7	1.0	0.8	0.6	0.3	1,450
Electronic & other electric equip.	36	8.4	3.5	1.8	7.6	2.8	1.5	1.1	0.9	0.5	0.4	0.2	0.1	2,550
Electrical industrial apparatus	362	6.9	2.9	1.7	5.0	2.4	1.2	1.0	0.8	0.5	0.3	0.1	0.1	200
Electronic components & acc.	367	8.3	3.6	1.7	8.6	3.0	1.6	1.2	1.0	0.5	0.3	0.2	0.1	1,350
Transportation equipment	37	24.5	9.1	5.5	26.4	12.2	5.7	4.2	3.3	2.2	1.5	0.9	0.6	3,600
Motor vehicles & equipment	371	34.5	11.5	7.7	36.3	15.6	7.5	5.5	4.5	3.1	2.2	1.4	0.9	2,400
Instruments & related products	38	6.6	2.7	1.2	5.3	2.5	1.0	0.7	0.6	0.4	0.3	0.2	0.1	2,050
Measuring & controlling devices	382	7.2	3.5	1.5	5.8	2.9	1.1	0.9	0.7	0.6	0.4	0.2	0.1	800
Medical instruments & supplies	384	5.8	1.8	0.9	5.5	2.6	0.9	0.7	0.6	0.3	0.2	0.1	0.1	950
Misc. manufacturing industries	39	11.3	4.9	2.4	12.2	5.6	2.3	1.9	1.4	1.0	0.7	0.3	0.3	900
<b>Transportation &amp; public utilities</b>		<b>10.7</b>	<b>5.8</b>	<b>4.1</b>	<b>8.0</b>	<b>4.6</b>	<b>3.0</b>	<b>2.6</b>	<b>2.3</b>	<b>1.5</b>	<b>1.0</b>	<b>0.7</b>	<b>0.5</b>	<b>9,050</b>
Railroad transportation	40	6.6	4.8	3.7	4.0	2.8	2.0	1.8	1.5	1.2	1.0	0.8	0.7	250
Local & interurban passenger transit	41	9.9	4.2	3.6	7.2	3.0	2.3	1.9	1.6	1.1	0.8	0.5	0.4	550
Trucking & warehousing	42	20.2	11.5	7.6	10.5	6.5	4.9	4.3	4.0	2.6	1.8	1.2	0.8	3,150
Trucking & courier services, ex. air	421	20.5	11.6	7.7	10.2	5.7	3.9	3.4	3.1	2.1	1.4	0.9	0.7	3,150
Transportation by air	45	8.5	5.7	4.3	12.2	8.0	4.4	3.9	3.1	2.1	1.4	0.9	0.7	3,050
Transportation services	47	2.5	1.1	0.8	2.5	1.3	1.1	0.9	0.8	0.5	0.4	0.3	0.3	150
Communication	48	4.6	1.5	1.2	3.7	1.5	1.1	0.9	0.7	0.4	0.2	0.1	0.1	700
Telephone communication	481				3.8	1.5	1.1							500
Electric, gas, & sanitary services	49	8.3	3.1	1.9	7.5	2.6	1.6	1.3	1.0	0.7	0.4	0.3	0.2	1,050
Electric services	491	7.6	2.7	1.6	7.8	2.6	1.5	1.3	1.0	0.7	0.5	0.3	0.2	650
<b>Wholesale trade</b>		<b>7.3</b>	<b>3.2</b>	<b>2.2</b>	<b>7.7</b>	<b>3.6</b>	<b>2.2</b>	<b>1.7</b>	<b>1.3</b>	<b>0.8</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>	<b>11,150</b>
Wholesale trade -- durable	50	6.7	2.9	2.0	6.6	3.0	1.8	1.4	1.0	0.6	0.5	0.3	0.2	5,750
Motor vehicles, parts, & supplies	501				8.8	3.6	2.3							900
Lumber & construction materials	503				9.9	5.4	3.4							550
Professional & commercial equip.	504	4.5	1.6	1.0	4.2	1.7	1.0	0.8	0.6	0.4	0.2	0.1	0.1	950
Machinery, equipment, & supplies	508	8.4	2.9	2.1	8.4	3.1	1.8	1.3	1.1	0.7	0.5	0.3	0.2	1,650
Wholesale trade -- nondurable	51	8.0	3.6	2.5	9.2	4.5	2.7	2.1	1.7	1.1	0.7	0.4	0.3	5,350
Groceries & related products	514				11.4	4.9	2.6							2,150
<b>Retail trade</b>		<b>7.5</b>	<b>2.9</b>	<b>2.0</b>	<b>7.3</b>	<b>2.6</b>	<b>1.6</b>	<b>1.3</b>	<b>1.1</b>	<b>0.6</b>	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>21,350</b>
Building materials & garden supplies	52	7.5	3.5	2.5	9.8	5.5	3.7	3.1	2.5	1.3	0.8	0.5	0.3	1,650
Lumber & other building materials	521				10.6	5.4	3.4							1,100
General merchandise stores	53	7.8	3.7	2.0	7.7	3.5	1.9	1.6	1.3	0.8	0.6	0.3	0.2	3,100
Department stores	531	7.8	3.9	2.0	8.1	3.6	2.0	1.6	1.3	0.8	0.6	0.3	0.2	2,900
Food stores	54	10.2	3.8	2.4	10.6	3.9	1.9	1.4	1.1	0.7	0.4	0.2	0.1	4,200
Grocery stores	541	11.0	4.1	2.6	11.4	4.2	1.9	1.5	1.1	0.7	0.4	0.2	0.1	3,850

Industry [2]	SIC Code	Average Annual Cases per 100 Full-Time-Equivalent Workers											Average Annual Number of Cases, 1996-1998 [5]	
		1993-1995 Avg. [3]			1996-1998 Average									
		Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Total Cases	Lost-Work-day Cases	Days-Away-From-Work Cases	Days-Away-From-Work Cases With Two or More Days Away [4]						
						2+	3+	6+	11+	21+	31+			
Auto dealers & service stations	55	8.1	2.7	1.9	9.0	3.3	2.3	1.9	1.4	0.9	0.6	0.3	0.2	3,800
New & used car dealers	551				12.5	3.7	2.5	2.1	1.6	1.0	0.7	0.3	0.2	2,350
Apparel & accessory stores	56	3.2	1.5	1.0	3.1	0.8	0.4	0.3	0.2	0.1	0.1	0.0	0.0	350
Furniture & home furnishings stores	57	6.0	3.4	2.1	6.1	3.2	2.0	1.7	1.3	0.8	0.5	0.3	0.2	1,050
Eating & drinking places	58	7.9	2.4	2.1	6.1	1.2	0.9	0.8	0.6	0.4	0.2	0.2	0.1	5,100
Misc. retail	59	5.0	2.2	1.5	5.0	1.8	1.2	0.9	0.7	0.5	0.3	0.2	0.2	2,150
<b>Finance, insurance, &amp; real estate</b>		<b>2.5</b>	<b>0.9</b>	<b>0.7</b>	<b>1.9</b>	<b>0.8</b>	<b>0.5</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>2,450</b>
Real estate	65	5.4	2.2	1.7	4.3	1.8	1.4	1.1	0.8	0.5	0.3	0.2	0.1	750
<b>Services</b>		<b>7.4</b>	<b>3.3</b>	<b>2.1</b>	<b>6.7</b>	<b>3.3</b>	<b>1.8</b>	<b>1.4</b>	<b>1.0</b>	<b>0.6</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>32,250</b>
Hotels & other lodging places	70	11.5	4.5	2.9	9.9	4.6	2.2	1.9	1.5	1.0	0.6	0.5	0.4	1,550
Hotels & motels	701				8.9	3.5	1.8							1,550
Personal services	72	4.9	2.5	1.5	5.2	3.2	1.9	1.7	1.5	1.0	0.7	0.5	0.4	950
Business services	73	3.8	1.7	1.3	3.9	2.0	1.1	0.8	0.7	0.4	0.2	0.1	0.1	4,150
Auto repair, services, & parking	75	7.1	3.0	2.4	7.9	2.6	2.1	1.8	1.5	1.0	0.8	0.5	0.4	1,450
Misc. repair services	76	9.4	3.9	3.2	8.6	4.0	3.0	2.7	2.0	1.2	0.8	0.5	0.3	450
Motion pictures	78				1.7	0.3	0.3							100
Amusement & recreation services	79	9.2	3.2	2.4	8.2	3.4	1.8	1.5	1.2	0.7	0.5	0.3	0.2	2,250
Misc. amusement, recreation servs.	799	9.5	3.1	2.3	8.0	3.2	1.7	1.4	1.2	0.7	0.5	0.3	0.2	1,850
Health services	80	11.6	5.6	3.2	10.2	5.3	2.8	2.0	1.4	0.7	0.4	0.2	0.2	15,150
Nursing & personal care facilities	805	20.2	12.0	6.6	18.1	11.5	5.0	3.5	2.4	1.2	0.6	0.4	0.3	6,000
Hospitals	806	15.4	7.1	4.5	13.5	7.2	4.5	3.1	2.3	1.2	0.7	0.4	0.2	6,150
Home health care services	808				10.9	6.2	3.6	3.0	2.3	1.5	1.0	0.3	0.2	550
Education services	82	4.3	1.4	0.7	3.2	1.2	0.9	0.7	0.5	0.3	0.2	0.1	0.1	550
Social services	83	8.4	3.6	2.5	8.7	4.1	2.5	2.0	1.4	0.6	0.4	0.2	0.1	4,050
Residential care	836	11.6	5.0	3.3	13.1	5.7	3.4	2.8	2.1	0.9	0.6	0.4	0.2	2,050
<b>State government</b>		<b>5.4</b>	<b>2.3</b>	<b>1.9</b>	<b>4.2</b>	<b>1.7</b>	<b>1.3</b>	<b>1.0</b>	<b>0.8</b>	<b>0.5</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	<b>2,950</b>
<b>Construction</b>					<b>13.3</b>	<b>5.4</b>	<b>3.1</b>	<b>2.3</b>	<b>1.6</b>	<b>1.0</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>	<b>550</b>
<b>Services</b>		<b>4.8</b>	<b>2.3</b>	<b>2.0</b>	<b>3.6</b>	<b>1.4</b>	<b>1.2</b>	<b>0.9</b>	<b>0.7</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>1,550</b>
Health services	80	12.1	7.0	5.9	10.8	6.0	4.9	3.7	3.0	1.6	0.9	0.4	0.3	550
Education services	82	2.7	0.8	0.7	2.7	0.7	0.6	0.4	0.3	0.2	0.1	0.0	0.0	1,000
<b>Public administration</b>		<b>4.9</b>	<b>2.1</b>	<b>1.7</b>	<b>4.0</b>	<b>1.6</b>	<b>1.2</b>	<b>0.9</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>850</b>
<b>Local government</b>		<b>8.6</b>	<b>3.2</b>	<b>2.7</b>	<b>8.0</b>	<b>2.7</b>	<b>2.0</b>	<b>1.5</b>	<b>1.2</b>	<b>0.8</b>	<b>0.5</b>	<b>0.3</b>	<b>0.2</b>	<b>14,900</b>
<b>Services</b>		<b>7.7</b>	<b>2.5</b>	<b>2.2</b>	<b>7.8</b>	<b>2.3</b>	<b>1.6</b>	<b>1.2</b>	<b>0.9</b>	<b>0.6</b>	<b>0.4</b>	<b>0.2</b>	<b>0.1</b>	<b>9,350</b>
Hospitals	806	11.9	5.1	4.0	12.5	5.0	3.4	2.5	1.8	1.1	0.6	0.3	0.2	1,550
Education services	82	6.7	1.8	1.6	6.9	1.6	1.2	0.9	0.7	0.4	0.3	0.2	0.1	6,850
Elem. & sec. schools	821				7.0	1.6	1.2	0.9	0.7	0.4	0.3	0.2	0.1	6,650
<b>Public administration</b>		<b>9.4</b>	<b>3.9</b>	<b>3.3</b>	<b>7.3</b>	<b>3.1</b>	<b>2.3</b>	<b>1.7</b>	<b>1.4</b>	<b>0.9</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>4,350</b>

nec = not elsewhere classified.

1. Figures include injuries and illnesses.
2. Industries are shown only if they have at least two years of incidence data for 1996-1998.
3. Incidence rates are given for 1993-1995 only for those industries with at least two years of data for that period.
4. Computed from 1996-1998 incidence data for days-away-from-work cases and 1994-1998 severity data for these cases. These incidence rates are shown only for industries with at least three years of severity data. Details in Appendix B.
5. Rounded to the nearest 50.

Source: Survey of Occupational Injuries and Illnesses (U.S. Bureau of Labor Statistics).

# Appendix G

## Incidence of Paid Indemnity Claims for Detailed Industries, Minnesota, 1992-1998 [1]

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Av. Pd. Indem. Claims, 1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									1993-1995 Avg.	1996-1998 Avg.
				1992	1993	1994	1995	1996	1997	1998				
<b>Total</b>		<b>1,891,630</b>	<b>33,555</b>	<b>2.4</b>	<b>2.2</b>	<b>2.1</b>	<b>1.8</b>	<b>1.8</b>	<b>1.7</b>	<b>1.7</b>	<b>2.0</b>	<b>1.7</b>		
<b>Agriculture, forestry, &amp; fishing</b>		<b>[a]</b>	<b>545</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>	<b>[a]</b>		
Agricultural production -- crops	01	[a]	135	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Horticultural specialties	018	[a]	45	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Ornamental nursery products	0181	[a]	45	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
General farms, primarily crop	019	[a]	50	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
General farms, primarily crop	0191	[a]	50	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Agricultural production -- livestock	02	[a]	175	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Livestock, ex. dairy & poultry	021	[a]	75	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Hogs	0213	[a]	65	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Dairy farms	024	[a]	35	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Dairy farms	0241	[a]	35	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Poultry & eggs	025	[a]	55	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Turkeys & turkey eggs	0253	[a]	25	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Agricultural services	07	8,120	230	4.1	3.3	3.4	3.1	3.0	2.8	2.7	3.3	2.9		
Landscape & horticultural services	078	3,770	160	6.1	5.3	5.0	4.5	4.6	4.2	3.9	5.0	4.2		
Lawn & garden services	0782	2,470	100	5.3	4.9	4.6	4.4	4.5	3.7	3.9	4.6	4.1		
Ornamental shrub & tree services	0783	1,090	50	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.2	6.4	4.7	
Forestry	08	230	[d]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]		
<b>Mining</b>		<b>7,460</b>	<b>250</b>	<b>4.5</b>	<b>3.5</b>	<b>3.2</b>	<b>3.0</b>	<b>3.1</b>	<b>3.4</b>	<b>3.7</b>	<b>3.2</b>	<b>3.4</b>		
Metal mining	10	6,140	195	4.1	3.2	3.1	2.9	2.9	3.1	3.5	3.1	3.2		
Iron ores	101	[b]	195	4.1	3.2	3.1	2.9	2.9	3-4	3-4	3.1	3-4		
Iron ores	1011	[b]	195	4.1	3.2	3.1	2.9	2.9	3-4	3-4	3.1	3-4		
Nonmetallic minerals, ex. fuels	14	1,370	55	[c]	[c]	3.5	3.0	3.8	4.4	4.1	3.7	4.1		
Sand & gravel	144	810	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.7	4.6		
Construction sand & gravel	1442	760	35	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.9	4.8		
<b>Construction</b>		<b>90,000</b>	<b>3,935</b>	<b>5.1</b>	<b>4.7</b>	<b>4.7</b>	<b>4.3</b>	<b>4.4</b>	<b>4.4</b>	<b>4.3</b>	<b>4.6</b>	<b>4.4</b>		
General building contractors	15	18,770	865	5.8	5.0	5.0	4.2	4.6	4.6	4.6	4.7	4.6		
Residential building construction	152	8,780	425	6.5	5.7	5.5	3.7	4.4	4.7	5.5	5.0	4.9		
Single-family housing construction	1521	8,570	410	6.4	5.8	5.5	3.6	4.2	4.6	5.5	5.0	4.8		
Nonresidential building construction	154	9,790	435	5.0	4.3	4.6	4.7	4.8	4.5	4.0	4.5	4.4		
Industrial buildings & warehouses	1541	1,780	85	[c]	[c]	[c]	5.9	5.2	5.6	3.7	6.1	4.8		
Nonresidential construction, nec	1542	8,020	350	4.7	4.0	4.3	4.5	4.7	4.3	4.0	4.2	4.3		
Heavy construction, ex. building	16	18,200	740	4.4	4.1	4.0	4.6	4.7	4.2	3.4	4.2	4.1		
Highway & street construction	161	12,420	480	3.8	3.2	3.4	4.5	4.6	4.0	3.0	3.7	3.9		
Highway & street construction	1611	12,420	480	3.8	3.2	3.4	4.5	4.6	4.0	3.0	3.7	3.9		
Heavy construction, ex. highway	162	6,120	260	5.6	6.0	5.2	4.6	4.5	4.2	4.0	5.2	4.2		
Water, sewer, & utility lines	1623	3,530	160	5.9	6.6	5.6	4.7	4.9	4.4	4.5	5.6	4.6		
Heavy construction, nec	1629	2,160	80	4.2	5.0	4.6	4.4	4.2	4.1	3.2	4.7	3.8		
Special trade contractors	17	52,950	2,335	5.2	4.8	4.9	4.3	4.3	4.5	4.4	4.7	4.4		

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									
												1993-1995	1996-1998
				1992	1993	1994	1995	1996	1997	1998	Avg.	Avg.	
Plumbing, heating, air-conditioning	171	13,370	480	4.5	4.0	4.1	4.0	3.4	3.6	3.7	4.1	3.6	
Plumbing, heating, air-conditioning	1711	13,370	480	4.5	4.0	4.1	4.0	3.4	3.6	3.7	4.1	3.6	
Painting & paper hanging	172	2,570	95	4.4	4.2	4.9	2.8	3.3	4.1	3.6	4.0	3.7	
Painting & paper hanging	1721	2,570	95	4.4	4.2	4.9	2.8	3.3	4.1	3.6	4.0	3.7	
Electrical work	173	10,830	340	3.5	3.4	3.6	2.7	3.4	3.2	2.9	3.2	3.1	
Electrical work	1731	10,830	340	3.5	3.4	3.6	2.7	3.4	3.2	2.9	3.2	3.1	
Masonry, stonework, & plastering	174	6,340	385	7.6	6.0	5.9	5.5	5.8	6.0	6.2	5.8	6.0	
Masonry & other stonework	1741	2,850	170	8.2	6.2	5.3	5.8	5.4	6.4	6.1	5.8	6.0	
Plastering, drywall, & insulation	1742	3,020	190	6.6	5.8	6.9	5.2	6.5	5.9	6.4	6.0	6.3	
Carpentry & floor work	175	3,640	215	6.4	5.2	6.0	5.2	5.2	6.8	5.8	5.5	5.9	
Carpentry work	1751	2,700	175	6.5	4.4	5.5	4.9	5.6	7.3	6.3	5.0	6.4	
Floor laying & floor work, nec	1752	940	45	[c]	[c]	[c]	[c]	[c]	[c]	[c]	7.0	4.6	
Roofing, siding, & sheet metal work	176	3,230	235	7.8	7.1	7.3	6.8	7.3	7.0	7.4	7.1	7.2	
Roofing, siding, & sheet metal work	1761	3,230	235	7.8	7.1	7.3	6.8	7.3	7.0	7.4	7.1	7.2	
Concrete work	177	4,100	210	6.0	6.2	4.6	4.9	4.9	5.1	5.2	5.2	5.1	
Concrete work	1771	4,100	210	6.0	6.2	4.6	4.9	4.9	5.1	5.2	5.2	5.1	
Water well drilling	178	670	25	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.0	3.9	
Water well drilling	1781	670	25	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.0	3.9	
Misc. special trade contractors	179	8,740	355	4.7	5.3	5.2	4.3	4.0	4.2	4.0	4.9	4.1	
Structural steel erection	1791	1,230	85	[c]	[c]	[c]	[c]	[c]	6.4	7.9	7.1	6.7	
Glass & glazing work	1793	800	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.4	3.5	
Excavation work	1794	2,340	70	3.9	4.1	5.0	3.0	3.5	3.4	2.5	4.0	3.1	
Installing building equipment, nec	1796	[b]	45	4.4	4.9	3.8	4.0	2.9	2-3	2-3	4.3	2-3	
Special trade contractors, nec	1799	2,700	125	5.5	6.1	5.7	5.0	4.2	5.1	4.4	5.6	4.6	
<b>Manufacturing</b>		<b>424,860</b>	<b>7,825</b>	<b>2.6</b>	<b>2.3</b>	<b>2.2</b>	<b>2.1</b>	<b>1.9</b>	<b>1.9</b>	<b>1.7</b>	<b>2.2</b>	<b>1.8</b>	
Food & kindred products	20	53,840	1,190	4.3	3.7	3.2	2.7	2.3	2.3	2.0	3.2	2.2	
Meat products	201	15,500	365	4.8	5.0	3.8	2.9	2.6	2.2	2.3	3.9	2.4	
Meat packing plants	2011	3,840	130	7.7	7.6	6.4	5.2	5.2	3.5	1.6	6.5	3.4	
Poultry slaughtering & processing	2015	6,760	175	4.2	4.6	3.4	2.6	2.4	2.3	3.0	3.5	2.6	
Dairy products	202	7,980	155	4.0	2.9	3.2	2.2	2.0	1.7	2.1	2.8	1.9	
Cheese, natural & processed	2022	2,930	45	3.7	2.9	3.0	1.8	1.5	1.6	1.5	2.6	1.5	
Fluid milk	2026	950	50	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.6	5.3	
Preserved fruits & vegetables	203	6,030	145	2.8	3.2	2.3	3.6	2.4	2.7	2.1	3.1	2.4	
Canned fruits & vegetables	2033	2,910	45	1.2	1.2	1.3	1.8	1.6	1.6	1.7	1.4	1.6	
Frozen fruits & vegetables	2037	1,180	25	2.5	[c]	[c]	1.9	1.7	[c]	[c]	1.5	2.2	
Frozen specialties, nec	2038	1,660	55	6.2	7.5	4.5	6.9	3.7	4.3	2.4	6.3	3.5	
Cereal breakfast foods	2043	2,200	35	[c]	1.3	1.3	2.2	1.4	1.7	1.8	1.6	1.7	
Prepared feeds, nec	2048	1,900	40	2.9	3.2	2.8	1.4	1.7	2.5	2.0	2.5	2.1	
Bakery products	205	2,830	70	10.8	5.0	4.6	3.7	3.0	2.6	2.0	4.4	2.5	
Bread, cake, & related products	2051	2,100	60	11.8	6.1	5.1	4.2	3.2	2.8	2.2	5.2	2.8	
Sugar & confectionery products	206	3,100	65	3.6	3.2	3.7	1.6	1.9	2.3	2.1	2.8	2.1	
Beet sugar	2063	1,640	45	4.3	3.7	4.9	2.7	2.5	3.3	2.4	3.8	2.7	
Fats & oils	207	1,130	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.2	2.7	
Beverages	208	2,980	100	9.7	9.1	8.7	6.1	4.6	4.1	1.4	8.0	3.4	
Malt beverages	2082	490	25	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.9	5.6	
Bottled & canned soft drinks	2086	2,120	65	11.4	11.2	10.3	6.3	4.6	3.9	0.8	9.3	3.1	
Misc. food & kindred products	209	3,580	125	4.0	3.3	3.0	2.7	3.1	4.2	3.1	3.0	3.5	
Potato chips & similar snacks	2096	730	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.0	5.4	
Food preparations, nec	2099	2,150	55	2.0	1.7	1.4	1.9	2.6	2.7	2.3	1.7	2.6	
Textile mill products	22	1,570	40	3.0	2.7	2.8	3.2	2.2	1.9	3.6	2.9	2.5	
Apparel & other textile products	23	4,190	60	2.0	2.3	1.8	1.6	1.4	1.6	1.2	1.9	1.4	

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									
				1992	1993	1994	1995	1996	1997	1998	1993-1995 Avg.	1996-1998 Avg.	
Lumber & wood products	24	19,250	655	4.5	4.2	3.9	3.3	3.8	3.3	3.0	3.8	3.4	
Logging	241	770	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.3	3.8	
Logging	2411	770	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.3	3.8	
Sawmills & planing mills	242	1,280	75	[c]	[c]	[c]	4.5	6.2	5.5	5.8	4.7	5.9	
Sawmills & planing mills, general	2421	830	50	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.9	6.3	
Millwork, plywood & structural members	243	12,200	365	4.3	4.0	3.6	3.0	3.4	2.9	2.8	3.5	3.0	
Millwork	2431	7,400	235	4.0	3.7	3.3	3.2	3.4	3.2	2.9	3.4	3.2	
Wood kitchen cabinets	2434	3,410	80	4.7	4.9	3.7	2.4	3.1	2.1	2.1	3.6	2.4	
Structural wood members, nec	2439	1,280	45	[c]	[c]	[c]	[c]	3.6	3.5	3.6	4.6	3.6	
Wood containers	244	960	50	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.9	5.2	
Wood pallets & skids	2448	650	35	[c]	[c]	[c]	[c]	[c]	[c]	[c]	6.0	5.5	
Wood buildings & mobile homes	245	1,290	60	[c]	[c]	5.8	4.4	5.6	4.9	3.9	5.6	4.8	
Mobile homes	2451	690	45	[c]	[c]	[c]	[c]	[c]	[c]	[c]	7.0	6.2	
Misc. wood products	249	2,880	70	2.6	2.9	2.8	3.1	2.8	2.8	1.7	3.0	2.4	
Wood products, nec	2499	1,300	45	3.0	3.6	3.5	4.6	2.8	4.7	[c]	3.8	3.4	
Furniture & fixtures	25	6,780	220	3.6	3.4	3.6	3.4	3.5	3.5	2.8	3.5	3.3	
Household furniture	251	1,380	55	3.3	3.4	3.2	4.6	4.2	4.9	2.8	3.7	4.0	
Office furniture	252	1,120	45	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.6	4.1	
Partitions & fixtures	254	3,010	100	3.4	3.6	3.5	3.3	3.6	3.4	3.1	3.5	3.3	
Wood partitions & fixtures	2541	1,720	60	[c]	3.8	3.5	2.8	3.8	3.3	3.0	3.3	3.4	
Partitions & fixtures, ex. wood	2542	1,280	40	3.2	3.4	3.6	3.9	3.3	[c]	3.1	3.6	3.3	
Paper & allied products	26	31,010	350	1.7	1.6	1.3	1.5	1.2	1.1	1.1	1.5	1.1	
Paper mills	262	5,440	90	1.6	2.0	2.0	1.8	2.1	1.5	1.3	1.9	1.6	
Paper mills	2621	5,440	90	1.6	2.0	2.0	1.8	2.1	1.5	1.3	1.9	1.6	
Paperboard containers & boxes	265	5,070	85	3.7	2.6	1.8	2.2	1.8	1.5	1.6	2.2	1.6	
Corrugated & solid fiber boxes	2653	3,230	55	3.8	2.6	2.1	2.3	1.9	1.8	1.6	2.3	1.8	
Die-cut paper & board	2675	1,190	35	4-5	[c]	[c]	4.2	3.7	[c]	[c]	4-5	3.1	
Printing & publishing	27	49,240	690	1.8	1.7	1.6	1.4	1.4	1.4	1.4	1.5	1.4	
Newspapers	271	7,570	155	1.6	1.7	1.6	1.8	1.6	2.4	2.3	1.7	2.1	
Newspapers	2711	7,570	155	1.6	1.7	1.6	1.8	1.6	2.4	2.3	1.7	2.1	
Periodicals	272	3,230	75	2.8	2.6	1.9	2.5	2.5	1.9	2.5	2.4	2.3	
Periodicals	2721	3,230	75	2.8	2.6	1.9	2.5	2.5	1.9	2.5	2.4	2.3	
Chemicals & allied products	28	11,060	145	2.0	1.3	1.5	1.5	1.5	1.4	1.2	1.5	1.3	
Drugs	283	1,850	30	1.3	0.5	0.8	1.3	1.9	1.7	0.9	0.8	1.5	
Petroleum & coal products	29	2,130	35	3.0	3.7	1.9	1.5	1.3	2.3	1.6	2.4	1.8	
Rubber & misc. plastics products	30	19,580	460	3.4	3.0	3.2	2.6	2.5	2.4	2.1	2.9	2.3	
Fabricated rubber products, nec	306	2,260	85	3.0	3.9	3.3	2.7	2.9	4.6	4.1	3.3	3.8	
Fabricated rubber products, nec	3069	1,660	60	3.4	4.4	2.8	2.7	2.4	4.8	4.5	3.2	3.8	
Misc. plastics products, nec	308	16,910	355	3.4	2.7	3.1	2.5	2.4	2.1	1.8	2.8	2.1	
Unsupported plastics film & sheet	3081	1,890	35	2.5	2.6	2.6	1.6	1.6	2.2	2.1	2.2	1.9	
Plastics products, nec	3089	11,880	250	3.5	2.9	3.3	2.7	2.3	2.1	1.9	2.9	2.1	
Leather & leather products	31	2,060	65	3.8	3.7	3.0	2.9	3.5	3.1	2.5	3.2	3.0	
Leather tanning & finishing	311	440	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	7.1	8.7	
Leather tanning & finishing	3111	440	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	7.1	8.7	
Stone, clay, & glass products	32	9,430	295	3.6	2.9	3.4	3.2	3.5	3.4	2.5	3.1	3.1	
Products of purchased glass	323	[b]	35	[c]	[c]	[c]	1.8	2.4	2-3	2.2	1.5	2-3	
Products of purchased glass	3231	[b]	35	[c]	[c]	[c]	1.8	2.4	2-3	2.2	1.5	2-3	
Concrete, gypsum, & plaster products	327	4,270	185	4.9	4.0	5.0	4.7	4.8	4.5	3.9	4.6	4.4	
Concrete products, nec	3272	1,510	85	4.3	4.4	5.4	6.2	5.2	6.3	5.6	5.4	5.7	
Ready-mixed concrete	3273	2,090	80	5.4	3.7	4.5	3.8	4.8	3.0	3.3	4.0	3.7	
Misc. nonmetallic mineral products	329	1,110	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	1.5	2.9	

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									
												1993-1995	1996-1998
				1992	1993	1994	1995	1996	1997	1998	Avg.	Avg.	
Abrasive products	3291	[b]	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	2.4	5-6
Primary metal industries	33	7,780	310	5.5	5.0	4.2	4.3	3.8	4.1	4.0		4.5	4.0
Blast furnace & basic steel products	331	1,070	25	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.0	2.5
Iron & steel foundries	332	1,750	105	7.4	7.6	7.2	7.5	5.3	6.6	6.0		7.5	6.0
Gray & ductile iron foundries	3321	1,090	80	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	9.3	7.5
Nonferrous foundries (castings)	336	3,610	135	4.6	3.2	3.2	3.9	3.5	3.8	3.8		3.4	3.7
Aluminum die-castings	3363	2,300	60	4.5	2.7	3.3	1.6	2.3	2.6	3.1		2.4	2.7
Aluminum foundries	3365	750	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.6	5.2
Fabricated metal products	34	35,850	845	3.3	3.2	2.9	2.6	2.4	2.5	2.2		2.9	2.4
Metal cans & shipping containers	341	1,050	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.2	3.0
Metal cans	3411	1,050	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.2	3.0
Fabricated structural metal products	344	11,490	275	3.8	4.2	3.4	2.2	2.4	2.4	2.4		3.1	2.4
Fabricated structural metal	3441	690	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.9	5.6
Fabricated plate work (boiler shops)	3443	2,370	55	3.0	4.2	3.4	2.7	3.0	2.1	2.1		3.4	2.4
Sheet metalwork	3444	6,800	130	4.0	4.3	2.9	1.4	1.8	1.9	2.0		2.3	1.9
Screw machine products, bolts, etc.	345	1,940	35	2.9	3.1	2.0	2.2	1.9	2.3	1.5		2.4	1.9
Screw machine products	3451	[b]	30	2.7	3.0	1.9	2.0	1.7	1-2	1.4		2.3	1-2
Metal forgings & stampings	346	4,890	150	3.5	3.3	2.8	3.4	3.2	3.4	2.8		3.2	3.1
Metal stampings, nec	3469	4,260	135	3.8	3.5	3.0	3.2	3.2	3.5	2.9		3.2	3.2
Metal services, nec	347	3,530	115	4.1	4.2	3.9	3.8	3.2	3.4	3.0		4.0	3.2
Plating & polishing	3471	2,140	70	4.0	3.9	4.3	4.2	3.6	3.5	2.9		4.1	3.3
Metal coating & allied services	3479	1,390	40	[c]	[c]	3.1	3.3	2.6	3.2	3.2		3.6	3.0
Misc. fabricated metal products	349	5,060	135	3.5	3.5	3.5	3.7	2.4	2.7	2.7		3.6	2.6
Misc. fabricated wire products	3496	1,230	50	[c]	[c]	3.7	[c]	[c]	3.5	5.8		3.7	3.9
Fabricated metal products, nec	3499	1,150	35	[c]	[c]	[c]	[c]	[c]	[c]	1.9		5.7	3.1
Industrial machinery & equipment	35	77,210	1,155	1.7	1.5	1.6	1.6	1.5	1.5	1.4		1.6	1.5
Farm & garden machinery	352	5,560	170	3.3	2.8	3.0	2.9	2.8	3.0	3.4		2.9	3.1
Farm machinery & equipment	3523	3,790	140	3.6	3.2	3.5	3.5	3.4	3.6	4.2		3.4	3.7
Lawn & garden equipment	3524	1,770	30	2.4	1.9	2.0	1.7	1.5	1.6	1.6		1.9	1.6
Construction & related machinery	353	5,100	175	3.8	3.5	3.8	2.9	3.3	3.6	3.4		3.3	3.4
Construction machinery	3531	2,810	100	4.1	3.1	4.8	3.3	4.0	3.4	3.0		3.7	3.5
Conveyors & conveying equipment	3535	710	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]		2.2	4.2
Metalworking machinery	354	7,020	110	2.5	2.1	2.2	1.9	1.2	1.7	1.8		2.1	1.6
Special industry machinery	355	4,900	80	2.1	2.3	1.9	1.6	1.5	1.5	1.8		1.9	1.6
Special industry machinery, nec	3559	2,570	40	1.9	2.8	1.8	1.4	1.5	1.4	2.0		1.9	1.6
Refrigeration & service machinery	358	7,140	120	2.4	1.9	1.8	1.9	1.6	2.0	1.5		1.9	1.7
Refrigeration & heating equipment	3585	3,320	55	2.9	1.8	2.0	2.0	1.6	2.0	1.4		1.9	1.7
Industrial machinery, nec	359	13,590	250	2.3	2.1	2.2	2.2	2.1	1.9	1.6		2.2	1.9
Industrial machinery, nec	3599	10,540	205	2.5	2.2	2.5	2.5	2.2	1.9	1.8		2.4	2.0
Electronic & other electric equipment	36	33,480	360	2.1	1.8	1.6	1.6	1.2	1.1	0.9		1.7	1.1
Household appliances	363	[b]	35	6-7	4-5	2-3	1-2	2-3	2-3	2-3		2-3	2-3
Household refrigerators & freezers	3632	[b]	30	7-8	4-5	2-3	1-2	1-2	1-2	1-2		2-3	1-2
Electronic components, nec	3679	2,710	40	2.4	1.9	1.8	2.2	1.5	1.6	1.4		2.0	1.5
Transportation equipment	37	13,640	490	3.1	3.5	3.3	3.9	3.7	3.7	3.3		3.6	3.6
Motor vehicles & equipment	371	6,390	275	3.5	4.6	4.1	5.0	4.7	4.1	4.2		4.6	4.3
Motor vehicles & car bodies	3711	[b]	160	5-6	7-8	6-7	9-10	7-8	6-7	7-8		7-8	7-8
Motor vehicle parts & accessories	3714	3,020	80	2.3	2.7	2.4	2.4	2.9	2.7	2.2		2.5	2.6
Ship & boat building & repairing	373	2,090	70	4.2	3.5	4.5	4.4	3.4	3.9	3.1		4.1	3.5
Boat building & repairing	3732	[b]	70	4.2	3.5	4.5	4.4	3.4	3-4	3-4		4.2	3-4
Misc. transportation equipment	379	4,220	115	1.8	2.1	1.8	2.4	2.8	3.2	2.3		2.1	2.8
Transportation equipment, nec	3799	3,980	110	1.9	2.0	1.5	2.2	2.8	3.3	2.2		1.9	2.8

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									
												1993-	1996-
				1992	1993	1994	1995	1996	1997	1998	1995 Avg.	1998 Avg.	
Instruments & related products	38	39,120	325	1.3	1.1	1.1	0.8	0.9	0.8	0.8	1.0	0.8	
Environmental controls	3822	4,650	75	2.1	2.0	1.8	1-2	1.7	1.7	1.5	1-2	1.6	
Misc. manufacturing industries	39	7,270	135	2.9	2.4	2.1	2.1	1.9	1.9	1.9	2.2	1.9	
Toys & sporting goods	394	2,710	50	3.0	2.8	2.1	2.2	2.3	1.4	1.7	2.3	1.8	
Sporting & athletic goods, nec	3949	2,450	50	3.1	2.8	2.2	2.2	2.5	1.4	1.9	2.4	2.0	
Misc. manufactures	399	3,270	80	3.8	2.8	2.5	2.4	2.1	2.7	2.5	2.5	2.4	
Signs & advertising specialties	3993	1,940	45	3.5	3.1	2.4	2.2	2.2	2.5	1.9	2.5	2.2	
Manufacturing industries, nec	3999	1,130	35	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.3	1-2	2.9
<b>Transportation, communication, &amp; util.</b>		<b>109,290</b>	<b>3,250</b>	<b>3.1</b>	<b>3.3</b>	<b>3.2</b>	<b>2.9</b>	<b>3.1</b>	<b>3.0</b>	<b>2.8</b>	<b>3.1</b>	<b>3.0</b>	
Local & interurban passenger transit	41	9,400	415	4.7	5.1	4.5	4.2	4.5	4.7	4.0	4.6	4.4	
Local & suburban transportation	411	3,860	280	7.9	9.0	7.8	6.5	7.1	7.8	7.0	7.7	7.3	
Local & suburban transit	4111	1,730	190	10.3	11.8	10.3	9.4	12.3	12.6	8.5	10.5	11.1	
Local passenger transportation, nec	4119	2,130	90	[c]	[c]	4.1	3.6	2.8	3.9	5.7	4.0	4.2	
School buses	415	3,680	100	2.7	3.2	2.7	2.4	3.1	2.9	2.1	2.8	2.7	
School buses	4151	3,680	100	2.7	3.2	2.7	2.4	3.1	2.9	2.1	2.8	2.7	
Trucking & warehousing	42	29,060	1,535	5.4	5.5	5.4	4.4	6.3	5.1	4.5	5.1	5.3	
Trucking & courier services, ex. air	421	27,860	1,480	5.4	5.6	5.5	4.4	6.3	5.1	4.5	5.1	5.3	
Local trucking, without storage	4212	10,360	645	5.4	5.4	5.8	5.2	8.1	5.9	4.8	5.5	6.2	
Trucking, ex. local	4213	13,170	625	5.8	6.2	5.5	4.8	5.3	5.0	4.0	5.4	4.8	
Local trucking with storage	4214	1,000	55	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.3	5.3	
Courier services, ex. by air	4215	3,330	155	4.6	4.9	4.8	2.2	5.0	3.2	5.8	3.6	4.6	
Public warehousing & storage	422	[b]	55	[c]	[c]	[c]	[c]	[c]	4-5	[c]	3.8	4-5	
General warehousing & storage	4225	660	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.2	4.2	
Water transportation	44	930	10	[c]	[c]	[c]	[c]	[c]	[c]	[c]	1.0	1.3	
Transportation by air	45	25,170	785	3-4	3-4	3.4	2.9	2.4	3.2	3.7	3-4	3.1	
Air transportation, scheduled	451	23,140	730	3-4	3-4	3-4	2-3	2.4	3.2	3.9	3-4	3.2	
Air transportation, scheduled	4512	[b]	420	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	
Air courier services	4513	[b]	305	[c]	[c]	10.8	11.0	2.3	5-6	6-7	10.4	4-5	
Airports, flying fields, & services	458	800	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.5	5.1	
Airports, flying fields, & services	4581	800	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.5	5.1	
Pipelines, ex. natural gas	46	[b]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	
Transportation services	47	8,090	60	0.8	0.9	0.9	0.6	0.8	0.7	0.6	0.8	0.7	
Communication	48	19,580	140	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.8	0.7	
Electric, gas, & sanitary services	49	15,510	300	2.1	2.0	2.0	2.3	2.2	2.1	1.5	2.1	1.9	
Gas production & distribution	492	1,920	35	2.0	1.9	1.5	2.3	2.0	2.5	1.2	1.9	1.9	
Combination utility services	493	3,580	70	2.6	2.4	1.9	1.6	1.6	2.2	2.0	2.0	1.9	
Electric & other services combined	4931	[b]	70	2.6	2.4	1.9	1.6	1.5	2-3	1-2	2.0	1-2	
Water supply	494	[b]	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.6	4-5	
Water supply	4941	[b]	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	3.6	4-5	
Sanitary services	495	1,390	70	5.7	6.8	3-4	[c]	7.9	5.4	1.9	6-7	5.1	
Refuse systems	4953	930	60	[c]	[c]	[c]	[c]	[c]	[c]	[c]	9.5	6.5	
<b>Wholesale trade</b>		<b>144,530</b>	<b>2,470</b>	<b>2.1</b>	<b>2.0</b>	<b>1.9</b>	<b>1.8</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>	<b>1.9</b>	<b>1.7</b>	
Wholesale trade -- durable goods	50	86,200	1,170	1.7	1.7	1.8	1.5	1.4	1.3	1.4	1.7	1.4	
Motor vehicles, parts, & supplies	501	10,260	245	2.3	2.5	2.6	2.3	2.3	2.3	2.5	2.4	2.4	
Automobiles & other motor vehicles	5012	2,690	65	3.1	3.0	2.2	2.6	2.3	2.9	2.1	2.6	2.4	
Motor vehicle supplies & new parts	5013	5,880	130	1.8	2.1	2.8	2.1	2.2	1.9	2.4	2.3	2.2	
Motor vehicle parts, used	5015	1,090	30	[c]	[c]	[c]	[c]	[c]	[c]	[c]	2.9	2.8	
Lumber & construction materials	503	5,560	130	3.4	3.2	3.7	3.2	2.3	2.4	2.2	3.3	2.3	
Lumber, plywood, & millwork	5031	3,480	70	4.2	3.9	4.7	3.6	2.0	1.8	2.1	4.1	2.0	
Metals & minerals, ex. petroleum	505	2,920	80	2.9	4.4	4.5	2.7	2.7	2.8	2.8	3.8	2.7	
Metals service centers & offices	5051	2,880	80	2.9	4.4	4.5	2.8	2.7	2.8	2.8	3.9	2.8	

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]											
														1993-1995	1996-1998
				1992	1993	1994	1995	1996	1997	1998	Avg.	Avg.			
Plumbing & hydronic heating supplies	5074	2,230	50	1.6	2.4	1.7	2.8	2.3	1.9	2.3	2.3	2.2			
Construction & mining machinery	5082	2,000	40	2.5	2.5	2.3	2.5	2.5	1.5	1.7	2.4	1.9			
Farm & garden machinery	5083	5,590	90	1.9	2.3	2.3	1.7	1.8	1.7	1.4	2.1	1.6			
Misc. durable goods	509	4,760	95	3.2	2.8	2.7	2.7	2.0	1.9	2.1	2.7	2.0			
Scrap & waste materials	5093	1,610	55	6.7	6.3	4.9	5.8	3.9	3.3	3.3	5.6	3.5			
<b>Wholesale trade -- nondurable goods</b>	<b>51</b>	<b>58,350</b>	<b>1,305</b>	<b>2.7</b>	<b>2.4</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>			
Paper & paper products	511	5,750	95	1.7	1.5	1.4	1.4	1.3	1.6	2.1	1.4	1.6			
Industrial & personal service paper	5113	1,320	45	3.1	3.5	2.2	2.1	2.1	3.5	4.9	2.6	3.4			
Groceries & related products	514	19,100	680	4.4	4.3	3.6	3.2	3.5	3.7	3.5	3.7	3.6			
Groceries, general line	5141	5,880	150	3.2	4.6	2.6	2.4	2.2	2.4	3.1	3.2	2.6			
Dairy products, exc. dried or canned	5143	1,660	50	4.8	3.4	2.8	1.2	3.8	3.6	1.9	2.5	3.1			
Confectionery	5145	1,580	45	3.0	3.3	4.4	2.5	3.8	1.8	3.0	3.4	2.9			
Meats & meat products	5147	740	45	5.6	3.5	4.9	5.2	[c]	[c]	[c]	4.5	5.7			
Fresh fruits & vegetables	5148	1,560	70	6.2	7.0	5.0	3.6	4.5	5.1	3.7	5.2	4.5			
Groceries & related products, nec	5149	6,210	280	4.5	4.4	4.0	3.9	3.8	5.0	4.7	4.1	4.5			
<b>Petroleum &amp; petroleum products</b>	<b>517</b>	<b>2,450</b>	<b>60</b>	<b>1.9</b>	<b>1.7</b>	<b>2.5</b>	<b>2.6</b>	<b>2.5</b>	<b>2.5</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>			
Petroleum products, nec	5172	1,960	45	1.9	1.6	2.6	2.7	2.4	2.3	2.4	2.3	2.4			
Beer, wine, & distilled beverages	518	2,360	90	4.3	4.1	3.8	4.5	3.7	3.6	4.0	4.1	3.7			
Beer & ale	5181	1,430	80	4.6	5.0	4.2	5.3	5.0	5.5	5.9	4.8	5.4			
Farm supplies	5191	6,710	110	2.0	1.8	1.5	2.0	2.1	1.6	1.1	1.8	1.6			
<b>Retail trade</b>		<b>294,300</b>	<b>4,465</b>	<b>2.2</b>	<b>1.9</b>	<b>1.9</b>	<b>1.6</b>	<b>1.6</b>	<b>1.5</b>	<b>1.4</b>	<b>1.8</b>	<b>1.5</b>			
Building materials & garden supplies	52	16,640	345	2.5	2.1	2.1	1.7	2.0	2.1	2.1	2.0	2.1			
Lumber & other building materials	521	10,290	255	2.9	2.7	2.7	2.1	2.5	2.5	2.5	2.5	2.5			
Lumber & other building materials	5211	10,290	255	2.9	2.7	2.7	2.1	2.5	2.5	2.5	2.5	2.5			
Retail nurseries & garden stores	526	1,690	25	2.6	1.6	1.5	1.2	1.6	1.5	1.7	1.4	1.6			
Retail nurseries & garden stores	5261	1,690	25	2.6	1.6	1.5	1.2	1.6	1.5	1.7	1.4	1.6			
General merchandise stores	53	40,770	610	2.1	2.0	1.7	1.6	1.6	1.5	1.4	1.7	1.5			
Misc. general merchandise stores	539	3,160	50	1.6	1.9	1.2	1.8	1.8	1.9	1.2	1.6	1.6			
Misc. general merchandise stores	5399	3,160	50	1.6	1.9	1.2	1.8	1.8	1.9	1.2	1.6	1.6			
Food stores	54	39,550	870	3.2	2.4	2.5	2.3	2.3	2.1	2.2	2.4	2.2			
Grocery stores	541	34,420	790	3.3	2.5	2.6	2.4	2.4	2.2	2.3	2.5	2.3			
Grocery stores	5411	34,420	790	3.3	2.5	2.6	2.4	2.4	2.2	2.3	2.5	2.3			
Automotive dealers & service stations	55	43,930	710	2.0	1.8	1.9	1.7	1.8	1.5	1.5	1.8	1.6			
New & used car dealers	551	18,910	310	2.2	1.9	2.1	1.8	1.7	1.7	1.6	1.9	1.7			
New & used car dealers	5511	18,910	310	2.2	1.9	2.1	1.8	1.7	1.7	1.6	1.9	1.7			
Auto & home supply stores	553	5,820	125	2.7	2.4	2.5	2.2	2.6	1.8	2.1	2.4	2.2			
Auto & home supply stores	5531	5,820	125	2.7	2.4	2.5	2.2	2.6	1.8	2.1	2.4	2.2			
Apparel & accessory stores	56	11,770	50	1.0	0.7	0.8	0.6	0.4	0.5	0.3	0.7	0.4			
Furniture & home furnishings stores	57	17,250	255	2.0	2.1	1.8	1.5	1.4	1.6	1.4	1.8	1.5			
Furniture & home furnishings stores	571	8,940	175	2.2	2.3	2.2	1.9	1.8	2.2	1.9	2.1	1.9			
Furniture stores	5712	5,520	130	2.5	2.6	2.4	2.2	2.3	2.5	2.3	2.4	2.3			
Floor covering stores	5713	1,380	25	[c]	[c]	2.5	1.8	1.5	3.0	1.3	2.3	1.9			
Eating & drinking places	58	83,010	1,235	2.3	2.2	2.1	1.8	1.6	1.4	1.4	2.0	1.5			
Eating places	5812	69,830	1,100	2.7	2.2	2.2	1.9	1.8	1.5	1.5	2.1	1.6			
Misc. retail	59	42,060	395	1.4	1.3	1.2	1.0	1.0	0.9	0.8	1.2	0.9			
Fuel dealers	598	1,450	25	2.5	1.7	1.2	1.1	2.1	1.4	1.9	1.3	1.8			
<b>Finance, insurance, &amp; real estate</b>		<b>104,390</b>	<b>615</b>	<b>0.8</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.4</b>	<b>0.4</b>	<b>0.6</b>	<b>0.4</b>			
Depository institutions	60	32,190	130	0.8	0.7	0.6	0.4	0.4	0.4	0.4	0.6	0.4			
Nondepository institutions	61	11,270	20	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2			
Security & commodity brokers	62	15,060	20	0.5	0.4	0.2	0.2	0.2	0.0	0.1	0.2	0.1			
Insurance carriers	63	36,790	110	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3			



Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									1993-1995 Avg.	1996-1998 Avg.
				1992	1993	1994	1995	1996	1997	1998				
Insurance agents, brokers, & service	64	[a]	45	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	
Insurance agents, brokers, & service	6411	[a]	45	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	
Real estate	65	8,010	250	3.3	2.1	2.0	1.8	1.7	1.5	1.7	2.0	1.6		
Real estate operators & lessors	651	6,090	115	3.6	2.4	2.3	2.2	1.9	1.8	1.9	2.3	1.9		
Nonresidential building operators	6512	1,180	25	2.9	2.8	1.9	2.5	1.5	[c]	[c]	2.4	2.2		
Apartment building operators	6513	4,390	75	3.9	2.4	2.5	2.1	1.9	1.6	1.6	2.4	1.7		
Real estate agents & managers	6531	[a]	125	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Holding & other investment offices	67	4,300	40	0.8	1.1	1.1	1.3	1.1	0.6	0.9	1.2	0.9		
<b>Services</b>		<b>624,380</b>	<b>9,050</b>	<b>2.0</b>	<b>1.9</b>	<b>1.8</b>	<b>1.5</b>	<b>1.5</b>	<b>1.4</b>	<b>1.3</b>	<b>1.7</b>	<b>1.4</b>		
Hotels & other lodging places	70	18,040	360	3.1	2.9	2.6	2.2	2.0	1.8	2.2	2.6	2.0		
Hotels & motels	701	17,110	345	3.1	2.9	2.6	2.3	2.0	1.8	2.2	2.6	2.0		
Hotels & motels	7011	17,110	345	3.1	2.9	2.6	2.3	2.0	1.8	2.2	2.6	2.0		
Personal services	72	18,030	235	1.7	1.7	1.6	1.4	1.3	1.4	1.2	1.6	1.3		
Laundry, cleaning, & garment services	721	4,930	115	3.0	3.4	3.0	2.0	2.2	2.5	2.3	2.8	2.3		
Linen supply	7213	950	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	4.5	4.0		
Business services	73	125,420	1,695	2.1	2.0	2.1	1.7	1.5	1.3	1.3	1.9	1.4		
Direct mail advertising services	7331	1,650	35	[c]	[c]	3.1	1.8	1.9	2.6	2.3	2.7	2.3		
Services to buildings	734	8,740	265	4.4	4.0	3.4	3.7	3.5	2.8	2.8	3.7	3.0		
Building maintenance services, nec	7349	8,410	250	4.3	3.9	3.4	3.8	3.5	2.7	2.7	3.7	3.0		
Misc. equipment rental & leasing	735	2,440	65	2.7	3.3	3.0	2.9	2.5	2.7	2.9	3.0	2.7		
Equipment rental & leasing, nec	7359	1,680	50	2.6	3.8	3.7	3.5	2.8	3.3	2.6	3.7	2.9		
Personnel supply services	736	41,910	940	3.2	3.1	3.7	2.7	2.4	2.2	2.1	3.1	2.2		
Help supply services	7363	37,370	905	3.4	3.2	3.8	2.8	2.6	2.5	2.2	3.3	2.4		
Auto repair, services, & parking	75	19,040	345	2.3	2.2	2.1	2.1	1.9	1.8	1.7	2.1	1.8		
Automotive repair shops	753	11,250	225	2.7	2.3	2.1	2.4	2.1	2.1	1.8	2.3	2.0		
Top & body repair & paint shops	7532	3,820	60	1.8	1.7	1.8	1.7	1.6	1.7	1.3	1.7	1.6		
General automotive repair shops	7538	4,390	90	3.4	2.4	2.3	2.6	2.1	2.2	2.0	2.4	2.1		
Automotive repair shops, nec	7539	920	25	[c]	[c]	[c]	[c]	[c]	[c]	[c]	2.7	2.8		
Automotive services, ex. repair	754	3,580	60	1.9	2.3	2.7	2.0	2.0	1.5	1.5	2.3	1.7		
Carwashes	7542	2,100	35	1.5	2.0	2.7	2.1	1.6	1.7	1.4	2.3	1.6		
Automotive services, nec	7549	1,480	30	[c]	[c]	[c]	1.9	2.7	1.3	1.8	2.5	1.9		
Misc. repair services	76	5,030	120	2.6	2.1	2.9	1.9	2.3	2.5	2.4	2.3	2.4		
Misc. repair shops	769	3,720	95	2.7	1.9	3.2	2.0	2.3	2.7	2.8	2.3	2.6		
Repair services, nec	7699	2,920	70	2.4	1.7	3.0	1.6	2.2	2.6	2.6	2.1	2.4		
Motion pictures	78	5,000	15	0.4	0.6	0.7	0.3	0.4	0.3	0.3	0.5	0.3		
Amusement & recreation services	79	13,160	345	2.3	2.0	1.4	1.4	1.6	1.3	1.3	1.6	1.4		
Producers, orchestras, entertainers	792	1,930	40	1.7	1.6	0.9	1.6	2.2	1.9	1.9	1.4	2.0		
Theatrical producers & services	7922	[b]	35	[c]	[c]	[c]	[c]	[c]	2-3	2-3	1.6	2-3		
Commercial sports	794	980	40	[c]	[c]	[c]	[c]	[c]	[c]	[c]	5.8	3.9		
Sports clubs, managers, & promoters	7941	700	35	[c]	[c]	[c]	[c]	[c]	[c]	[c]	7.0	4.9		
Amusement & recreation, nec	7999	[a]	155	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]		
Health services	80	169,850	3,385	2.8	2.7	2.5	2.1	2.0	2.1	1.9	2.4	2.0		
Nursing & personal care facilities	805	38,590	1,380	5.7	5.2	4.6	4.0	3.6	3.7	3.5	4.6	3.6		
Skilled nursing care facilities	8051	33,670	1,260	6.4	5.8	4.8	4.2	3.8	3.9	3.6	4.9	3.7		
Intermediate care facilities	8052	2,310	60	2.8	2.6	3.1	2.1	1.8	2.4	3.2	2.6	2.5		
Nursing & personal care, nec	8059	2,610	65	3.0	3.0	2.8	3.8	2.6	2.3	2.5	3.2	2.4		
Hospitals	806	60,840	1,500	3.3	3.2	3.0	2.6	2.6	2.6	2.1	2.9	2.5		
General medical & surgical hospitals	8062	55,240	1,415	3.0	3.0	2.9	2.6	2.7	2.7	2.2	2.8	2.6		
Psychiatric hospitals	8063	[b]	70	7.1	6.9	6.4	5.0	3.6	3-4	1-2	6.2	2-3		
Home health care services	808	5,840	150	3.9	3.6	3.0	2.5	2.3	2.8	2.7	3.0	2.6		
Home health care services	8082	5,840	150	3.9	3.6	3.0	2.5	2.3	2.8	2.7	3.0	2.6		

Industry [2]	SIC Code	Average FTE Covered Emp., 1996-1998 [3]	Annual Avg. Pd. Indem. Claims, 1996-1998 [4]	Paid Indemnity Claims per 100 Full-Time-Equivalent Covered Workers [5]									
												1993-1995 Avg.	1996-1998 Avg.
				1992	1993	1994	1995	1996	1997	1998			
Health & allied services, nec	809	3,140	50	1.3	1.2	1.2	1.0	1.2	2.5	1.2	1.2	1.2	1.6
Health & allied services, nec	8099	1,210	25	1.1	0.8	[c]	0.6	[c]	[c]	2.1	0.9	2.1	2.1
Legal services	81	13,100	40	0.4	0.3	0.4	0.4	0.4	0.3	0.2	0.4	0.3	0.3
Educational services	82	137,960	1,280	1.2	1.1	1.0	0.9	0.9	0.9	0.9	1.0	0.9	0.9
Social services	83	49,250	825	2.5	2.2	2.2	2.0	2.0	1.6	1.5	2.1	1.7	1.7
Individual & family services	832	14,300	220	1.7	1.5	1.4	1.7	1.9	1.4	1.3	1.5	1.5	1.5
Individual & family services	8322	14,300	220	1.7	1.5	1.4	1.7	1.9	1.4	1.3	1.5	1.5	1.5
Job training & related services	833	6,330	170	5.0	4.7	3.0	3.2	3.1	2.4	2.6	3.5	2.7	2.7
Job training & related services	8331	6,330	170	5.0	4.7	3.0	3.2	3.1	2.4	2.6	3.5	2.7	2.7
Residential care	836	16,200	295	3.1	2.8	3.0	2.2	2.3	1.7	1.6	2.7	1.8	1.8
Residential care	8361	16,200	295	3.1	2.8	3.0	2.2	2.3	1.7	1.6	2.7	1.8	1.8
Museums, botanical, zoological gardens	84	1,650	10	1.1	1.9	0.9	0.5	0.8	0.8	0.4	1.1	0.6	0.6
Membership organizations	86	13,690	190	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.9	0.7	0.7
Religious organizations	8661	[a]	90	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Engineering & management services	87	40,280	180	0.5	0.7	0.6	0.4	0.5	0.5	0.4	0.5	0.4	0.4
Private households	88	[a]	20	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]	[a]
Services, nec	89	980	5	[c]	[c]	[c]	[c]	[c]	[c]	0.5	1.1	0.7	0.7
<b>Public administration</b>		<b>79,370</b>	<b>1,145</b>	<b>2.3</b>	<b>2.2</b>	<b>1.9</b>	<b>1.4</b>	<b>1.2</b>	<b>1.3</b>	<b>1.6</b>	<b>1.8</b>	<b>1.4</b>	<b>1.4</b>
Executive, legislative, & general	91	[e]	435	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
General government, nec	919	[e]	30	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
General government, nec	9199	[e]	30	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Justice, public order, & safety	92	[e]	490	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Public order & safety	922	[e]	485	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Police protection	9221	[e]	280	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Correctional institutions	9223	[e]	70	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Fire protection	9224	[e]	125	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Finance, taxation, & monetary policy	93	[e]	10	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Administration of human resources	94	[e]	80	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Environmental quality & housing	95	[e]	85	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
Administration of economic programs	96	[e]	35	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]
National security & intl. affairs	97	[e]	5	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]	[e]

nec = not elsewhere classified.

1. The incidence rate is the number of cases per year per 100 full-time-equivalent workers. Incidence rates are computed with claims data from the Department of Labor and Industry and employment and hours data from other sources. The numbers of indemnity claims are developed, using historical rates of claim development, to represent estimates of what the numbers will be when claims are mature and all data are reported to the Department of Labor and Industry. Data sources and estimation procedures are described in Appendix B.
2. Two-digit industries are included if they had at least 200 employees in 1998. Three- and four-digit industries are included only if they had an annual average of at least 25 paid indemnity claims and an average annual incidence rate of at least 1.5 for 1996-1998.
3. Rounded to the nearest 10.
4. Rounded to the nearest 5.
5. Where the confidentiality of industry employment data is protected by nondisclosure rules, the incidence rate is given as a range between the two closest whole numbers.
  - a. Not computed because of differences in coverage between Reemployment Insurance and workers' compensation. See Appendix B for details.
  - b. Not given because nondisclosure rules protect data confidentiality. See Appendix B for details.
  - c. Not computed because industry employment did not meet minimum-size threshold. See Appendix B for details.
  - d. Fewer than five per year.
  - e. Not computed because of industry classification issues. See Appendix B for details.

