



WHAT'S A TCIR?

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TCIR, or **Total Case Incident Rate**, is the generally accepted measure used to report workplace injuries across an industry or industry segment. TCIR is defined as the average number of work-related injuries incurred by 100 workers during a one-year period. Use of the TCIR to report workplace injuries allows comparison of accident and injury statistics across industries, among industry segments, and from one year to the next.

The TCIR is typically calculated as follows:

$$\text{TCIR} = \frac{200,000 \times \text{annual \# of injuries incurred}}{\text{annual total \# of hours worked}}$$

For example, if an industry or industry segment with 7,500 workers reported 430 injuries in 2001, and workers in that industry averaged 40 hours per week for 50 weeks, then the 2001 TCIR for that industry segment would be:

$$\text{TCIR} = \frac{200,000 \times 430}{7,500 \times 40 \times 50} = \frac{86,000,000}{15,000,000} = 5.7 \text{ injuries/100 workers/year}$$

The U.S. Labor Department, Bureau of Labor Statistics (BLS), calculates and publishes the TCIRs for all major U.S. industries each year. They are available to the public on the BLS web site, www.bls.gov. Industries are listed according to an assigned number, called a Standard Industrial Classification (SIC) code. The SIC code for the logging industry is 2410, and includes all types of logging systems across the country, from skyline yarder operations in Oregon to feller-buncher/grapple skidder operations in Georgia. The government's TCIR calculations are based on "OSHA Reportable Injuries," defined as those injuries that result in medical expenses exceeding \$1,000 and one or more days lost from work, or a fatality. For 2000, the BLS TCIR for logging was 8.2, and the "all industry" average was 5.8, indicating that logging was approximately 40% more hazardous than the average manufacturing job that year. Over the past 10 years, the BLS logging industry TCIR has fallen impressively—in 1990, it was 17.5!

To monitor regional trends and evaluate the effectiveness of logging safety training programs, it may be useful to determine an accurate TCIR for a key industry segment. For example, researchers at Virginia Tech have used Worker's Compensation Insurance (WCI) claim data since 1996 to establish the annual TCIR for mechanized (feller-buncher/grapple skidder) logging operations in the South. Using WCI claim data insures that all injuries, including minor ones that may not qualify as "OSHA Reportable", are included in the calculation. Virginia Tech's 2000 "mechanized logging" TCIR of 6.1 indicates that even with minor injuries included, this important logging industry segment is significantly safer than the nationwide logging industry average.