Workers' Compensation Claims in the Food Processing Industry, Washington State; 1994 to 1999.

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TABLE OF CONTENTS

List of Tables and Figures

Tables

Table 4(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Costs by *Type* of Injury (> 1.0 % total claims) for SIC codes 201-206, 208, 209, 1994-1999.

Table 4(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims' Rate by Year by *Type* of Injury (> 1.0 % total claims) for SIC codes 201 -206, 208, 209, 1994-1999.

Table 5(a): Washington State Workers' Compensation State Fund Claims; Food Processing by Selected *Body Parts* of Injury and Illness (≥1% of total claims) for SIC codes 201 - 206, 208, 209; 1994-1999.

Table 5(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Costs by *Body Part* (≥1% of total claims) for SIC codes 201 - 206, 208, 209; 1994 - 1999.

Table 5(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims' Rate by Year by *Body Part* (≥1% of total claims) for SIC codes 201 - 206, 208, 209; 1994 - 1999.

Table 5d: Washington State Workers' Compensation State Fund Claims; Food Processing Claims by *Nature* and *Source* of Injury for Selected *Body Parts* for SIC codes 201-206, 208, 209, 1994-1999.

Table 6(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims Rates by *Source* of Injury (≥1.5% of total claims) for SIC codes 201 - 206, 208, 209; 1994-1999.

Table 6(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Costs by *Source* of Injury (>1.5% of total claims) for SIC codes 201 - 206, 208, 209; 1994 - 1999.

Table 16(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims Rates by Year by *Type* of Injury (≥ 1.0 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304; 1994 - 1999.

Table 17(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims Rates by *Body Part* (≥1% of total claims) for WIC Codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304; 1994 - 1999.

Table 17(b): Washington State Workers' Compensation State Fund Claims. Food Processing Claim Costs by *Body Part* (≥ 1 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304; 1994-1999.

Table 17(c): Washington State Workers' Compensation State Fund Claims. Food Processing Claims and Claims Rates by Year by *Body Part* (≥1 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304; 1994 - 1999.

Table 17(d): Washington State Accepted Worker's Compensation Claims; *Nature* and *Source* of Injury for Selected *Body Parts* in WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304; 1994-1999.

Table 18(a1): Washington State Workers' Compensation State Fund Claims; Food Processing Claims by *Source* of Injury (≥ 1% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906 4002, 4301, 4302, and 4304; 1994-1999.

Table 18(a2): Washington State Workers' Compensation State Fund Claims. Food Processing Claims Rates by *Source* of Injury (≥ 1% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906 4002, 4301, 4302, and 4304; 1994-1999.

Figure

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Executive Summary:

Objectives: This study describes the state fund workers' compensation claim rates in the food processing industry by Standard Industrial Classification (SIC) and Washington Industrial Classification (WIC) coding systems. Claim incidence rates, workers' compensation claims costs and yearly trends in claim incidence rates are described utilizing the American National Standard Institute (ANSI) methods for coding injury. Workers' compensation claims for fall injuries, overexertion, machine related injury, noise induced hearing loss and forklift injury were used to establish baseline measures for the Healthy Workplaces Initiative. Washington State workers' compensation claim rates were compared to the Bureau of Labor Statistics (BLS) Annual Survey of Occupational Injury and Illness (SOII). Conditions under surveillance by the Washington State Department of Labor and Industries' Safety and Health Assessment and Research for Prevention (SHARP) program were described for the food processing industry.

Methods: We describe Washington State fund accepted workers' compensation claims occurring in the food processing industry from 1994 to 1999. We identified claims associated with food processing SIC and WIC codes and generated claims' rates utilizing hours reported to workers' compensation for insurance premium purposes. ANSI codes were used to describe the most frequent injuries by the *type*, *nature*, *body part*, and *source* codes. Direct costs to the workers' compensation system were determined and presented for the above conditions. ANSI codes were combined to describe injuries related to falls, forklift injuries, overexertion, injuries related to machinery and noise induced hearing loss.

Results: Using SIC codes, between 1994 and 1999, there were 16,367 state fund accepted workers compensation claims in food processing (SIC 20) resulting in $65.9 million in direct workers' compensation costs. The average annual claim rate was 1,877 claims per 10,000 full time equivalent (FTE) employees, with an average annual decrease in the claims rate by - 3.58% (95% CI: -4.51%; -2.65%). This did not differ significantly from trends in workers' compensation claim rates for all of manufacturing SICs

excluding food processing and trends in claim rates for all industries combined. State fund claims rates in food processing exceeded claim rates in all other industries combined by approximately 50 percent. The most common nature of injury claims were for sprains, cuts, and contusions. The most common type of injury claims were for overexertion and falls. The most frequent body parts injured were fingers, back and the hand.

The frequency of most injuries was low necessitating multiple interventions to attempt to reduce injury rates in this industry. The application of the best practices identified through the Healthy Workplaces Initiative regarding machine guarding, manual handling, forklift operation, fall prevention and noise control have the potential to reduce serious injury and illness if applied in the food processing industry.

Many factors complicate the comparison between injury and illness rates reported to the Washington State workers' compensation system and those reported to the Washington State BLS SOII. Twelve of 14 SIC injury rates derived from workers' compensation were outside of the 95% confidence interval generated for injury rate estimates from the BLS SOII. Reasons for this discordance are discussed.

Using WIC coding, between 1994 and 1999, there were 34,039 state fund accepted workers compensation claims in Washington State food processing WIC codes resulting in $131.3 million in direct workers' compensation costs. The average annual claims rate was 2,144 claims per 10,000 FTEs, with an average annual decrease in the claim rate by - 4.11% (95% CI: -5.19%; -3.02%), which did not differ significantly from trends in claim rates for all industries combined. By nature of injury claims were most common for sprains, cuts, and contusions while by type of injury the most common claims were for overexertion and falls. The most frequent body parts injured were fingers, back and the eye. Risk class analysis may lead to more refined injury rate estimates related to occupational tasks associated with food processing than SIC code analysis.

Conclusions: This descriptive study suggests that claim rates in food processing decreased over the study period, but were not significantly different than decreases in claim rates in all manufacturing SICs or in all industries combined. If best practices identified in the Healthy Workplace Initiative are implemented, the potential for

significant reduction in workers' compensation claim costs and workers' compensation claim rates may occur. There is poor comparability between BLS rates and workers' compensation rates of injury and illness in the food processing SIC codes.

I. Introduction:

Improving occupational safety and health demands new approaches to understanding and reducing the risks of occupational disease and injury in the workplace. Occupational health surveillance usually focuses on individual hazards or specific diseases associated with those hazards.[1,2] Little industry based non-fatal occupational injury and illness surveillance on a state or national level exists aside from the United States' Department of Labor Bureau of Labor Statistics'(BLS) Survey of Occupational Illness and Injury (SOII). As part of an attempt to improve occupational safety and health the Washington State Department of Labor and Industries' (L&I) Safety and Health Assessment and Research for Prevention (SHARP) program sought to identify best practices in an industry and promote the transfer of those best practices throughout the industry.[3] The safety and health interventions in the targeted industry were aimed at reducing hazardous workplace exposures and at reducing workers' compensation claim rates.

The primary intention of this report is to characterize Washington State workers' compensation (WC) claims in the food processing industry. This will enable L&I to prioritize the most significant injuries and illnesses for prevention activities, monitor trends in WC claims rates and establish baseline measures to assess the effectiveness of the Healthy Workplaces Initiative. The food processing industry was the initial industry selected to participate in this initiative due to its economic importance to Washington State, and its high rate of work-related injury and illness.[3]

Characterizing injury and illness rates within an industry, such as food processing, offers the opportunity to further explore relevant issues related to industry based occupational health surveillance. These are:

1. Evaluating the relative importance of different diseases and injuries within food processing by comparing workers' compensation claim rates, claim costs, hospitalization rates or the proportion of claims deemed compensable (involving four or more days off from work). Ranking and determining the importance of a disease or injury from administrative data can be based on many factors such as the number of people affected, the severity of the disease, the rate at which the illness occurs but is limited by its inability to capture sometimes more important factors such as the

political and public perceptions of the disease or injury, and the ease within which a disease or injury may be prevented.

2. Utilizing and comparing different classification systems for the food processing industry, such as the SIC or the WIC System, to determine either work activities or industry subdivisions that have elevated injury and illness rates.

3. Comparing Washington State workers' compensation claim rates to estimates obtained from the US Department of Labors' Annual SOII. This comparison will help determine the relative strengths and limitations of each system in obtaining industry based estimates of injury and illness rates.

4. Presenting data to stakeholders in the food processing industry for intervention or planning purposes at the company level.

II. Methods:

II. A. General Description:

II. A 1. Workers' Compensation System:

Washington State employers, except the federal government, are required to obtain workers' compensation insurance through the Washington State Department of Labor and Industries industrial insurance system unless they are able to self-insure. The L&I **State Fund** provides workers' compensation to approximately 160,000 employers and approximately 66% of the workforce. The remaining 400 (primarily large) employers **self-insure** and employ approximately one-third of the Washington workforce. The L&I State Fund has elective workers' compensation coverage for self-employed workers and household employers with two or less workers, and other defined exemptions in Title 51.[4] All workers who are covered by the state fund pay a portion of the workers' compensation insurance premium. All employers in Washington State, except those covered by alternative workers' compensation systems, are regulated under Washington State Industrial Safety and Health Act.

II. A 2. Workers' Compensation Databases:

Two primary databases are used in workers' compensation insurance claims processing. The Washington State Department of Labor and Industries' Industrial Insurance System (LINIIS) contains all administrative information necessary to adjudicate a state fund claim. Information contained in LINIIS includes identification of the employer and injured worker, coding to characterize the type of injury or illness, and other necessary medical information. A second data processing system, the Medical Information and Payment System (MIPS) contains all billing information generated by health care providers including hospitals for state fund claims. This system contains all medical billing information for procedures, treatment and physician diagnoses' as coded by the International Classification of Disease version 9 (ICD-9) system. Claims originating from self-insured employers that involve four or more days of lost time are

coded in the LINIIS system. Billing information (ICD - 9 codes and medical costs) for self-insured claims are generally not coded in the MIPS system.

II. A 3. Claim Information:

In Washington State, a physician and worker initiate a workers' compensation claim by filing a report of accident (ROA) form. The worker provides demographic information (date of birth, gender, marital status, address information) employment and wage information and a brief description of the accident. The physician provides a medical diagnosis (with ICD-9 code), subjective and objective information regarding the diagnosis, and a treatment and diagnostic plan. The physician also appraises whether an injury or illness was caused by employment on a probability scale (NO; POSSIBLE - less than 50% likely; PROBABLE - more than 50% likely; and YES). Generally, a physician must mark 'probable' or 'yes' for a claim to be accepted. The workers' employer completes an employer ROA form when they are notified of a physician and worker ROA filing. The information contained in the employer ROA form includes wage and employer information as well as the employer's description of the accident. In order for an occupational disease claim to be accepted in the Washington workers' compensation system three criteria must be met:

1. A physician must present an opinion that work conditions, on a 'more probable than not basis' (a greater than 50% chance), are the cause of the illness or have temporarily or permanently aggravated a pre-existing condition; AND
2. Objective medical findings must support the diagnosis; AND
3. The disease must arise 'naturally and proximately' out of employment.[5]

An occupational injury claim must have the first two criteria associated with an occupational disease claim and occur during the course of employment.[5] All claims data from the ROA form including the text portion are entered into LINIIS verbatim. The text descriptions of the injury or illness provided by the physician, worker, and employer are searchable for words or portions of words indicative of a specific injury or illness.

II. A 4. Claims' Coding and Identification of Specific Claims:

All Washington workers' compensation state fund claims are coded for *nature*, *type*, *body part*, *source*, and *associated source* of injury or illness from the ROA form according to the American National Standards Institute (ANSI) Z16.2 coding system.[6] ANSI codes can be used individually (e.g. *nature* code (100) = amputation); or in combination with each other (e.g. *source* code (0201) = live animals and *type* code (025) = bitten by) to identify specific injury or illness claims. ANSI codes can be combined with ICD-9 diagnosis and procedure codes to identify claims as well. Descriptions of the injury or accident on the ROA forms as described by the physician, worker, or employer can be searched by text (e.g. the word 'asthma' can be the basis for search of the database). For selected conditions (e.g. work-related musculoskeletal disorders) claims may be identified by combining ANSI codes and ICD codes. Cases identified by combining ICD-9 and ANSI codes undergo validation according to a predetermined case definition for the selected injury or illness.

Each employer has a Standard Industrial Classification (SIC)[7] code assigned which identifies the industry associated with the firm's commerce. SIC has been used nationally as the standard coding system for industry but is being replaced by the North American Industrial Classification System. Each employer reports hours worked for each employee and confers its insurance premium based on the hours worked in each Washington Industrial Classification (WIC) system.[8] The WIC system combines industry and occupation to group workplaces by similar risk of injury for insurance purposes (e.g. a clerical worker and a butcher within the same company may have the same SIC code but will be assigned different risk classes). The WIC system is unique to Washington State.

II. A 5. Claim costs:

Primary costs associated with a workers' compensation claim involve the medical care administered, lost work time payments and permanent partial disability costs. Claim costs for closed claims reflect actual paid costs. For claims that are not closed, costs reflect actual totals incurred plus the actuarially estimated total future costs. Indirect costs and administrative costs of managing the claim are not included in claim costs.

II. B. Other data sources:

II. B 1.The Washington State Employment Security Department (ESD) manages unemployment insurance for the employers of Washington State. ESD collects information on wages, hours worked and number of employed workers per quarter for each employer in the state of Washington. Unemployment insurance is not required for owners of businesses such as corporate officers and the self-employed. Each employer has a Unified Business Identifier (UBI) number, which allows linkage between state administrative databases, including the Washington State L&I and ESD. SIC codes are assigned systematically to each employer within Washington State by each Washington State agency. SIC codes assigned by ESD are considered more reliable for the purposes of this research.

II. B 2. The US Department of Labor's Bureau of Labor Statistics (BLS) performs the Survey of Occupational Injuries and Illnesses (SOII). The annual survey estimates the number and incidence rate of nonfatal workplace injury and illness based the OSHA 200 (now OSHA 300) logs kept by private industry employers during the year. A small sample of employers (~5%) is surveyed in the state and standard errors are published for case incidence rates. Number and incidence rates are reported by industry according to SIC code. BLS SOII sampling is designed to allow state-to-state comparisons of injury rates and illness statistics. ESD provides BLS with a listing of each individual businesses' SIC code for Washington State for the annual SOII. The BLS SOII utilizes Washington workers' compensation data to complete the characterization of injuries identified by employers as lost time cases.

II. C. Specific Methods Description for Food Processing Study:

II. C 1 a. Data Ascertainment:

We identified all workers' compensation claims filed for injury and illness from January 1, 1994 to December 31, 1999 for employer accounts assigned food processing

SIC codes and WIC codes by the Washington State Department of Labor and Industries. Claims with food processing SIC codes were obtained from LINIIS during November 2001. Hours by three-digit SIC code were obtained by linking L&I accounts to ESD assignment of hours for those same accounts. The two-digit SIC code for food processing is 20, which represents all claims associated with:

- meat products (SIC 201)
- dairy products (SIC 202)
- preserved fruits and vegetables (SIC 203)
- grain mill products (SIC 204)
- bakery products (SIC 205)
- sugar and confectionery products (SIC 206)
- fats and oils (SIC 207)
- beverages (SIC 208)
- miscellaneous food products (SIC 209).

WIC codes associated with food processing are assigned by the Washington State Department of Labor and Industries' Employer Services. WIC claims were identified in the database in January of 2002. For WIC, employment information is reported to Labor and Industries by state fund employers as the number of hours worked by employees in that particular risk class for each quarter of the year. These hours are reported by the employer's account.

The WIC codes associated with food processing:

- grain and feed and flour mills (WIC 2101)
- fruit and vegetable packing -fresh (WIC 2104)
- meat, fish, poultry dealers- wholesale (WIC 3304)
- breweries, wineries and beverage bottling (WIC 3702)
- fruit, vegetable canneries, food product mfg., NOC (WIC 3902)
- sugar refining (WIC 3903)
- bakeries - wholesale, NOC (WIC 3906)
- dairy products mfg., NOC (WIC 4002)
- meat products mfg.; slaughter packing houses (WIC 4301)

- custom meat cutting (WIC 4302)
- feed lots and stock yards (WIC 4304).

Data for each claim includes: Claimant's age, gender, social security number, claim identification number, claim status (medical only; compensable), ANSI z16.2 codes for *body part*, *source*, *nature*, and *type* of injury or illness; total cost of claim, text descriptions of the injury or illness. The claim identification number was used to access medical billing information for ICD-9 codes, claims that involved inpatient hospitalization and costs associated with the claim.

II. C 1 b. Specific Injury or Illness Claim Identification:

Fifty claims associated with ANSI z16.2 *source* code (5635) 'powered carrier' were reviewed to validate if a forklift was associated with the claim. All but one described an injury associated with a forklift. Claims associated with forklifts were further characterized by providing details associated with the *type*, *nature* and *body part* injured. Similarly, claims associated with 'fall from elevation' (ANSI Z16.2 *type* code 03) were further characterized by identifying the specific *type* (i.e. 'fall from platform' code 032), *nature* and *body part* of injury. Machinery related claims were identified by grouping ANSI Z 16.2 *source* of injury codes 3000 to 3999, which encompasses all subclasses of machinery. 'Overexertion' claims were identified by ANSI *type* codes 120 to 129, which encompasses all forms of overexertion whether by throwing or lifting etc. Standard, validated methods to identify claims for workplace violence,[9] work-related musculoskeletal disorders,[10] work-related asthma,[11] hospitalized burns[11], dermatitis[12] and hearing loss[13] have been presented elsewhere. Census Occupation Codes were combined to provide comparison of the distribution of claims associated with occupation with the distribution of workers by reported to the ESD department.

II. C 2. Data Analysis:

Descriptive analysis of workers' compensation claims were conducted for the following groups: ANSI *nature*, ANSI *source*, ANSI *type* and ANSI *body part*, selected Washington State priority conditions of workplace violence, asthma, dermatitis, hospitalized burns, and work-related musculoskeletal disorders of the neck, back and

upper extremity. Analysis by group included trends in the number of claims and claim incidence rate (CIR) by year over the study period; the number of claims and average annual CIR by SIC code or WIC classification, average annual number of workers' compensation claims, average annual CIR, total cost of claims, median cost of claims, average claim costs, proportion compensable claims, and average compensable claim costs.

The number of full time equivalent (FTE) employees working per year was calculated assuming each full-time employee works 2,000 hours per year (40 hours per week for 50 weeks per year). Data analysis was restricted to SIC or WIC with greater than 25 claims per year and at least 50 FTE per year. Self-insured employers were excluded from detailed analysis due to the small number of employers who are self-insured in food processing and the incompleteness of some of the data elements described.

We used a Poisson regression model to test for evidence of a trend in claim rates as a function of calendar year. The GENMOD procedure, with a Poisson distribution, was used to evaluate trends over time (using SAS Release 8.2). We used the following regression model:

$$\text{Ln}\,(\lambda_{year}) = \beta_0 + \beta_1\,(\text{Year}) + \varepsilon$$

The λ_{year} is the injury rate for each year and the natural log transformation ensures that the model-based predictions of rates are constrained to be greater than or equal to zero. We estimated the annual percent decrease in injury rate by exponentiating the coefficients from the fitted model.

III. **Results:**

The results are divided into two general groups: SIC Food Processing Codes Tables 1 - 12 and those associated with the WIC classification system Tables 13 - 21. For the WIC or SIC coding systems, results are divided into four categories:

1. General overview of all accepted state fund claims;
2. Descriptive analysis of claims by ANSI codes for *nature*, *type*, *source* and *body part*;
3. Comparative incidence rates and cost measures associated with conditions under surveillance by the Washington State SHARP program;
4. A descriptive analysis of selected topics which were the focus of the 'Healthy Workplaces; Successful Strategies in the Food Processing Industry' document including falls from elevation, forklift injury, noise injuries (hearing loss), and injuries associated with materials handling using a surrogate measure of overexertion type codes.

III A. Standard Industrial Classification (SIC) System:

III A 1. General Overview of Accepted State Fund Claims:

From 1994 to 1999, 17,930 Washington state fund workers' compensation claims were filed for SIC 20, of which 1,563 (8.7%) were rejected. Of the 16,367 accepted claims, 16,187 (98.9%) were closed and 3,932 (24%) were compensable claims. Accepted state fund claims in food processing (SIC 20) had a total direct cost of $65,941,000 (Table 1). Claim incidence rates in food processing (SIC 20) decreased an average of 3.58% annually (95% CI: -4.51%; -2.65%) from CIR of 20.6 per 100 FTEs in 1994 to 17.3 per 100 FTEs in 1999.

Workers' compensation CIRs for all state fund employers combined over the study period had an average annual change of -4.22% (95% CI: -4.85%; -3.58%), decreasing from 12.8 per 100 FTE in 1994 to 10.2 per 100 FTEs in 1999. Workers' compensation CIR for all manufacturing SIC codes excluding food processing SICs showed an average annual decline from 1994 to 1999 of 3.57% (95% CI: -4.54%; -2.59%), decreasing from 17.6 per 100 FTEs to 13.4 per 100 FTEs. Differences in declining rates were not statistically different between these three groups (Figure 1). Due to the small number of claims in fats and oils (SIC 207) it was not included in additional descriptive analysis.

III A 2. Descriptive analysis of claims by ANSI codes:

The potential of individual employers and worker groups to prioritize safety and health problems in their individual workplace combined with the wealth of data available for analysis required us to present the data according to the following structure:

Table A: Matrix of Tables Describing Claims Associated with Food Processing (SIC 20) Employers.

Subject(s) of Table	ANSI *Nature*	ANSI *Type*	ANSI *Body Part*	ANSI *Source*
Number of Claims/ Claims Incidence Rate	Table 3(a)	Table 4(a)	Table 5(a)	Table 6(a)
Demographics/ Claim Costs/ Hospitalizations	Table 3(b)	Table 4(b)	Table 5(b)	Table 6(b)
Trend in Claim Rates	Table 3(c)	Table 4(c)	Table 5(c)	Table 6(c)

The most frequent ANSI codes by body part were further characterized by determining the *nature* and *source* of injury (Table 5(d)). The most affected body part was the fingers with the majority of injuries occurring in the form of cuts due to a non-power knife. This accounted for 714 claims or 4.4% of all claims. The back was identified in 2,702 claims of which 945 (35.0%) were sprains directly associated with moving containers.

III A 3. Washington State SHARP Occupational Health Surveillance Activities:

The Washington State SHARP program tracks seven 'priority' conditions -- workplace violence, dermatitis, hospitalized burns, asthma, carpal tunnel syndrome, rotator cuff syndrome, epicondylitis, and sciatica. Rotator cuff syndrome and carpal tunnel syndrome represented approximately one-sixth of all claim costs in food processing for the study period. Diseases such as asthma and dermatitis represent relatively few claims in the food processing industry (Table 7(a)). Trends in accepted state fund claim rates for neck, back and upper extremity musculoskeletal disorders declined over the study period (Table 7(b)) consistently with the previously reported trends for these musculoskeletal disorders.[10] The meatpacking industry had the highest claim rates for carpal tunnel syndrome, rotator cuff syndrome, work-related musculoskeletal

disorders(WMSDs) of the neck, back, and upper extremity when compared to the other three digit food processing SICs (Table 7(c)).

III A 4. 'Healthy Workplaces: Successful Strategies in the Food Processing Industry':

The 'Healthy Workplaces Initiative' sought to identify best practices associated with preventing specific types of injury and illness in food processing workplaces. Best practices were summarized and distributed to all food processing workplaces in Washington State.[14] Five different types of injury and illness will be monitored to determine the effectiveness associated with the Healthy Workplaces Initiative intervention:

- Falls occurring in the workplace;
- Forklift injuries;
- Hearing loss claims,
- Overexertion claims, which may in part be surrogate measures for claims related to poor material handling practices
- Machine related injuries as a surrogate measure of machine guarding effectiveness and lockout-tagout procedures.

III A 4 a. Fall injuries:

There were 708 claims resulting from 'falls from elevation'. The average annual state fund CIR over the study period for falls from elevation was 82 per 10,000 FTEs (95% CI: 68; 97). Approximately 31% of all fall from elevation claims involved four or more days off from work. Most state fund claims for falls from elevation originate on stairs (33.2%), from vehicles (20.3%) or off ladders (15.5%) (Table 8). Injuries resulting from these falls were contusions, sprains, fractures and/or multiple injuries. Injury rates for falls from elevation were highest in dairy products (SIC 202), preserved fruits and vegetables (SIC 203) and grain mill products (SIC 204).

There were 1,447 claims resulting from 'falls from same level' with an average annual state fund CIR of 168 per 10,000 FTEs (95% CI: 151; 186) over the study period. Approximately 28% of all fall from same level claims involved four or more days off from work. The average cost of a state fund compensable claim for a fall from same level was among the highest for all injury types at $18,524. Injuries resulting from these falls were contusions, sprains, fractures and/or multiple injuries (Table 9). State fund

CIRs from 1994 to 1999 for falls from same level were highest in dairy products (SIC 202), preserved fruits and vegetables (SIC 203), bakery products (SIC 205) and sugar and confectionery products (SIC 206).

III A 4 b. Forklift injuries:

Forklift use is common in the food processing industry for materials handling. In food processing (SIC 20) for the study period there were 287 claims in which 'powered carrier' was listed as the source of the injury for an average annual state fund CIR of 34 per 10,000 FTEs (95% CI: 24; 43). Approximately 40% of the claimants were 'struck by' the forklift (Table 10).

III A 4 c. Hearing loss:

Noise exposure is commonplace in food processing facilities. A total of 78 state fund claims were accepted for 'hearing loss' for an average annual state fund CIR of 9.0 per 10,000 FTEs (95% CI: 4.3; 13.7). The total cost of all hearing loss claims was $1.1 million. Mean and median claim costs, $18,956 and $10,975 respectively, associated with hearing loss were among the highest of any illness occurring in the workers' compensation state fund food processing industry.

III A 4 d. Overexertion:

Materials handling is common in food processing. Consequently, there were 4,582 'overexertion' workers' compensation claims in food processing (SIC 20) over the study period. The average annual state fund CIR was 533 per 10,000 FTEs (95% CI: 486; 580). One third of all workers' compensation state fund direct costs for food processing claims were for overexertion claims. Approximately 60% of all 'lifting overexertion' claims were associated with source codes identifying containers (ANSI source codes (600 - 699)). The most common body parts affected by overexertion were the back (39.8%), hand/wrist (18.1%), shoulder (10.7%), multiple body parts (10%) and the elbow (5.6%).

III A 4 e. Machinery related injury:

Food processing utilizes a variety of machinery to improve productivity. As part of the Healthy Workplace Initiative, machine guarding and lock-out tag-out educational materials were emphasized to improve safety and health. There were 1,094 workers' compensation claims for injuries related to machinery (ANSI source codes 3000 - 3999) for an average annual state fund CIR over the study period of 127 per 10,000 FTEs (95% CI: 101;154). The total cost of machine related injury in food processing (SIC 20) was $4.8 million (7.3% of all workers' compensation costs in food processing (SIC 20)). Approximately 40% of all machinery claims were associated with *nature* codes for cuts (40.3%), contusions (21.8%), sprains (15.1%) and fractures (9.2%). Most frequently machinery claims involved the hand/wrist (68.5%), the elbow (6.9%) and back (6.1%). Twenty-six of the 54 amputations recorded during the study period in food processing (SIC 20) were related to machinery (ANSI source codes 3000 – 3999).

III A 5. Distribution of Claims by Occupation:

The 1998 distribution of employment by occupation by the three-digit SIC codes and the distribution of the 1998 state fund worker compensation claim occurrence by occupation is presented in Table 11. While the claim numbers are small, generally workers in the production and materials handling occupations accounted for most of the workers' compensation claims; those in service operations in preserved fruits and vegetables (SIC 203) and beverages (SIC 208) were over-represented in the claims distribution by occupation.

III B. Washington Industrial Classification (WIC) System:

III B 1. General Overview of Accepted State Fund Claims:

From 1994 to 1999, 38,279 Washington state fund workers' compensation claims were filed for WIC codes associated with food processing, of which 4,240 (10.9%) were rejected. Of the 34,039 accepted claims, 33,721 (99.1%) were closed, and 8,006 (23.5%) were compensable.

There were more claims identified by WIC codes for food processing (n_1 = 34,039) than by SIC (n_2 = 16,367). Of the 16,367 claims identified with a food processing SIC code, 86.1% had a food processing WIC code. Of the 34,039 WIC codes associated with food processing, 42.1% had a food processing SIC code (Table 12).

For the study period, accepted state fund claims in food processing (WIC) had a total direct cost of $131,316,000 and an average annual CIR of 18.8 per 100 FTEs (95% CI: 17.9; 21.5) (Table 13). Claims incidence rates in the food processing WICs decreased an average of 4.11% annually (95% CI: -5.19%; -3.02%) but this did not differ significantly from decreases in the CIR in all manufacturing excluding food processing WICs nor from the decline in workers' compensation claims rates in all industries combined over the study period. Sugar refining (WIC 3903) was not included in additional descriptive analysis due to the small number of workers' compensation claims and FTEs (Table 14).

III B 2. Descriptive analysis of claims by ANSI codes:

The potential of individual employers and worker groups to prioritize safety and health problems in their individual workplace combined with the wealth of data available for analysis required us to present the data according to the following structure:

Table B: Matrix of Tables Describing Claims Associated With WIC Food Processing Codes.

Subject(s) of Table	ANSI *Nature*	ANSI *Type*	ANSI *Body Part*	ANSI *Source*
Number of Claims/ Claims Incidence Rate	Table 15(a)	Table 16(a)	Table 17(a)	Table 18(a)
Demographics/ Claim Costs/ Hospitalizations	Table 15(b)	Table 16(b)	Table 17(b)	Table 18(b)
Trend in Claim Rates	Table 15(c)	Table 16(c)	Table 17(c)	Table 18(c)

The most frequent ANSI codes by *body part* were further characterized by determining the *nature* and *source* of injury (Table 17(d)). The most affected body parts were the fingers with the majority of injuries occurring in the form of cuts due to a non-power knife accounting for 1,299 claims or 3.8% of all claims. The back was identified

in 5,520 claims of which 3,019 (8.9%) were sprains directly associated with moving containers.

III B 3. Washington State Occupational Health Surveillance Activities

Work-related musculoskeletal disorders of the back, neck and upper extremity account for nearly 50% of the claim costs in food processing WIC codes (Table 19(a)). Relatively few claims for work-related asthma and hospitalized burns occurred despite the likely presence of hazards in the food processing industry associated with these types of claims. Compared to an overall decreasing claims rate in food processing WICs, claim rates do not appear to be decreasing for carpal tunnel syndrome, rotator cuff tendonitis and epicondylitis (Table 19(b)). The highest rates for work-related musculoskeletal disorders by risk class occurred in dairy products manufacturing, NOC (WIC 4002)(Table 19(c)).

III B 4. 'Healthy Workplaces: Successful Strategies in the Food Processing Industry:

In 2001, the educational materials identifying best practices in food processing were mailed to companies identified by SIC code for food processing activities. WIC codes allowed identification of businesses with food processing activities whose primary commerce may or may not be associated with a food processing SIC code (i.e. a bakery in a grocery store). Analysis related to specific WIC codes was undertaken because the effect of the intervention may be more specific to select occupational groups (production workers rather than clerical staff).

III B 4 a. Fall injuries:

For the study period, 1,463 'falls from elevation' occurred in the food processing WIC codes for an average annual state fund CIR of 92 per 10,000 FTEs (95% CI: 77; 109). Approximately 34% of all fall from elevation claims involved four or more days off from work. The average cost of a state fund compensable claim for a fall from elevation was among the highest for all injury types at $19,433 for the study period. Most state fund claims for falls from elevation originated on stairs (29.5%), from vehicles (20.4%) or off of ladders (15.9%). Injuries resulting from falls from elevation included

contusions, sprains, fracture and/or multiple injuries. Injury rates for falls from elevation were highest in grain and feed and flour mills (WIC 2101) and feed lots and stock yards (WIC 4304.)

The number of workers' compensation claims for 'falls from same level' was 2,883. The average annual state fund CIR over the study period for falls from same level 182 per 10,000 FTEs (95% CI: 157; 208). Approximately 28% of all falls from same level claims were compensable. The average cost of a state fund compensable claim for a fall from same level was among the highest for all injury types at $16,684. Injuries resulting from falls were predominantly contusions, sprains, fractures and/or multiple injuries. State fund CIRs for falls from the same level were highest in fruit, vegetable canneries, food product mfg., NOC (WIC 3902), dairy products mfg., (WIC 4002) and feed lots and stock yards (WIC 4304) over the study period.

III B 4 b. Forklift injuries:

There were 730 accepted workers' compensation state fund claims from 1994 to 1999 in food processing WIC codes for injuries related to 'powered carriers' (Table 21). The average annual state fund CIR over the study period for powered carrier as the source of the injury was 46 per 10,000 FTEs (95% CI: 39; 53). Approximately 26% of all claims involving a powered carrier involved four or more days off from work. The average cost of a state fund compensable claim for a powered carrier injury was $15,878. State fund CIR from 1994 to 1999 for powered carrier injuries was highest in meat products mfg., NOC (WIC 4301.)

III B 4 c. Hearing loss:

A total of 342 state fund claims were accepted for 'hearing loss' over the study period in the food processing WIC codes. The average annual workers' compensation state fund CIR, in food processing WICs over the study period for hearing loss was 22 per 10,000 FTEs (95% CI: 16.5; 26.9). Fifty-five percent of hearing loss claims were compensable. The mean and total cost of hearing loss claims in the food processing WICs were $17,526 and $5.4 million. Costs associated with hearing loss were among the highest of any illness occurring in the food processing industry.

III B 4 d. Overexertion:

Handling heavy materials is common in food processing and as such workers' compensation claims for ‘overexertion’ are common. There were 9,968 claims for overexertion for an average annual workers’ compensation state fund CIR over the study period of 630 per 10,000 FTEs (95% CI: 569; 691). Approximately 38% ($49.5 million) of all direct workers' compensation costs to the food processing workers in food processing WICs were accounted for by overexertion. Approximately 73.6% of all lifting overexertion claims were associated with source codes identifying containers (ANSI source codes (600 - 699)). Overexertion claims involved the back (38.8%), hand/wrist (20.0%), shoulder (10.8%), multiple sites (9.8%) and the elbow (4.9%).

III B 4 e. Machinery related injury:

The number of workers' compensation claims for injuries related to ‘machinery’ (ANSI source codes 3000 - 3999) was 2,224 over the study period. The average annual state fund CIR over the study period for workers' compensation claims for injuries related to machinery (ANSI source codes 3000 - 3999) was 140 per 10,000 FTEs (95% CI: 113 per 10,000 FTEs; 168 per 10,000 FTEs). Total claim costs associated with machinery related injuries was $6.5 million over the study period or 5% of all costs associated with workers’ compensation claims in WIC food processing. Common nature codes associated with machinery claims were cuts (42.0%), contusions (22.5%), sprains (12.8%) and fractures (9.0%). The body parts involved in machinery claims were the hand and wrist (68.2%), and the back (6.1%).

III C. Bureau of Labor Statistics Survey of Occupational Injury and Illness:

Table 22 shows data obtained from the Washington State BLS SOII with workers' compensation data obtained from combining injury and illness cases and hours from both State Fund and Self Insured employers. BLS injury data was available only from 1996 to 1998, because miscellaneous food products (SIC 209) employers no longer complied with the BLS SOII in 1999 (J. VanMansart - personal communication, 2002). The 95% confidence intervals for BLS survey estimates are also presented. BLS rates for food processing (SIC 20), meat products (SIC 201), preserved fruits and vegetables (SIC 203),

bakery products (SIC 205), beverages (SIC 208) and miscellaneous food products (SIC 209) were highly variable from 1996 to 1998 with peak injury rates in all SIC codes except bakery products (SIC 205) occurring in 1997. Differences between the BLS estimates for both hours worked and the number of cases and Washington workers' compensation data may explain rate differences between the two data sources. Twelve of the 14 injury rate estimates generated by Washington workers' compensation data in food processing (SIC 20), meat products (SIC 201), preserved fruits and vegetables (SIC) 203), bakery products (SIC 205), beverages (SIC 208) and miscellaneous food products (SIC 209) exist outside of the 95% confidence interval for the BLS injury rate.

IV. Discussion:

Food processing is vital to the Washington State economy. Characterizing injury and illness in this industry through Washington's workers' compensation data may allow individual workplaces, trade associations, unions, and other stakeholders in the food processing industry to focus prevention resources within the industry. This report provides a general overview of worker injuries and illnesses within state fund employers. Prevention activities may be directed towards the most frequent types of claims, claims associated with more serious injuries and illness (i.e., hospitalized burns), claims associated with significant direct cost to the workers' compensation system or types of occupational injury and illness, which may be deemed more preventable by the stakeholder (through technology transfer or implementation of effective controls).

IV A. **Considerations for Prevention Activities:**

ANSI codes used in this report allow a systematic presentation of claims information regarding occupational injury and illness by *type, nature, body part* and *source*. If one considers the magnitude of claims and cost of claims, several clear areas for prevention emerge within both the SIC and WIC analysis. Within both the food processing (SIC 20) and the food processing WIC codes, by ANSI *type*, the largest proportion of expenditures, the greatest number of claims and the greatest proportion of compensable claims were related to 'overexertion'. 'Fall' injuries, while less frequent, accounted for a significant proportion of direct cost to the workers' compensation system. Clearly overexertion claims associated with lifting 'containers' are a target for prevention. Falls either from 'elevation' or the 'same level' (Tables 8 & 9, Tables 20 (a), (b)) likely relate to the conditions in the work environment such as decreased traction of the worker on the floor or elevated structure.[13] When considering the claims coded by *nature* of injury by claims frequency, 'sprains', 'cuts' and 'contusions' were most frequent in both the food processing WICs and food processing SICs. However, while the relative number of claims was high for 'cuts', the direct costs and proportion of claims requiring greater than 4 days of lost time from work was low relative to less common disorders such as 'fractures'. Therefore, one might focus prevention resources on less common disorders with more significant morbidity.

Considering *body part* coding of claims, major body groups of the 'upper extremity', 'trunk' and 'lower extremity' accounted for a large proportion of claims with the 'fingers', 'back' and 'knee' accounting for a large proportion of claims in each group respectively. Back injuries are associated with 23% of all costs associated with workers' compensation claims within food processing.

While the data in this report may identify certain areas for prevention, there is necessity to consider the many other factors, which limit the utilization of this data. The ANSI coding identifies one *nature*, *source*, *type* and *body part* code per claim. As such injuries or illnesses that affect multiple body parts (e.g., the occurrence of hand wrist disorders may be coded over multiple body parts) or an injury which may be characterized by different *nature* codes (e.g., a hand crushed in a machine with an amputation of hand and fracture of multiple bones may be coded solely as a 'fracture' rather than 'amputation') may be misrepresented in the ANSI system. Previous work with the workers' compensation data suggest that combinations of ANSI codes may present a more accurate rate estimate for specific diseases or injuries (e.g., 'dermatitis' claims incidence rate is defined by combining cases from five *nature* codes). [12] Combining ANSI codes with other coding systems within a workers' compensation claim, such as the ICD-9 diagnosis and procedure codes reported through medical bills, might more clearly identify specific diagnosis. The use of ICD-9 diagnosis and procedure codes are used to identify specific cases of work-related musculoskeletal disorders (e.g. epicondylitis and rotator cuff), diagnoses which would not be identifiable through the ANSI system alone.[10] Some diagnosis which rely solely upon the combination of ANSI codes such as carpal tunnel syndrome generate underestimates of the true magnitude of the disease to the workers' compensation system.[10] In this context while the ANSI coding system provides a general overview of injuries and illness occurring in food processing, it lacks the specificity to identify the many potential injuries and illnesses a worker may suffer.

The ANSI system, when applied to injuries does provide fertile ground for specific targeting of injury prevention. An obvious example, in food processing (SIC 20), (Table 5d), would be prevention efforts to reduce cuts. About 65% of all 1,842 finger injuries were 'cuts' to the fingers and about 40% of these were due to the use of a

non-power knife. The highest workers' compensation CIRs for cuts occurred in meat products (SIC 201) and miscellaneous food products (SIC 209.) Effective targeting of prevention resources towards cut prevention suggests a targeted effort in meat products (SIC 201) and miscellaneous food products (SIC 209) related to knife use. While the use of the data in this report is reasonable for generating hypotheses related to injury prevention, additional information may be necessary to further identify the risk factors associated with this type of injury. These risk factors may need to be further clarified before an effective prevention strategy can be developed. For example, the occurrence of an injury for a cut related to a non-power knife is likely influenced by the pace of production, sharpness of the knife, use of protective gloves, shields, and worker training among other risk factors.

IV B. Healthy Workplaces:

The Healthy Workplaces Initiative identified risk factors for common injuries from three different sources:

1. A series of site visits to food processing employers;
2. The investigators' safety and health knowledge of hazards in food processing; and
3. A review of workers' compensation claims in the food processing industry.

The hazards identified during the series of site visits which included: noise exposure, physical hazards associated with material handling, wet, slippery surfaces, and the need for machine guarding and lock-out tag-out programs, were common to employers in the food processing industry.[3] The public health model for injury prevention generally includes five steps:

1. Identify and prioritize problems through injury surveillance;
2. Quantify and prioritize risk factors through analytic injury research;
3. Identify existing or develop new strategies to prevent occupational injuries, including evaluation and confirmation of effectiveness;
4. Implement the most effective injury control measures through dissemination and technology transfer; and
5. Evaluate and monitor the results of intervention efforts.[15]

The information from the site visits combined with a cursory review of workers' compensation data provided a relative context for the importance of each hazard and

identification of risk factors. The relative clarity of specific risk factors identified during on site visits and their direct associations to specific injuries led to preventative action without further clarification of risk factor relationships. Examples of these the 'causal webs' include noise exposure as related to hearing loss, wet, greasy floors are a risk factor for the worker slipping and falling, lifting heavy loads and highly forceful repetitive tasks are risk factors for work-related musculoskeletal disorders.

The relevance of the public health model to the Healthy Workplaces Initiative is the ability to implement a successful intervention within an industry and produce a meaningful reduction in workers' compensation claims' rates. ***If the goal of a program or intervention is a 5% reduction in workers' compensation claims, the intervention must attempt to reduce multiple types of injuries simultaneously because a single intervention is unlikely to achieve the stated goal.*** In other words, within the food processing (SIC 20) industry (Table 5d), the intervention would have to eliminate almost all eye injuries or 40% of back sprains or nearly half of the cuts to the fingers to be considered successful; goals which may be unrealistic. However in order to implement an intervention that targets several hazards, an employer will need a more formal health and safety system. Indeed, one of the findings of the Healthy Workplaces Initiative was that 'workplaces that used a systems approach to health and safety had lower workers' compensation claims' rates' and were more 'proactive in hazard prevention'.[3] ***This suggests that the identification and hurdling of the barriers to implementing safety and health systems within an entire organization is essential to applying an effective multifactorial intervention.*** The barriers to implementing a voluntary intervention influence the selection of the most appropriate intervention in an industry.

IV C. Comparison of the Bureau of Labor Statistics Data to Workers' Compensation Data:

The BLS SOII estimates the occurrence of injuries and illness by surveying a sample of employers within an industry. Washington State's BLS program is administered by the Washington State Department of Labor and Industries. The program is federally funded. In most states, the BLS SOII is administered to the employer who is required to identify injured workers' and to complete the details describing the injury or

illness. OSHA mandates the employer to maintain records (OSHA logs), of injury and illness in their worksite. Historically, OSHA logs are incomplete and underestimate the injury and illness rates in the workplace.[16] Since Washington workers' compensation is an exclusive state fund and the claims administration data is a rich resource regarding injury and illness data, the Washington BLS survey allows state fund employers to identify an injured worker, with the subsequent details of the workers' injury and illness completed from the workers' compensation claim record within the Department of Labor and Industries. This is not available for self-insured employers.

Several issues arise regarding the BLS estimates for injuries and illness among Washington State employers. First, given the knowledge that the state workers' compensation system assists in completing the BLS survey an employer may solely report injuries and illnesses resulting in workers' compensation claims. Additionally, an employer may solicit the workers' compensation program for a listing of the claims occurring in the last year. If this occurs, there should be a very good correlation between the number of workers' compensation claims and the number of cases reported to BLS by state fund employers. Several additional issues arise, however, when one attempts to correlate Washington BLS case estimates with Washington workers' compensation estimates. Self-insured employers, essentially the largest 400 employers, do not utilize the state workers' compensation system for assistance in completing the survey. While self-insured employers report the number of workers' compensation claims to the Washington State Department of Labor and Industries, the accompanying details are not provided. Limited measures are in place to verify all self-insured workers' compensation claims are accurately reported to the Washington State Department of Labor and Industries or to the BLS SOII. Self-insured employers are also more likely to have on site medical programs thereby reducing the number of workers' compensation claims for injuries that require external medical assistance. If these injuries do not result in claims but result in cases reported to BLS then workers' compensation may undercount the injury and illness burden occurring in self-insured companies.

From Table 22, there is large variability in rates reported by BLS for three-digit SIC code for the time period of 1996 to 1998. The small number of employers sampled in the survey may explain the large variability in rates. There is a significant divergence

between the cases reported by BLS to Washington workers' compensation in miscellaneous food products (SIC 209.) This illustrates that BLS assignment of SIC codes originates from the Washington State Employment Security Department (ESD) rather than the Washington State Department of Labor and Industry assignments. ESD miscellaneous food products (SIC 209) likely captures workers' covered under the federal Longshore and Harbor Workers' Compensation Act, for maritime workers who are injured on navigable waters, or the Jones Act, for injured seamen. Identification of employer accounts in Washington State ESD miscellaneous food products (SIC 209) which did not appear in the Washington State L&I data revealed at least 50 accounts associated with fishing vessels or seafood processing companies. The difference also appears in estimates of the number of FTEs estimated by the BLS data and the number recorded by Washington workers' compensation data.

Estimates of the number of FTEs reported to BLS may be subject to use of other administrative data systems. Employers are required to provide unemployment insurance for employed workers. As part of the unemployment insurance premium, each employer is required to report the number of hours worked by each employee per quarter and the number of workers employed per quarter. The remarkable correlation between the number of FTE's reported to BLS relative to the number of employed workers is suspect. Additional considerations regarding the differences between Washington State BLS occupational injury and illness rates and Washington State workers' compensation claim rates include the sampling strategy employed by BLS, the underreporting of work-related injury and illness to the workers' compensation system, and poor recognition by physicians and workers particularly of occupational illness.

In summary, utilizing Washington State BLS data to compare to other states BLS data or to rates from Washington workers' compensation data is limited by:

- utilization of Washington workers' compensation data for completion of the BLS survey;
- potential variability in OSHA log completion between self-insured employers and state fund employers;
- limited information regarding self-insured claims to the Washington workers' compensation system;
- underreporting of occupational injury and illness to workers' compensation system and to OSHA logs

- compliance to the BLS survey requests; and
- the sampling error associated with survey estimates.

IV D. State-based Surveillance for Occupational Injury and Illness:

There are many criteria to consider when selecting diseases, injuries or hazards for state-based occupational health surveillance. Some criteria for the selection of conditions for state-based surveillance include the magnitude of the injury or illness (number of workers potentially affected), the urgency of the problem (changing exposures), the hazard or injury severity, the opportunities for technology transfer to prevent the injury or illness from occurring, the cost of injury or illness being addressed, the underreporting potential, research gaps, emerging or growing hazards, injury or illness and the potential for funding sources. The relative importance of each criterion must be weighed by the appropriate stakeholders in the selection of appropriate conditions for surveillance. If magnitude of the injury and cost were the only considerations, the conditions under surveillance in Washington State (Table 7, Table 19) fail to capture some of the most common and costly injuries such as falls. However, most of the conditions under surveillance represent occupational conditions, such as asthma or hospitalized burns, with significant morbidity and represent only the 'tip of the iceberg' for chemical exposures or hazardous exposures in the workplace. Any intervention to reduce occupational diseases or injuries with significant morbidity will likely influence and decrease other diseases or injuries associated with a common risk factor. An example may be reduction in exposures to an asthma causing agent thereby reducing the rate of allergic dermatitis associated with that chemical.

Estimates of underreporting suggest that some occupational diseases such as work-related asthma are both poorly recognized in the workplace and underreported to workers' compensation. Incorporating estimates of underreporting into decisions regarding the selection of disease for surveillance activity is necessary. Nevertheless, given the low incidence rate of some of the selected conditions under surveillance by the Washington State SHARP program, one must re-evaluate the continued surveillance of selected conditions. Work-related asthma, while associated with both significant worker morbidity and significant underreporting to the workers' compensation system, has a remarkably low incidence rate over the study period. Even if a physician and worker

recognize only one of five work-related asthma cases, the magnitude of this illness is still superceded by many other injuries such as falls or hearing loss. Given the abundance of asthma causing agents in the food processing industry, one would expect a high rate of work-related asthma in the food processing industry relative to other industry sectors. The relative importance of a surveillance program for work-related asthma when allocating resources seems diminished by these findings. Similarly the relative expense of workers' compensation claims for dermatitis is low. While occupational dermatitis is a relatively common occupational disease, relatively little expense is incurred to the workers' compensation system for this illness. Less frequent injuries and illnesses may account for greater monetary costs to the workers' compensation system than occupational dermatitis claims suggesting that surveillance for occupational dermatitis may be less important than other work-related diseases or injuries with significant morbidity.

Work-related musculoskeletal disorders (WMSDs) are the only 'priority condition' under surveillance that combines a high number of workers' compensation claims, a high CIR, and high claim costs. WMSDs are also underreported and under recognized by physicians. While the incidence rate for WMSDs in food processing exceed those in other industries by virtue of the presence of a significant number of risk factors (e.g., high force and high repetition), the same assessment can be made for other disorders such as work-related asthma. Of all the conditions under surveillance in Washington State, prevention efforts for WMSDs likely would have the most impact on worker safety and health.

IV E. SIC coding relative to the WIC Coding:

SIC coding identifies a business by its commerce while WIC coding combines industry and occupation to group workplaces by similar risk of injury for insurance purposes. Comparisons between WIC and SIC groupings are difficult given the difference in the coding systems. However, the importance of the WIC codes is the grouping of workers by work activity they performed. Butchers/meat cutters in grocery stores, butcher shops, and meat processing facilities share common risks of injury and illness regardless of the SIC code associated with their establishment. By virtue of

combining workers with similar risk of injury, workers who perform different work tasks are excluded. For example, SIC 201 relates to meat products manufacturing while WIC 4301 is meat products manufacturing/slaughter and packing houses. Approximately 88% of claims in meat products manufacturing/slaughter and packing houses (WIC 4301) identify any of the SIC codes 201 - 209 as the SIC code associated with the claim. However, the state fund average annual CIR in meat products (SIC 201) over the study period was 26.9 per 100 FTEs while the average annual state fund CIR over the study period in meat products manufacturing/slaughter and packing houses (WIC 4301) was 33.5 per 100 FTEs. The claim rate in meat products manufacturing/slaughter and packing houses (WIC 4301) is likely higher given the elimination of occupations associated with businesses in meat products (SIC 201), which may have less risk for occupational injury and illness such as clerical work. SIC coding allows comparisons between different state surveillance systems, whereas WIC coding exists only in Washington State.

IV. F. Comparisons to Published Medical Literature:

Other than the BLS SOII, there are no readily identifiable data sources that provide total injury and illness rates in the food processing industry as a whole, either state-based or nationally. Within BLS, injury rates for specific injuries (i.e. cuts) are limited and are for cases that require days away from work or result in restricted activity. Injury rates for injuries not requiring days of lost work time are poorly described in the BLS SOII.

Workers in the meatpacking industry have high rates of occupational injury and illness. Musculoskeletal hazards are common to almost all slaughterhouses and injury rates for musculoskeletal disorders are among the highest of any industry.[17] National case rates from employers reporting to BLS in meat products (SIC 201) exceed 1,200 per 10,000 FTEs.[18] ***Relative to other industries in Washington State from 1992 to 2000, meatpacking (SIC 201) had the highest state fund CIR for non-traumatic soft tissue disorders of the upper extremity at 511.6 per 10,000 FTEs.***[9] Washington State incidence rates and counts of workers' compensation state fund claims in meat products

(SIC 201) for non-traumatic hand wrist tendonitis, carpal tunnel syndrome and epicondylitis are among the highest of any industry.[10]

Many different asthma causing substances are present in the food processing industry.[19] In the United States, there is not a national estimate of the incidence rate of asthma in food processing workers (SIC 20) as a whole. Rather incidence rates for work-related asthma for specific exposures or occupations are usually derived from the study of specific workplaces or specific occupations. In the United Kingdom, the estimated annual incidence of asthma in food processing workers, from 1992 to 1997, is 280 cases per million workers.[20] In Michigan, surveillance for work-related asthma, between 1988 and 1994, showed an annual incidence rate of 100 cases per million food processing workers.[21] The Michigan estimate is comparable to our estimate of 150 per million FTEs. The small number of cases of work-related asthma in our study does not allow reliable incidence rate calculations for specific three-digit SIC codes for work-related asthma.

IV. G. Limitations: There are many potential limitations to this study. ***The accuracy of injury and illness incidence rates in this study is dependent on the completeness of reporting of both cases and employee work hours to the workers' compensation system.*** There are many potential barriers to filing a workers' compensation claim, some of which include:

1. Fear of employer retribution for filing a claim,
2. Poor recognition of occupational injury and illness by the physician, worker, and employer,
3. Administrative barriers to physicians or workers filing a workers' compensation claim,
4. The availability of alternative medical insurance providers.

The magnitude of underreporting of injuries and illness to the Washington State workers' compensation system is unknown. Once a claim is received, acceptance is dependent on satisfying the medical and legal requirements of the Washington workers' compensation system. Claims associated with expensive or unfamiliar diagnosis to the workers' compensation system claims manager, may (or may not) receive more scrutiny than less expensive claims and may (or may not) have a higher rejection rate.

Workers' compensation premiums are dependent on employer reporting of work hours and underreporting of work hours may occur. Because insurance premiums are dependent on the claims' experience in a particular WIC, employers may underreport to high premium risk class and overreport to lower premium risk classes. If overreporting or underreporting occurs comparisons between injury and illness rates between WICs is problematic.

While the availability and general accuracy of Washington workers' compensation coding is reasonable for the administration of a workers' compensation claim, data quality at times is poor. Codes not used for administrative purposes, such as occupational coding, are unreliable. As is seen in Table 11, anywhere from 10 to 16% of claims were not coded for occupation. Because claims are assigned ANSI codes from the ROA, if the ROA is incomplete there is a chance of miscoding. ANSI coding is based on the initial assessment of a workers' injury or illness that is reported on the ROA form. Therefore, cases that may require additional diagnostic workup may be poorly defined on the ROA form and the ANSI coding may not reflect the true injury or illness associated with the claim.

An additional limitation of this report is the exclusion of the self-insured companies in the food processing industry. One might hypothesize that more developed safety systems exist in large employers who self-insure, and consequently there would be a lower workers' compensation CIR. This may or may not be true. One might speculate that larger companies, due to high volume, may organize production such that workers perform only one task. This may increase the duration of hazardous exposure and promote a higher risk of developing a particular injury or illness. An example may be daily high dose exposure to particular allergen leading to increased sensitization associated with a particular job title. Also, self-insured companies may have on-site medical care, which may diminish claim filing.

Costs associated with workers' compensation claims vary by state, thus limiting the generalizability of this data. Costs aggregated by industry (SIC or WIC) represent cumulative direct costs, excluding indirect costs, associated with claims. Costs associated with workers compensation claims in an industry are surrogate measures of the physical, biological and chemical hazards present in that industry as manifested through

medical, wage replacement, and disability experience associated with those claims. Future work should separately analyze costs associated with medical only claims and those that are considered compensable. Furthermore, differentiation of claim costs by permanent partial disability, wage replacement (time loss), and medical costs may yield more meaningful insight into the medical consequences and outcomes of occupational injury and illness.

Finally, there is significant heterogeneity of hazardous exposures among WIC and SIC codes associated with food processing. Aggregating the injury rate by individual ANSI code (*nature, type* codes), or individual WIC or SIC code, still may not allow identification of the relationship between a particular exposure and a significant injury or illness. Optimally, quantification of the degree of individual and combined exposures for individual workers and the injuries resulting from the exposures yields a more accurate estimate of the injury rate. For example, the claim rate for cuts from a non-power knife likely depends on a number of factors (training, sharpness of knife, number of cuts made with a knife, use of personal protective equipment, number of hours the individual works, personal factors, and workplace organizational factors). Therefore additional information is necessary to provide a complete perspective of the injuries and illnesses in the food processing industry.

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Legend of SIC/WIC Codes:

SIC Codes

- meat products (SIC 201)
- dairy products (SIC 202)
- preserved fruits and vegetables (SIC 203)
- grain mill products (SIC 204)
- bakery products (SIC 205)
- sugar and confectionery products (SIC 206)
- fats and oils (SIC 207)
- beverages (SIC 208)
- miscellaneous food products (SIC 209).

WIC Codes

- grain and feed and flour mills (WIC 2101)
- fruit and vegetable packing -fresh (WIC 2104)
- meat, fish, poultry dealers- wholesale (WIC 3304)
- breweries, wineries and beverage bottling (WIC 3702)
- fruit, vegetable canneries, food product mfg., NOC (WIC 3902)
- sugar refining (WIC 3903)
- bakeries - wholesale, NOC (WIC 3906)
- dairy products mfg., NOC (WIC 4002)
- meat products mfg.; slaughter packing houses (WIC 4301)
- custom meat cutting (WIC 4302)
- feed lots and stock yards (WIC 4304).

Table 1: **Washington State Workers' Compensation State Fund Claims; Food Processing SIC codes, 1994 to 1999.**

	SIC 20	SIC 201	SIC 202	SIC 203	SIC 204	SIC 205	SIC 206	SIC 207	SIC 208	SIC 209
Total Claims: 1994 to 1999	16,367	3,356	615	4,773	810	761	582	268	1,215	3,987
% of all claims in SIC 20		20.5	3.8	29.2	4.9	4.6	3.6	1.6	7.4	24.4
% Female	27.5	20.5	19.7	34.4	7.2	40.6	51.2	12.3	15.1	29.5
Median Age	34	32	34	35	36	33	36	36	32	34
Average number claims / year	2,728	559	103	796	135	127	97	47	203	665
Average no. injured workers/year	1,940	384	61	555	101	99	69	30	151	489
Total no. compensable claims	3932	894	200	990	180	207	110	77	241	1,033
%total claims	24	26.6	32.5	20.7	22.2	27.2	18.9	28.7	19.8	25.9
Number Hospitalized	283	52	11	64	17	9	17	0	19	94
% Claims Hospitalized	1.73	1.55	1.79	1.34	2.10	1.18	2.92	0.00	1.56	2.36
Total FTEs: 1994-1999	87,206	12,498	2,410	25,746	5,057	4,570	3,172	1,169	8,699	23,885
Avg. yearly claim rate/10,000FTE	1877	2685	2552	1854	1602	1665	1835	2293	1397	1669
Total Direct Cost: 1994-1999*	$65,941	$11,829	$3,488	$15,685	$4,291	$2,860	$3,309	$1,348	$4,418	$18,710
% total cost		17.9	5.3	23.8	6.5	4.3	5	2	6.7	28.4
Avg total direct cost/claim	$4,029	$3,525	$5,672	$5,031	$5,298	$3,758	$5,687	$5,031	$3,637	$4,693
Median direct cost of claim	$290	$335	$313	$309	$290	$293	$261	$309	$265	$271
Avg total direct cost/ comp claim	$15,229	$11,845	$16,610	$13,747	$22,389	$12,660	$28,048	$16,287	$16,353	$16,870
Median direct cost comp claim	$2,694	$2,264	$3,045	$2,998	$3,234	$2,603	$5,360	$2,806	$3,805	$2,401

** Expressed in thousands of dollars; Not adjusted for inflation.* ***Comp=Compensable claim involves four or more lost workdays*

SIC Code	*SIC Description*
201	Meat Products
202	Dairy Products
203	Canned, Frozen, and Preserved Fruits, Vegetables and Food Specialties
204	Grain Mill Products
205	Bakery Products
206	Sugar and Confectionary Products
207	Fats and Oils
208	Beverages
209	Miscellaneous Food Preparations and Kindred Products

Figure 1: Washington State Workers' Compensation State Fund Claims Incidence Rates, for all industries, all Manufacturing SIC codes except SIC 20 and the Food Processing Industry (SIC 20); 1994 to 1999

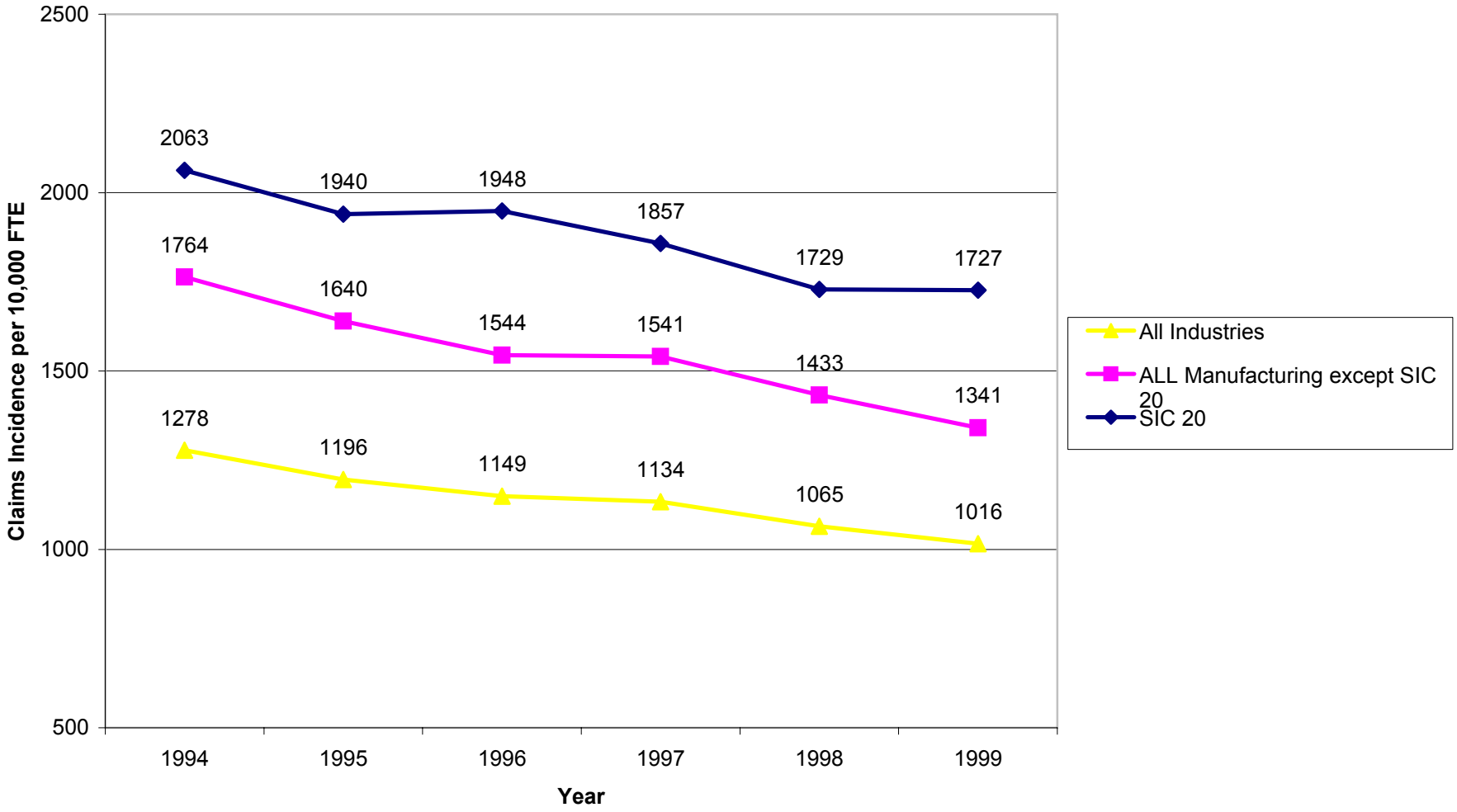

Table 2: Washington State Workers' Compensation State Fund Claims;
Food Processing Claims' Incidence Rates by Year by SIC Code; 1994 to 1999.

SIC Code	Year	Claims	FTEs	Claims / 10,000 FTEs
20	1994	2,920	14155	2063
	1995	2,872	14804	1940
	1996	2,830	14524	1948
	1997	2,741	14757	1857
	1998	2,449	14168	1729
	1999	2,555	14797	1727
201	1994	474	1943	2439
	1995	568	2034	2793
	1996	576	1978	2912
	1997	577	2134	2704
	1998	574	2139	2683
	1999	587	2270	2586
202	1994	87	422	2061
	1995	115	428	2688
	1996	119	418	2846
	1997	98	362	2705
	1998	72	352	2048
	1999	124	428	2898
203	1994	1,034	4501	2297
	1995	865	4268	2027
	1996	761	4182	1820
	1997	793	4394	1805
	1998	649	4063	1597
	1999	671	4338	1547
204	1994	123	839	1466
	1995	99	839	1181
	1996	155	861	1800
	1997	188	851	2208
	1998	114	837	1363
	1999	131	831	1577

SIC Code	Year	Claims	FTEs	Claims / 10,000 FTEs
205	1994	124	626	1982
	1995	127	718	1770
	1996	131	736	1780
	1997	119	755	1577
	1998	114	764	1493
	1999	146	972	1502
206	1994	84	482	1742
	1995	81	465	1741
	1996	64	453	1413
	1997	63	453	1392
	1998	127	593	2142
	1999	163	725	2247
207	1994	92	347	2654
	1995	70	330	2120
	1996	51	226	2253
	1997	24	83	2893
	1998	10	87	1145
	1999	21	96	2187
208	1994	165	1234	1337
	1995	204	1504	1357
	1996	245	1462	1676
	1997	205	1499	1367
	1998	205	1535	1336
	1999	191	1465	1304
209	1994	737	3762	1959
	1995	743	4220	1761
	1996	728	4208	1730
	1997	674	4226	1595
	1998	584	3798	1538
	1999	521	3672	1419

Table 3(a): Washington State Workers' Compensation State Fund Claims. Food Processing Claims and Claim Rates* by Nature of Injury (> 1.0 % total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

	SIC 20		SIC 201		SIC 202		SIC 203		SIC 204		SIC 205		SIC 206		SIC 208		SIC 209	
Nature of Injury (Code No.)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
Burn - Heat (120)	337	39	51	41	10	41	137	53	13	26	20	44	33	104	27	31	46	19
Burn - Chemical (130)	189	22	28	22	11	46	89	35	6	12	3	7	13	41	16	18	23	10
Contusions (160)	2,251	262	393	314	100	415	749	291	104	206	133	291	87	274	141	162	544	228
Cuts (170)	3,317	386	863	691	70	290	816	317	145	287	136	298	66	208	295	339	926	388
Fractures (210)	630	73	120	96	26	108	174	68	42	83	25	55	25	79	35	40	183	77
Bursitis (260)	460	53	135	108	18	75	104	40	16	32	28	61	19	60	28	32	112	47
Scratches (300)	630	73	109	87	12	50	242	94	57	113	19	42	18	57	44	51	129	54
Sprains (310)	5,593	650	1,118	895	264	1095	1,655	643	274	542	301	659	213	672	451	518	1317	551
Multiple Injuries (400)	338	39	68	54	12	50	101	39	20	40	18	39	15	47	19	22	85	36
Eye Disorder (530-2)	184	21	41	33	5	21	62	24	14	28	3	7	6	19	7	8	46	19
Nerve Disorder (560-2)	260	30	67	54	7	29	66	26	6	12	17	37	21	66	15	17	61	26
Ill-Defined Disorder (580)	1,038	121	204	163	50	207	287	111	59	117	32	70	40	126	80	92	286	120

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

Table 3(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Cost by Nature of Injury (> 1.0 % total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

Nature of Injury (Code No.)	No.	Rate*	Avg Cost per Claim	Median Cost	Total Cost	No. Compensable Claims (%)	Avg Cost per Comp Claim	Hospitalized Number (%**)
Burn - Heat (120)	337	39	$ 1,958	$ 240	$ 659,866	67 (19.9)	$ 860	2 (0.6)
Burn - Chemical (130)	189	22	$ 1,300	$ 225	$ 245,777	24 (12.7)	$ 8,481	2 (1.1)
Contusions (160)	2,251	262	$ 1,963	$ 204	$ 4,417,768	342 (15.2)	$ 11,096	19 (0.8)
Cuts (170)	3,317	386	$ 1,036	$ 234	$ 3,435,682	332 (10)	$ 7,582	18 (0.5)
Fractures (210)	630	73	$ 7,567	$ 739	$ 4,767,134	303 (48.1)	$ 15,030	42 (6.7)
Bursitis (260)	460	53	$ 5,894	$ 393	$ 2,711,327	141 (30.7)	$ 17,945	4 (0.9)
Scratches (300)	630	73	$ 383	$ 163	$ 241,233	22 (3.5)	$ 4,723	3 (0.5)
Sprains (310)	5,593	650	$ 4,684	$ 400	$ 26,197,500	1700 (30.4)	$ 14,027	97 (1.7)
Multiple Injuries (400)***	338	39	$ 15,580	$ 424	$ 5,265,874	112 (33.1)	$ 26,026	11 (3.3)
Eye Disorder (530-2)	184	21	$ 297	$ 168	$ 54,571	1 (0.5)	$ 626	0 (0)
Nerve Disorder (560-2)	260	30	$ 12,670	$ 3,021	$ 3,294,184	154 (59.2)	$ 20,754	4 (1.5)
Ill-Defined Disorder (580)	1,038	121	$ 6,269	$ 370	$ 6,507,004	337 (32.5)	$ 18,162	25 (2.4)

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

***** Represents proportion of claims within nature code that are hospitalized.***

****** Average cost per claim calculation includes significant outlying claim with cost of $2.27 million; Average cost of the claim without outlier is $8,900.05.***

Table 3(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rates* by Year by Nature of Injury (> 1.0 % total claims) for SIC codes 201 -206, 208, 209, 1994 to 1999.

	1994-1999		1994		1995		1996		1997		1998		1999	
Nature of Injury (Code No.)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
Burn - Heat (120)	337	39	54	39	59	41	57	40	60	41	55	39	52	35
Burn - Chemical (130)	189	22	38	28	28	19	28	20	33	23	18	13	44	30
Contusions (160)	2,251	262	367	266	401	277	412	288	380	259	354	251	337	229
Cut (170)	3,317	386	592	429	577	399	543	380	577	393	513	364	515	350
Fractures (210)	630	73	96	70	106	73	114	80	108	74	97	69	109	74
Bursitis (260)	460	53	31	22	70	48	93	65	92	63	88	63	86	59
Scratches (300)	630	73	117	85	96	66	121	85	98	67	82	58	116	79
Sprains (310)	5,593	650	1,041	754	1,038	717	992	694	899	613	820	582	803	546
Multiple Injuries (400)	338	39	78	57	61	42	51	36	76	52	40	28	32	22
Eye Disorder (530-2)	184	21	45	33	26	18	38	27	33	23	19	14	23	16
Nerve Disorder (560-2)	260	30	44	32	50	35	46	32	51	35	30	21	39	27
Ill-Defined Disorder (580)	1,038	121	133	96	147	102	144	101	172	117	201	143	241	164

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

Table 4(a): Washington State Worker's Compensation State Fund Claims. Food Processing Claims and Claim Rates* by Type of Injury (>1.0% total claims) for SIC codes 201 -206, 208, 209, 1994 to 1999

	SIC 20		SIC 201		SIC 202		SIC 203		SIC 204		SIC 205		SIC 206		SIC 208		SIC 209	
Accident Type (Code No.)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
Struck Against (01)	1,677	195	279	223	60	249	557	216	83	164	86	188	53	167	156	179	403	169
Struck By (020-023, 029)	3,629	422	1,006	805	102	423	836	325	181	358	144	315	82	259	270	310	1,008	422
Fall - Elevation (03)	708	82	84	67	32	133	258	100	52	103	34	74	25	79	63	72	160	67
Fall - Same Level (05)	1,447	168	219	175	62	257	520	202	54	107	97	212	65	205	66	76	364	152
Caught In, Under, Bet (06)	770	89	117	94	31	129	282	110	40	79	52	114	33	104	37	43	178	75
Rubbed or Abraded (08)	512	60	80	64	10	42	198	77	50	99	11	24	19	60	30	35	114	48
Bodily Reaction (100)	766	89	148	118	37	154	250	97	39	77	35	77	38	120	60	69	159	67
Overexertion (120 - 129)	4,582	533	1,051	841	200	830	1,198	465	197	390	232	508	180	568	389	447	1,135	475
Unspecified (120)	1,465	168	374	299	62	257	385	150	59	117	70	153	58	183	90	103	367	154
Lifting (121)	1,782	204	314	251	64	266	471	183	80	158	97	212	83	262	193	222	480	201
Pull/Push (122)	557	64	197	158	32	133	140	54	17	34	24	53	8	25	43	49	96	40
Carrying (124)	89	10	15	12	5	21	23	9	x	x	x	x	x	x	17	20	20	8
NEC (129)	655	75	145	116	36	149	167	65	37	73	37	81	26	82	44	51	163	68
Contact - Temp. Ext. (150)	335	39	51	41	11	46	137	53	13	26	20	44	30	95	26	30	47	20
Contact - Subst. (180)	764	89	121	97	32	133	297	115	40	79	18	39	33	104	42	48	181	76
Unclassified (990)	378	44	76	61	17	71	113	44	19	38	13	28	15	47	23	26	102	43

**** Average Annual Claims Incidence Rates per 10,000 FTEs.***

x = Less than four claims

Table 4(b): Washington State Workers' Compensation State Fund Claim; Food Processing Claim Cost by *Type of Injury* (>1.0% total claims) for SIC codes 201-206, 208, 209, 1994-1999.

Type (Code No.)	No.	Rate*	Avg Cost per Claim	Median Cost	Total Cost	No. Compensable Claims (%)	Avg Cost per Comp Claim	Hospitalized Number (%**)
Struck Against (01)	1,677	195	$1,554	$219	$2,606,228	206 (12.3)	$10,463	14 (0.8)
Struck By (02)	3,629	422	$2,021	$239	$7,335,842	523 (14.4)	$11,991	34 (0.9)
Fall - Elevation (03)	708	82	$5,094	$395	$3,606,858	222 (31.4)	$14,986	19 (2.7)
Fall - Same Level (05)	1,447	168	$5,601	$362	$8,104,238	405 (28.0)	$18,524	34 (2.3)
Caught In,Under,Between (06)	770	89	$5,443	$284	$4,190,846	206 (26.8)	$19,238	29 (3.8)
Rubbed or Abraded (08)	512	60	$378	$154	$193,677	8 (1.6)	$7,968	0 (0)
Bodily Reaction (100)	766	89	$5,189	$389	$3,974,484	254 (33.2)	$14,400	16 (2.1)
Overexertion (120 - 129)	4,582	533	$5,270	$479	$24,146,101	1626 (35.5)	$13,785	74 (1.6)
Unspecified (120)	1,465	168	$6,366	$524	$9,326,769	549 (37.5)	$16,027	25 (1.7)
Lifting (121)	1,782	204	$4,984	$492	$8,882,307	631 (35.4)	$13,030	36 (2.0)
Pull/Push (122)	557	64	$4,352	$433	$2,423,939	181 (32.5)	$12,351	8 (1.4)
Carrying (124)	89	10	$4,206	$408	$374,314	29 (32.6)	$9,862	1 (1.1)
NEC (129)	655	75	$4,484	$410	$2,937,102	221 (33.7)	$12,108	8 (1.2)
Contact-Temp.Extremes (150)	335	39	$2,443	$235	$818,572	69 (20.6)	$10,926	4 (1.2)
Contact - Substances (180)	764	89	$1,568	$205	$1,197,610	68 (8.9)	$13,849	31 (4.1)
Unclassified (990)	378	44	$4,142	$315	$1,565,678	106 (28.0)	$13,589	11 (2.9)

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

***** Represents proportion of claims within type code that are hospitalized.***

Table 4(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rate by Year by Type of Injury (>1.0% total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

	1994-1999		1994		1995		1996		1997		1998		1999	
Type of Injury (Code No.)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
Struck Against (01)	1,677	195	332	240	310	214	279	195	304	207	231	164	221	150
Struck By (020-023, 029)	3,629	422	608	440	616	426	619	433	642	437	567	403	577	392
Fall - Elevation (03)	708	82	121	88	149	103	126	88	117	80	106	75	89	61
Fall - Same Level (05)	1447	168	233	169	251	173	282	197	219	149	220	156	242	165
Caught In, Under, Bet (06)	770	89	160	116	138	95	111	78	107	73	118	84	136	93
Rubbed or Abraded (08)	512	6	93	67	81	56	105	73	86	59	55	39	92	63
Bodily Reaction (100)	766	89	114	83	121	84	144	101	130	89	108	77	149	101
Overexertion (120 - 129)	4,582	533	808	585	815	563	787	550	770	525	732	520	670	456
Unspecified (120)	1,465	168	271	196	322	222	213	149	200	136	251	178	208	141
Lifting (121)	1,782	204	325	235	313	216	326	228	305	208	252	179	261	178
Pull/Push (122)	557	64	106	77	98	68	88	62	92	63	102	72	71	48
Carrying (124)	89	10	13	9	13	9	8	6	17	12	22	16	16	11
NEC (129)	655	75	86	62	67	46	147	103	150	102	96	68	109	74
Contact - Temp. Ext. (150)	335	39	56	41	57	39	55	38	63	43	56	40	48	33
Contact - Subst. (180)	764	89	166	120	123	85	103	72	118	80	114	81	140	95
Unclassified (990)	378	44	67	49	67	46	71	50	62	42	51	36	60	41

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

Table 5(a): Washington State Workers' Compensation State Fund Claims; Food Processing by Selected Body Parts of Injury and Illness (>1.0% of total claims) for SIC codes 201-201, 208, 209, 1994 to 1999

	SIC 20		SIC 201		SIC 202		SIC 203		SIC 204		SIC 205		SIC 206		SIC 208		SIC 209	
Body Part (Code)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
HEAD (1XX)	1,736	202	317	254	58	241	645	251	138	273	45	98	53	167	118	136	362	152
EYE(S) (130)	1,008	117	187	150	28	116	387	150	84	166	20	44	31	98	62	71	209	88
NECK (200)	248	29	46	37	11	46	83	32	16	32	15	33	11	35	17	20	49	21
UPPER EXT (3XX)	6,163	716	1,434	1147	192	797	1,609	625	243	481	319	698	218	687	425	489	1,723	721
ARM(S)UNS (310)	198	23	60	48	5	21	54	21	7	14	8	18	6	19	14	16	44	18
ELBOW (313)	399	46	80	64	10	41	133	52	20	40	18	39	24	76	30	34	84	35
FOREARM (315)	458	53	156	125	18	75	102	40	12	24	31	68	14	44	26	30	99	41
WRIST (320)	941	109	229	183	32	133	237	92	34	67	65	142	50	158	50	57	244	102
HAND (330)	1,112	129	242	194	47	195	286	111	51	101	58	127	36	113	72	83	320	134
FINGER(S) (340)	2,819	328	603	482	70	290	739	287	106	210	128	280	75	236	227	261	871	365
UPPER EXT (398)	165	19	43	34	7	29	35	14	9	18	8	18	9	28	5	6	49	21
TRUNK (4XX)	4,255	495	889	711	191	793	1,241	482	214	423	208	455	151	476	358	412	1,003	420
ABDOMEN (410)	276	32	65	52	15	62	77	30	11	22	13	28	10	32	29	33	56	23
BACK (420)	2,702	314	526	421	124	515	789	306	134	265	131	287	104	328	249	286	645	270
CHEST (430)	291	34	67	54	8	33	94	37	16	32	19	42	x	x	16	18	69	29
SHOULDER (450)	712	83	170	136	38	158	194	75	42	83	32	70	26	82	48	55	162	68
TRNK MULT (498)	170	20	37	30	x	x	53	21	6	12	8	18	6	19	10	11	48	20
LOWER EXT (5XX)	2,228	259	417	334	107	444	694	270	127	251	102	223	95	299	197	226	489	205
KNEE (513)	722	84	96	77	39	162	253	98	42	83	32	70	43	136	76	87	141	59
ANKLE (520)	404	47	73	58	25	104	122	47	28	55	15	33	16	50	29	33	96	40
FOOT (530)	497	58	105	84	15	62	145	56	22	44	24	53	17	54	45	52	124	52
TOE(S) (540)	167	19	34	27	10	41	51	20	11	22	6	13	7	22	17	20	31	13
BACK/NECK (600)	497	58	89	71	17	71	173	67	23	45	28	61	17	54	48	55	102	43
MULTIPLE (700)	723	84	140	112	31	129	236	92	37	73	39	85	32	101	39	45	169	71
BODY SYST(8XX)	208	24	14	11	8	33	73	28	10	20	5	11	4	13	11	13	83	35
RESP SYS (850)	85	10	x	x	x	x	26	10	x	x	x	x	x	x	x	x	44	18
MULT BOD (870)	100	12	11	9	x	x	36	14	5	10	x	x	x	x	7	8	34	14

x = Four or less claims

**** Average Annual Claim Incidence Rates per 10,000 FTEs.***

Note: Code (1XX) indicates all ANSI codes between 100 and 198.

Table 5(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Costs by *Body Part* (≥1% of total claims) for SIC codes 201 - 206, 208, 209; 1994 to 1999.

Body Part (Code)	*No.*	*Rate**	*Average Cost*	*Median Cost*	*Total Cost*	*No. Compensable Claims (%)*	*Average Cost per Compensable Claim*	*Hospitalized Number (%)*
HEAD (1XX)	1,736	202	$1,971	$204	$3,421,063	127 (7.3)	$18,888	15 (0.8)
EYE(S) (130)	1,008	117	$525	$177	$528,730	29 (2.9)	$8,851	4 (0.4)
NECK (200)	248	29	$7,636	$415	$1,893,804	57 (22.8)	$31,357	4 (1.6)
UPPER EXT (3XX)	6,163	716	$2,429	$250	$14,972,159	1165 (18.9)	$11,310	56 (0.9)
ARM(S)UNS (310)	198	23	$3,106	$265	$614,955	33 (16.9)	$15,152	4 (2.0)
ELBOW (313)	399	46	$2,471	$275	$985,977	83 (20.7)	$9,876	0 (0)
FOREARM (315)	458	53	$2,874	$249	$1,316,496	80 (17.6)	$14,968	6 (1.3)
WRIST (320)	941	109	$5,260	$386	$4,949,865	316 (33.6)	$14,966	6 (0.6)
HAND (330)	1,112	129	$1,811	$226	$2,013,288	176 (15.9)	$9,631	11 (1.0)
FINGER(S) (340)	2,819	328	$1,540	$227	$4,340,583	407 (14.4)	$8,935	27 (1.0)
UPPER EXT (398)	165	19	$3,363	$350	$554,830	54 (32.7)	$12,744	0 (0)
TRUNK (4XX)	4,255	495	$5,429	$439	$23,099,883	1458 (34.3)	$14,787	112 (2.6)
ABDOMEN (410)	276	32	$2,485	$666	$685,782	138 (50.0)	$4,510	4 (1.4)
BACK (420)	2,702	314	$5,643	$502	$15,248,096	954 (35.3)	$14,812	75 (2.8)
CHEST (430)	291	34	$1,008	$245	$293,262	54 (18.6)	$4,013	4 (1.4)
SHOULDER (450)	712	83	$7,687	$440	$5,473,485	239 (33.6)	$21,742	20 (2.8)
TRNK MULT (498)	170	20	$3,218	$334	$547,125	43 (25.2)	$11,316	2 (1.2)
LOWER EXT (5XX)	2,228	259	$3,674	$270	$8,186,015	640 (28.7)	$11,920	37 (1.6)
KNEE (513)	722	84	$6,273	$382	$4,529,321	265 (36.8)	$16,466	16 (2.2)
ANKLE (520)	404	47	$2,966	$279	$1,198,188	125 (30.9)	$8,841	7 (1.7)
FOOT (530)	497	58	$1,945	$209	$966,560	114 (23.0)	$7,481	5 (1.0)
TOE(S) (540)	167	19	$1,539	$214	$257,033	37 (22.2)	$6,372	2 (2.0)
BACK/NECK (600)	497	58	$5,419	$881	$2,693,017	140 (28.1)	$15,806	6 (1.2)
MULTIPLE (700)	723	84	$12,692	$507	$9,176,068	243 (33.6)	$36,271	30 (4.1)
BODY SYS (8XX)	208	24	$5,482	$327	$1,140,160	28 (13.5)	$2,739	30 (14.4)
RESP SYS (850)	85	10	$4,953	$712	$420,994	16 (18.6)	$22,654	17 (20.0)
MULT BOD (870)	100	12	$2,592	$215	$259,158	10 (9.9)	$20,503	10 (10.0)

**** Rates per 10,000 FTE***

Note: Code (1XX) indicates all ANSI codes between 100 and 198.

Table 5(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rate by Year by Body Part (>1.0% of total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

	1994-1999		1994		1995		1996		1997		1998		1999	
Body Part	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***
HEAD (1XX)	1,736	202	284	206	271	187	321	225	299	204	260	145	301	205
EYE(S) (130)	1,008	117	188	136	148	102	191	134	164	112	135	79	182	124
NECK (200)	248	29	53	38	42	29	37	26	47	32	30	23	39	27
UPPER EXT (3XX)	6,163	716	1124	814	1071	740	1020	713	1036	706	958	501	954	649
ARM(S)UNS (310)	198	23	36	26	31	21	27	19	37	25	30	18	37	25
ELBOW (313)	399	46	76	55	74	51	63	44	63	43	69	30	54	37
FOREARM (315)	458	53	78	56	76	53	81	57	63	43	89	30	71	48
WRIST (320)	941	109	155	112	178	123	168	118	170	116	143	82	127	86
HAND (330)	1,112	129	206	149	197	136	194	136	194	132	144	94	177	120
FINGER(S) (340)	2,819	328	527	382	481	332	450	315	474	323	439	229	448	305
UPPER EXT (398)	165	19	29	21	26	18	30	21	26	18	27	13	27	18
TRUNK (4XX)	4,255	495	703	509	763	527	755	528	704	480	656	341	674	458
ABDOMEN(410)	276	32	47	34	55	38	37	26	47	32	47	23	43	29
BACK (420)	2,702	314	471	341	473	327	494	346	443	302	418	214	403	274
CHEST (430)	291	34	43	31	54	37	48	34	48	33	53	23	45	31
SHOULDER (450)	712	83	98	71	138	95	127	89	112	76	103	54	134	91
TRNK MULT (498)	170	20	33	24	27	19	29	20	36	25	19	17	26	18
LOWER EXT (5XX)	2,228	259	360	261	401	277	410	287	394	268	313	191	350	238
KNEE (513)	722	84	102	74	117	81	155	108	111	76	117	54	120	82
ANKLE (520)	404	47	71	51	70	48	61	43	68	46	61	33	73	50
FOOT (530)	497	58	90	65	95	66	88	62	94	64	63	45	67	46
TOE(S) (540)	167	19	32	23	34	23	32	22	29	20	21	14	19	13
BACK/NECK (600)	497	58	109	79	88	61	86	60	80	55	63	39	71	48
MULTIPLE (700)	723	84	113	82	121	84	130	91	132	90	117	64	110	75
BODY SYS (8XX)	208	24	69	50	38	26	14	10	19	13	35	9	33	22
RESP SYS (850)	85	10	34	25	8	6	x	x	7	5	19	3	16	11
MULT BOD (870)	100	12	31	22	26	18	11	8	9	6	9	4	14	10

x = Less than Five claims per group

**** Claim Incidence rate per 10,000 FTEs.***

Note: Code (1XX) indicates all ANSI codes between 100 and 198.

TABLE 5d. Washington State Worker's Compensation State Fund Claims; Food Processing Claims by *Nature* and *Source* of Injury for Selected *Body Parts* for SIC codes 201 - 206, 208, 209; 1994 to 1999.

Nature	**N (%)**	**Source**	**N (%)**
Eye (total)	**1,008**		
Scratches	535 (53.1)	Particles	339 (63.4)
		Metal chips	60 (11.2)
		All other	136 (25.4)
Conjunctivitis	177 (17.6)	Particles	43 (24.3)
		Chemicals, UNS	39 (22.0)
		Chlorine Compounds	18 (10.2)
		All other	77 (43.5)
Hand (total)	**1,112**		
Cuts	488 (43.9)	Nonpower knife	181 (37.1)
		Machine, UNS	18 (03.7)
		All other	289 (59.2)
Contusions	298 (26.8)	Powered Conveyor	25 (08.4)
		Machine, UNS	25 (08.4)
		All other	248 (83.2)
Fingers (total)	**2,819**		
Cuts	1,842 (65.3)	Nonpower knife	714 (38.8)
		Machine, UNS	93 (03.7)
		Machine, NEC	73 (04.0)
		All other	962 (52.2)
Contusions	300 (10.6)	Machine, UNS	41 (13.7)
		Machine, NEC	20 (06.7)
		Miscellaneous, NEC	15 (05.0)
		All other	224 (74.7)
Fractures	267 (09.5)	Machine, UNS	26 (09.7)
		Machine, NEC	25 (09.4)
		All other	216 (80.9)
Sprains	161 (05.7)	Boxes/Cartons	22 (13.7)
		Miscellaneous, NEC	15 (05.0)
		All other	124 (77.0)
Back (total)	**2,702 (16.8)**		
Sprains	2,312 (85.6)	Boxes/Cartons	438 (18.9)
		Bodily Motion	187 (08.1)
		Ground Outdoors	130 (05.6)
		All other	1,557 (67.3)

Table 6(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rates* by Source of Injury (>1.5% of total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

	SIC 20		SIC 201		SIC 202		SIC 203		SIC 204		SIC 205		SIC 206		SIC 208		SIC 209	
Source (Code)	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*	*No.*	*Rate*
Bodily Motion (400)	766	89	148	118	37	154	250	97	39	77	35	77	38	120	60	69	159	67
Containers (06XX)	*2,938*	*341*	*416*	*333*	*127*	*527*	*886*	*344*	*141*	*279*	*206*	*451*	*118*	*372*	*309*	*355*	*735*	*308*
Boxes/Cartons (630)	1,135	132	203	162	53	220	344	134	23	46	25	55	57	180	122	140	308	129
Sacks, Bags (635)	259	30	21	17	11	46	73	28	53	105	21	46	10	32	6	7	64	27
Buildings (07XX)	*306*	*36*	*68*	*54.4*	*16*	*66.4*	*97*	*38*	*22*	*44*	*14*	*31*	*9*	*28*	*24*	*28*	*56*	*23*
Chemicals (09XX)	*557*	*65*	*79*	*63.2*	*27*	*112*	*234*	*91*	*27*	*53*	*9*	*20*	*28*	*88*	*34*	*39*	*119*	*50*
Food Products (18XX)	*697*	*81*	*291*	*233*	*11*	*45.6*	*114*	*44*	*5*	*10*	*24*	*53*	*22*	*69*	*8*	*9*	*222*	*93*
Meats & Prod (1840)	294	34	281	225	x	x	5	2	x	x	x	x	x	x	x	x	x	x
Hand Tools (22XX)	*1,861*	*216*	*701*	*561*	*18*	*74.7*	*281*	*109*	*72*	*142*	*61*	*133*	*28*	*88*	*115*	*132*	*585*	*245*
Nonpower Knife (2245)	1,320	153	558	447	7	29	121	47	29	57	40	88	9	28	85	98	471	197
Machines (3XXX)	*1,094*	*127*	*203*	*162*	*34*	*141*	*353*	*137*	*46*	*91*	*73*	*160*	*43*	*136*	*56*	*64*	*286*	*120*
Machines Uns (3000)	372	43	69	55	14	58	159	62	9	18	18	39	17	54	11	13	75	31
Machines NEC (3999)	277	32	56	45	10	42	86	33	9	18	21	46	8	25	11	13	76	32
Metal Items, UNS (41XX)	*912*	*106*	*143*	*114*	*40*	*166*	*361*	*140*	*62*	*123*	*30*	*66*	*25*	*79*	*69*	*79*	*182*	*76*
Particles (4600)	*432*	*50*	*60*	*48*	*9*	*37*	*168*	*65*	*50*	*99*	*8*	*18*	*15*	*47*	*26*	*30*	*96*	*40*
Vehicles (56XX)	*910*	*106*	*170*	*136*	*61*	*253*	*196*	*76*	*67*	*132*	*39*	*85*	*18*	*57*	*119*	*137*	*240*	*100*
Hiway Veh Power (5620)	258	30	36	29	12	50	34	13	26	51	18	39	4	13	54	62	74	31
Dollies (5631)	308	36	75	60	42	174	48	19	7	14	10	22	9	28	40	46	77	32
Powered Carrier (5635)	287	33	53	42	x	x	96	37	23	46	10	22	5	16	17	20	79	33
Wood Items (57XX)	*400*	*46*	*59*	*47.2*	*14*	*58.1*	*140*	*54*	*23*	*45*	*8*	*18*	*16*	*50*	*43*	*49*	*97*	*41*
Pallets, Etc (5720)	285	33	47	38	11	46	111	43	17	34	x	x	14	44	25	29	56	23
Working Surfaces (58XX)	*1,925*	*224*	*279*	*223*	*76*	*315*	*704*	*273*	*90*	*178*	*115*	*252*	*88*	*277*	*110*	*126*	*463*	*194*
Work Surface Uns (5800)	455	53	68	54	14	58	161	63	24	48	20	44	18	57	31	36	119	50
Floor (5801)	857	100	139	111	33	137	311	121	18	36	61	134	44	139	36	41	215	90
Ground-Outdoors (5810)	259	30	27	22	6	25	86	33	32	63	14	31	6	19	24	28	64	27
Stairs/Steps (5840)	259	30	38	30	12	50	122	47	8	16	12	26	14	44	10	12	43	18
Misc NEC (8800)	*682*	*79*	*161*	*129*	*36*	*149*	*213*	*83*	*26*	*51*	*34*	*74*	*32*	*101*	*38*	*44*	*142*	*60*
Unk/Unidentified (9800)	*715*	*83*	*157*	*126*	*32*	*133*	*198*	*77*	*34*	*67*	*28*	*61*	*37*	*117*	*42*	*48*	*187*	*78*

* Rates per 10,000 FTEs; x = Four or less claims;

Note: (07XX) indicates codes 0701 - 0799.

Table 6(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Cost by Source of Injury (>1.5% of total claims) for SIC codes 201-206, 208, 209, 1994 to 1999.

Source (Code)	Number of Claims	Rate	Avg Cost per claim	Median Cost	Total Cost	Compensable No. (%)	Average Cost / Comp Claim	Hospitalized Number (%)
Bodily Motion (400)	766	89	$5,189	$389	$3,974,484	254 (33.2)	$14,400	15 (2.0)
Containers (06XX)	2,938	341	$3,911	$332	$11,489,069	853 (29.0)	$12,208	45 (1.5)
Boxes/Cartons (630)	1,135	132	$4,268	$400	$4,844,217	374 (33.0)	$11,898	20 (1.8)
Sacks, Bags (635)	259	30	$3,486	$362	$902,875	79 (30.5)	$10,211	3 (1.2)
Buildings (07XX)	306	36	$4,011	$228	$1,227,471	52 (17.0)	$21,823	6 (2.0)
Chemicals (09XX)	557	65	$1,840	$231	$1,024,847	49 (8.8)	$17,050	31 (5.6)
Food Products (18XX)	697	81	$3,727	$341	$2,597,492	216 (31.0)	$10,971	4 (0.6)
Meats & Prod (1840)	294	34	$3,186	$470	$936,547	97 (33.0)	$8,427	1 (0.3)
Hand Tools (22XX)	1,861	216	$1,693	$254	$3,150,136	297 (16.0)	$8,851	13 (0.7)
Nonpower Knife (2245)	1,320	153	$1,066	$246	$1,406,726	172 (13.0)	$6,123	7 (0.5)
Machines (3XXX)	1,094	127	$4,385	$294	$4,797,581	249 (22.8)	$17,655	30 (2.7)
Machines Uns (3000)	372	43	$5,039	$283	$1,874,473	78 (21.0)	$22,163	10 (2.7)
Machines NEC (3999)	277	32	$4,304	$277	$1,192,189	65 (23.5)	$17,061	11 (4.0)
Metal Items, UNS (41XX)	912	106	$2,037	$220	$1,858,166	100 (11.0)	$15,642	7 (0.8)
Particles (4600)	432	50	$359	$148	$155,201	6 (1.4)	$8,895	0 (0.0)
Vehicles (56XX)	910	106	$7,270	$334	$6,615,703	258 (28.4)	$24,395	22 (2.4)
Hiway Veh Power (5620)	258	30	$15,933	$456	$4,110,626	76 (29.5)	$52,583	12 (4.7)
Dollies (5631)	308	36	$4,042	$270	$1,244,854	86 (27.9)	$13,599	4 (1.3)
Powered Carrier (5635)	287	33	$3,841	$331	$1,102,448	81 (28.2)	$12,164	6 (2.1)
Wood Items (57XX)	400	46	$2,539	$242	$1,015,689	93 (23.3)	$9,633	3 (0.8)
Pallets, Etc (5720)	285	33	$3,080	$268	$877,828	71 (24.9)	$11,088	2 (0.7)
Working Surfaces (58XX)	1,925	224	$5,451	$387	$10,492,312	564 (29.3)	$17,161	48 (2.5)
Work Surface Uns (5800)	455	53	$6,585	$350	$2,996,097	118 (25.9)	$23,730	14 (3.1)
Floor (5801)	857	100	$5,123	$399	$4,390,005	257 (30.0)	$15,572	17 (2.0)
Ground-Outdoors (5810)	259	30	$4,894	$440	$1,267,417	93 (35.9)	$12,728	8 (3.1)
Stairs/Steps (5840)	259	30	$3,991	$367	$1,033,711	67 (25.9)	$13,825	6 (2.3)
Misc NEC (8800)	682	79	$4,567	$314	$3,114,574	195 (28.6)	$14,892	5 (0.7)
Unk/Unidentified (9800)	715	83	$6,316	$365	$4,515,933	240 (33.6)	$17,839	18 (2.5)

Note: (07XX) indicates codes 0701 - 0799.

Table 6(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rates* by Year by Source of Injury (>1.5% of total claims) for SIC codes 201-206, 208, 209, 1994-1999.

	1994- 1999		1994		1995		1996		1997		1998		1999	
Source (Code)	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***	***No.***	***Rate***
Bodily Motion (400)	*766*	*89*	*114*	*83*	*121*	*84*	*144*	*101*	*130*	*89*	*108*	*77*	*149*	*101*
Containers (06XX)	*2,938*	*341*	*539*	*390*	*513*	*354*	*513*	*359*	*485*	*330*	*440*	*313*	*448*	*305*
Boxes/Cartons (630)	1,135	132	191	138	213	147	193	135	184	125	185	131	169	115
Sacks, Bags (635)	259	30	53	38	43	30	44	31	37	25	35	25	47	32
Buildings (07XX)	*306*	*36*	*52*	*38*	*50*	*35*	*49*	*34*	*64*	*44*	*41*	*29*	*50*	*34*
Chemicals (09XX)	*557*	*65*	*142*	*103*	*76*	*53*	*69*	*48*	*87*	*59*	*78*	*55*	*105*	*71*
Food Products (18XX)	*697*	*81*	*124*	*90*	*136*	*94*	*116*	*81*	*121*	*82*	*111*	*79*	*89*	*61*
Meats & Prod (1840)	294	34	46	33	57	39	48	34	48	33	51	36	44	30
Hand Tools (22XX)	*1,861*	*216*	*295*	*214*	*333*	*230*	*318*	*222*	*322*	*219*	*313*	*222*	*280*	*190*
Nonpower Knife (2245)	1,320	153	205	149	228	158	232	162	227	155	223	158	205	139
Machines (3XXX)	*1,094*	*127*	*232*	*168*	*211*	*146*	*156*	*109*	*183*	*125*	*165*	*117*	*147*	*100*
Machines Uns (3000)	372	43	66	48	59	41	49	34	55	38	68	48	75	51
Machines NEC (3999)	277	32	69	50	54	37	42	29	51	35	38	27	23	16
Metal Items, UNS (41XX)	*912*	*106*	*178*	*129*	*156*	*108*	*155*	*108*	*160*	*109*	*131*	*93*	*132*	*90*
Particles (4600)	*432*	*50*	*91*	*66*	*72*	*50*	*87*	*61*	*77*	*53*	*47*	*33*	*58*	*40*
Vehicles (56XX)	*910*	*106*	*162*	*117*	*173*	*120*	*178*	*124*	*158*	*108*	*109*	*77*	*130*	*88*
Hiway Veh Power (5620)	258	30	53	38	36	25	42	29	49	33	28	20	50	34
Dollies (5631)	308	36	55	40	61	42	59	41	56	38	32	23	45	31
Powered Carrier (5635)	287	33	44	32	63	44	65	46	42	29	41	29	32	22
Wood Items (57XX)	*400*	*46*	*89*	*64*	*54*	*37*	*75*	*52*	*59*	*40*	*59*	*42*	*64*	*44*
Pallets, Etc (5720)	285	33	66	48	35	24	49	34	46	31	41	29	48	33
Working Surfaces (58XX)	*1,925*	*224*	*304*	*220*	*349*	*241*	*347*	*243*	*287*	*196*	*307*	*218*	*331*	*225*
Work Surface Uns (5800)	455	53	99	72	96	66	70	49	74	50	60	43	56	38
Floor (5801)	857	100	124	90	139	96	145	101	132	90	155	110	162	110
Ground-Outdoors (5810)	259	30	31	22	48	33	65	46	39	27	30	21	46	31
Stairs/Steps (5840)	259	30	35	25	57	39	46	32	32	22	43	31	46	31
Misc NEC (8800)	*682*	*79*	*42*	*30*	*94*	*65*	*131*	*92*	*134*	*91*	*120*	*85*	*161*	*110*
Unk/Unidentified (9800)	*715*	*83*	*134*	*97*	*133*	*92*	*129*	*90*	*122*	*83*	*95*	*68*	*102*	*69*

*Claims Incidence Rates per 10,000 FTE; Note (09XX) represents codes 0901 - 0999.

Table 7(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims for Washington State Priority Conditions for SIC codes 201-206, 208, 209, 1994 to 1999.

Priority Condition	No.	Rate*	Med. Age	% Male	Avg Cost / Claim	Median Cost	Total Cost	No. Compensable (%)
Workplace Violence	37	4.3	34	64.9	$20,219	$401	$748,085	15 (40.5)
Dermatitis	121	14.1	34	58.7	$1,536	$134	$185,891	15 (12.4)
Hospitalized Occ Burns	6	0.7	39	100	$108,542	$35,332	$651,250	6 (100)
Work-related Asthma	13	1.5	42	61.5	$18,680	$1,635	$242,844	5 (38.5)
Carpal Tunnel Syndrome	352	40.9	37	33.8	$16,563	$4,631	$5,830,043	234 (66.5)
Rotator Cuff Syndrome	254	29.5	39	61.4	$20,077	$2,328	$5,099,593	145 (57.1)
Epicondylitis	170	19.8	41	56.5	$9,263	$1,242	$1,574,760	67 (39.4)
Sciatica	41	4.8	36	70.7	$35,025	$13,573	$1,436,026	35 (85.4)
WMSD -Neck	441	51.3	37	51.5	$17,688	$1,488	$7,800,717	201 (45.6)
WMSD -Back	2,183	253.7	35	24	$6,561	$532	$14,322,533	816 (37.4)
WMSD -Upper Extremity	727	84.5	38	48.4	$14,440	$2,900	$10,498,409	401 (55.2)

**** Average Annual Claims Incidence Rate per 10,000 FTEs.***

Table 7(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Rates by Year for Washington State Priority Conditions for SIC codes 201-206, 208-209, 1994 to 1999. Priority conditions with average annual claims rates > 10 per 10,000 FTEs.

Condition	*No.*	*Rate**	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Dermatitis	121	14.1	19.6	12.4	11.2	16.4	10.7	14.3
Carpal Tunnel Syndrome (CTS)	352	40.9	47.1	49.7	45.5	40.9	32.7	29.9
Rotator Cuff Syndrome	254	29.5	33.3	34.5	25.9	28.6	24.9	29.9
Epicondylitis	170	19.8	21.0	18.7	20.3	19.8	20.6	18.4
WMSD -Neck	441	51.3	61.6	53.2	48.3	54.5	46.9	43.5
WMSD -Back	2183	253.7	277.4	266.0	273.5	251.5	237.9	217.7
WMSD -Upper Extremity	727	84.5	93.4	96.0	86.0	88.6	71.0	72.1

**** Average Annual Claims Incidence Rate per 10,000 FTEs.***

Table 7(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Rates by SIC Code for Work Related Musculoskeletal Disorders for 1994 to 1999.

Condition	SIC 20	SIC 201	SIC 202	SIC 203	SIC 204	SIC 205	SIC 206	SIC 208	SIC 209
Carpal Tunnel Syndrome (CTS)	40.9	72.8	8.0	33.8	19.8	46.0	66.2	14.9	38.9
Rotator Cuff Syndrome	29.5	45.6	11.2	24.1	33.6	28.4	34.7	16.1	27.6
Epicondylitis	19.8	25.6	8.0	16.7	19.8	17.5	31.5	18.4	15.9
WMSD -Neck	51.3	68.8	19.2	45.8	39.5	65.6	41.0	34.5	50.2
WMSD -Back	253.7	347.3	77.6	235.4	215.5	229.8	264.8	257.5	219.4
WMSD -Upper Extremity	84.5	135.2	25.6	70.3	67.2	87.5	116.6	51.7	79.1

** Average Annual Claims Incidence Rates per 10,000 FTEs*

Table 8: Washington State Workers' Compensation State Fund Claims for 'Falls from Elevation" (Code 03x) in Food Processing. SIC codes 201-206, 208, 209, 1994 to 1999.

Type (Code)	*Claims (%)*	*Total Cost*	*% Compensable*
Fall from Elevation (030)	36 (5.1)	$185,905	30.6
Fall from Platforms (031)	26 (3.7)	$169,416	30.8
Fall from Ladders (032)	110 (15.5)	$604,484	32.7
Fall from Piled Matter (033)	3 (0.4)	$119,029	66.7
Fall from Vehicles (034)	144 (20.3)	$968,324	38.9
Fall on Stairs (035)	235 (33.2)	$882,290	27.2
Fall into Openings (036)	29 (4.1)	$64,081	37.9
Fall from Roof (037)	3 (0.4)	$4,460	33.3
Fall to Lower Level (039)	122 (17.2)	$608,869	27.0

Nature [1]	*Body Part* [2]			
SPRAINS	**All**	**345**	**$1,417,443**	**31.6%**
	Back	92	$468,621	29.3%
	Knee	58	$270,667	37.9%
	Ankle	46	$25,445	17.9%
	Back/Neck	38	$113,728	28.9%
	Other	110	$538,982	31.8%
CONTUSION	**All**	**179**	**$985,904**	**27.9%**
	Multiple	29	$220,800	24.1%
	Back	25	$74,654	32.0%
	Knee	20	$307,841	45.0%
	Other	105	$382,609	24.8%
MULT INJURIES	**All**	**54**	**$480,416**	**50.0%**
	Multiple	42	$468,105	50.0%
	Other	12	$12,311	33.3%
FRACTURE	**All**	**44**	**$423,026**	**50.0%**
ILL-DEF SYMP	**All**	**31**	**$132,294**	**25.8%**

[1] ***Limited to 30 Claims per Nature Code, Source Code***

[2] ***Limited to > 20 Claims per Body Part Code***

Table 9: Washington State Workers' Compensation State Fund Claims for 'Falls from Same Levels' (Code 05x) in processing* SIC codes 201-206, 208, 209, 1994 to 1999.

		N	Total Cost	Percent Compensable
Source				
Floor		731	$3,980,365	30.3
Work Surface, Uns		260	$1,384,749	23.8
Ground- Outdoors		118	$621,830	31.4
Nature [1]	***Body Part*** [2]			
Sprains	All	610	$3,812,274	28.7
	Back	206	$1,529,621	28.6
	Back/Neck	93	$704,878	29.0
	Knee	55	$349,649	47.3
	Multiple	50	$400,125	32.0
	Ankle	48	$47,682	27.0
	other	158	$780,319	21.5
Contusion	All	415	$1,269,976	17.8
	Knee	76	$130,880	19.7
	Back	69	$254,695	20.3
	Multiple	50	$443,308	22.0
	Chest	47	$42,273	12.8
	Shoulder	26	$173,853	23.1
	other	147	$224,967	15.0
Fracture	All	94	$1,214,976	57.4
	Chest	19	$34,243	26.3
	Wrist	17	$391,220	76.5
	other	58	$789,513	62.0
Ill-Defined	All	94	$744,120	44.7
	Back	22	$165,175	54.5
	Knee	15	$170,544	60.0
	Shoulder	10	$51,700	30.0
	other	47	$356,701	38.3
Multiple Injuries	All	80	$437,084	32.5
	Multiple	60	$415,393	35.0
	other	20	$21,691	25.0

[1] ***Limited to 50 Claims per Nature Code, Source Code***

[2] ***Limited to $\geq$ 10 Claims per Body Part Code***

Table 10: Washington State Workers' Compensation State Fund Claims for 'Forklift' Injuries in Food Processing* in Washington State, 1994 to 1999.

			N	Total Cost	Percent Compensable
Type	**All**		**287**	**$1,102,448**	**28.2**
Struck by			114		28.2
Caught On, Under, Between			36	$45,451	25.0
Non- Hwy Non Collision			33	$52,857	24.2
Overexertion			28	$145,975	28.6
Other			76	$404,669	28.9
***Nature*[1] *and Body Part*[2]					
Contusion	**All**		**123**	**$244,738**	**21.1**
		Chest	44	$181,928	52.0
		Knee	10	$3,478	35.3
		Other	69	$59,332	15.4
Sprains	**All**		**87**	**$553,561**	**28.7**
		Back	25	$230,162	27.3
		Back/Neck	17	$265,716	10.0
		Other	45	$57,683	18.8
Fracture	**All**		**28**	**$126,340**	**60.7**
		Fingers	10	$41,810	40.0
		Other	18	$84,530	72.2

***** *Includes Standard Industrial Classification (SIC) codes 201 to 206, 208, and 209.*

[1] *Limited to 25 Claims per Nature Code.*

[2] *Limited to 10 Claims per Body Part Code.*

Table 11: Distribution of Washington State Workers' Compensation State Fund Claims by Occupation Compared to the Distribution of Employed Persons by Occupation in Food Processing, Washington State, 1998.

	SIC 201			SIC 202			SIC 203			SIC 204		
	ESD	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**
MANAGERIAL & ADMINSTRATIVE	2.5	0.7	0.8	5.2	1.4	1.5	4.8	1.7	2.0	5.0		
PROFESSIONAL/PARAPROFESSIONAL & TECHNICAL OCCUPATIONS	1.7			3.5	1.4	1.5	4.4	1.1	1.3	5.0		
SALES & RELATED OCCUPATIONS	2.3			2.9	1.4	1.5	1.7	0.3	0.4	5.0	0.9	1.0
CLERICAL & ADMINISTRATIVE SUPPORT	5.3	1	1.2	7.5	1.4	1.5	7.6	1.5	1.8	10.4		
SERVICE OCCUPATIONS	2.5	3.1	3.6	3.5	6.9	7.7	3.4	8.6	10.1	2.8	2.6	3.1
AGRICULTURAL, FORESTRY, FISHING & RELATED	0.4	4	4.6	1.2	9.7	10.8	2.3	2.8	3.2	1.7	8.8	10.4
PRODUCT/CONSTRUCT/MATERIAL HANDLING OPERATIONAL MAINTENANCE	85.3	78.4	89.8	76.3	68.1	75.4	75.9	69.5	81.3	70.3	71.9	85.4
NO REPORTED OCCUPATION		12.7			9.7			14.5			15.8	

	SIC 205			SIC 206			SIC 208			SIC 209		
	ESD	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**	*ESD*	*L&I 98*	*L&I 98**
MANAGERIAL & ADMINSTRATIVE	5.3	3.5	4.0	6.0	2.4	2.7	10.4	6.3	7.3	4.7	3.8	4.4
PROFESSIONAL/PARAPROFESSIONAL & TECHNICAL OCCUPATIONS	2.9			6.0	1.6	1.8	7.4			3.6	0.7	0.8
SALES & RELATED OCCUPATIONS	8.2	0.9	1.0	10.3	3.9	4.5	15.2	4.4	5.1	2.1	2.4	2.8
CLERICAL & ADMINISTRATIVE SUPPORT	6.2	1.8	2.0	21.6	1.6	1.8	10.7	1	1.1	7.4	1	1.2
SERVICE OCCUPATIONS	8.5	6.1	7.0	4.3	5.5	6.3	9.1	23.4	27.0	6.5	4.8	5.6
AGRICULTURAL, FORESTRY, FISHING & RELATED					0.8	0.9	0.3	4.4	5.1	4.7	1.5	1.8
PRODUCT/CONSTRUCT/MATERIAL HANDLING OPERATIONAL MAINTENANCE	68.9	75.4	86.0	51.7	72.4	82.1	46.9	47.3	54.5	71.0	71.1	83.3
NO REPORTED OCCUPATION		12.3			11.8			13.2			14.7	

**** Random Redistribution of those with 'No Reported Occupation' to other occupational categories.***

Table 12: SIC code and WIC code Distributions of Washington State Workers' Compensation State Fund Claims when Claims are Identified by Food Processing SIC codes respectively.

Selection Restricted To SIC Codes

SIC Code	SIC Description	Number of Claims	Percent Assigned Food Processing WIC
201	Meat Products	3,101	92.4
202	Dairy Products	543	88.3
203	Canned, Frozen, Preserved Fruits, Vegetables, and Food Specialties	4,641	97.2
204	Grain Mill Products	497	61.4
205	Bakery Products	665	87.4
206	Sugar and Confectionary Products	551	94.7
207	Fats and Oils	258	96.3
208	Beverages	601	49.5
209	Miscellaneous Food Preparations and Products	3,233	81.1
		16,367	86.1

Selection Restricted To Risk Class

WIC Code	WIC Description	Number of Claims	Percent Assigned Food Processing SIC
2101	Grain, Feed and Flour Mills	2,068	14.5
2104	Fruit and Vegetable Packing - Fresh	10,113	0.4
3304	Meat, Fish, Poultry Dealers - Wholesale	7,684	47.8
3702	Breweries, Wineries and Beverage Bottling	1,681	54.4
3902	Fruit / Vegetable Canneries / Food Product Mfg. NOC	5,719	83.4
3903	Sugar Refining	163	98.2
3906	Bakeries - Wholesale, NOC	2,449	58.5
4002	Dairy Products Manufacturing, NOC	943	78.4
4301	Meat Products Mfg. / Slaughter and Packing Houses	2,463	88.1
4302	Custom Meat Cutting	179	25.1
4304	Feed Lots and Stock Yards	577	16.3
Total		**34,039**	**42.1**

Table 13: Washington State Workers' Compensation State Fund Claims; Food Processing WIC codes, 1994 to 1999.

	WIC ALL FP	*WIC 2101*	*WIC 2104*	*WIC 3304*	*WIC 3702*	*WIC 3902*	*WIC 3903*	*WIC 3906*	*WIC 4002*	*WIC 4301*	*WIC 4302*	*WIC 4304*
Total Claims: 1994-1999	34,039	2,068	10,113	7,684	1,681	5,719	163	2,449	943	2,463	179	577
Percent of all claims in all WIC FP		6	30	23	5	17	0	7	3	7	1	2
% Female	29	3	36	31	12	33	25	38	16	11	23	12
Median Age	34	32	34	34	31	34	31	34	35	31	34	35
Average total no. claims/year	5,673	345	1,686	1,281	280	953	27	408	157	411	30	96
Avg no. inj. workers/year	4,146	252	1,281	917	206	701	23	318	94	266	22	66
Compensable claims (total)	8,006	540	2,092	1,967	342	1,165	25	676	320	679	36	164
%total claims	24	26	21	26	20	20	15	28	34	28	20	28
Total FTEs: 1994-1999	158,755	8,712	62,645	27,372	6,625	27,258	359	12,883	3,048	7,357	532	1,965
Average claim rate/100FTE-YR	21	24	16	28	25	21	45	19	31	34	34	29
Total Direct Cost: 1994-1999*	131,316	11,979	34,422	31,183	4,879	18,819	548	11,189	5,324	9,159	454	3,360
% total cost		9	26	24	4	14	0	9	4	7	0	3
Average total direct cost/claim ($)	3,858	5,792	3,404	4,058	2,903	3,291	3,362	4,569	5,646	3,719	2,537	5,824
Median total direct cost/claim ($)	280	264	264	279	249	283	259	304	353	343	235	325
Avg total direct cost/ comp claim ($)	14,686	20,810	14,347	14,553	12,034	13,846	18,635	15,086	15,737	12,102	10,501	19,256
Median total direct cost/ comp claim ($)	2,827	2,845	3,370	2,498	2,215	3,027	10,396	2,856	3,494	2,168	2,587	2,552

**** Expressed in thousands of dollars; Not adjusted for inflation.***

Code	WIC Description
2101	Grain, Feed and Flour Mills
2104	Fruit and Vegetable Packing - Fresh
3304	Meat, Fish, Poultry Dealers - Wholesale
3702	Breweries, Wineries and Beverage Bottling
3902	Fruit / Vegetable Canneries / Food Product Mfg. NOC
3903	Sugar Refining
3906	Bakeries - Wholesale, NOC
4002	Dairy Products Manufacturing, NOC
4301	Meat Products Mfg. / Slaughter and Packing Houses
4302	Custom Meat Cutting
4304	Feed Lots and Stock Yards

Table 14: Washington State Workers' Compensation State Fund Claims; Food Processing Claim Incidence Rates by WIC code; 1994 to 1999

WIC Code	Year	Claims	FTEs	Claims / 10,000 FTE
All FP	1994	6355	26012	2443
	1995	5825	25891	2250
	1996	5457	25623	2130
	1997	5620	26344	2133
	1998	5324	26736	1991
	1999	5458	27791	1964
2101	1994	391	1392	2809
	1995	385	1458	2641
	1996	346	1495	2314
	1997	353	1496	2360
	1998	285	1410	2021
	1999	308	1461	2108
2104	1994	1969	10381	1897
	1995	1612	9875	1632
	1996	1538	9776	1573
	1997	1753	10653	1646
	1998	1662	11115	1495
	1999	1579	10843	1456
3304	1994	1489	4639	3210
	1995	1328	4627	2870
	1996	1190	4503	2643
	1997	1183	4332	2731
	1998	1227	4427	2772
	1999	1267	4843	2616
3702	1994	268	1039	2579
	1995	325	1158	2807
	1996	300	1132	2650
	1997	303	1179	2570
	1998	236	1104	2138
	1999	249	1012	2460
3902	1994	1115	4501	2477
	1995	995	4441	2240
	1996	898	4345	2067
	1997	930	4516	2059
	1998	858	4393	1953
	1999	923	5062	1823

WIC Code	Year	Claims	FTEs	Claims / 10,000 FTE
3903	1994	1	0	
	1995	2	0	
	1996		0	
	1997	2	4	5000
	1998	60	131	4580
	1999	98	224	4375
3906	1994	456	2015	2263
	1995	476	2210	2154
	1996	416	2183	1906
	1997	371	2011	1845
	1998	361	2162	1670
	1999	369	2302	1603
4002	1994	164	522	3142
	1995	147	529	2779
	1996	167	535	3121
	1997	188	484	3884
	1998	118	458	2576
	1999	159	520	3058
4301	1994	384	1104	3478
	1995	436	1190	3664
	1996	462	1233	3747
	1997	411	1253	3280
	1998	398	1265	3146
	1999	372	1314	2831
4302	1994	23	78	2949
	1995	34	86	3953
	1996	36	101	3564
	1997	32	97	3299
	1998	25	83	3012
	1999	29	86	3372
4304	1994	95	340	2794
	1995	85	317	2681
	1996	104	320	3250
	1997	94	323	2910
	1998	94	319	2947
	1999	105	346	3035

Table 15(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rates* by *Nature of Injury* (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4002, 4301, 4302, 4304 for 1994 to 1999.

	WIC ALL		*WIC 2101*		*WIC 2104*		*WIC 3304*		*WIC 3702*		*WIC 3902*		*WIC 3906*		*WIC 4002*		*WIC 4301*		*WIC 4302*		*WIC 4304*	
Nature of Injury (Code)	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
Burn - Heat (120)	497	31	18	21	66	11	51	19	51	77	165	114	47	36	19	62	57	77	x	x	x	x
Burn - Chemical (130)	291	18	7	8	43	7	46	17	32	48	96	67	10	8	14	46	29	39	x	x	x	x
Contusions (160)	4,894	309	273	313	1,488	238	1,101	402	226	341	884	613	377	293	146	479	229	311	x	x	138	702
Cut (170)	6,503	411	356	409	1,395	223	1,819	665	364	549	1,027	712	476	369	119	390	730	992	108	2,032	96	488
Fractures (210)	1,350	85	108	124	419	67	272	99	55	83	221	153	101	78	35	115	84	114	x	x	46	234
Hearing Loss (230)	341	22	37	42	109	17	43	16	22	33	74	51	16	12	9	30	17	23	x	x	8	41
Bursitis (260)	1,093	69	29	33	416	66	267	98	32	48	129	89	75	58	31	102	105	143	x	x	x	x
Scratches (300)	1,603	101	163	187	678	108	269	98	63	95	243	168	59	46	19	62	65	88	x	x	30	153
Sprains (310)	11,737	741	704	808	3,668	586	2,486	908	603	910	1,939	1,344	945	734	386	1,266	789	1,072	33	621	140	712
Multiple Injuries (400)	689	43	48	55	203	32	158	58	21	32	118	82	48	37	27	89	44	60	x	x	18	92
Eye Disorder (530-2)	360	23	20	23	111	18	97	35	9	14	73	51	10	8	7	23	24	33	x	x	x	x
Nerve Disorder (560-2)	575	36	15	17	132	21	187	68	21	32	80	55	67	52	18	59	46	63	7	132	x	x
Ill-Defined Disorder(580)	2,357	149	151	173	812	130	521	190	116	175	364	252	121	94	70	230	145	197	8	151	37	188

x less than 5 claims

**** Rates per 10,000 FTE***

Table 15(b): Washington State Workers' Compensation State Fund Claim; Food Processing Claims by Nature of Injury (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 4002, 4301, 4302, 4304 for 1994 to 1999.

Nature of Injury (Code No.)	*No.*	*Rate**	*Avg Cost per Claim*	*Median Cost*	*Total Cost*	*No. Compensable Claims (%)*	*Avg Cost per Comp Claim*	*Hospitalized Number (%)*
Burn - Heat (120)	497	31	$1,592	$221	$791,258	97 (19.5)	$7,166	9 (1.8)
Burn - Chemical (130)	291	18	$948	$216	$275,835	33 (11.3)	$6,459	1 (0.3)
Contusions (160)	4,894	309	$1,865	$203	$9,126,887	722 (14.8)	$10,887	48 (1.0)
Cut (170)	6,503	411	$982	$226	$6,385,957	654 (10.1)	$7,164	40 (0.6)
Fractures (210)	1,350	85	$8,818	$788	$11,904,486	686 (50.8)	$16,742	110 (8.1)
Hearing Loss (230)	341	22	$15,961	$13,564	$5,442,533	189 (55.4)	$17,503	0 (0.0)
Bursitis (260)	1,093	69	$4,882	$339	$5,336,545	307 (28.1)	$15,906	9 (0.8)
Scratches (300)	1,603	101	$321	$158	$515,162	43 (2.7)	$4,603	10 (0.6)
Sprains (310)	11,737	741	$4,386	$383	$51,473,633	3434 (29.3)	$13,515	205 (1.7)
Multiple Injuries (400)*	689	43	$12,613	$461	$8,690,566	238 (34.5)	$35,561	27 (3.9)
Eye Disorder (530-2)	360	23	$247	$156	$88,891	3 (0.8)	$521	1 (0.3)
Nerve Disorder (560-2)	575	36	$11,896	$3,094	$6,840,150	347 (60.3)	$19,015	9 (1.6)
Ill-Defined Disorder (580)	2,357	149	$5,558	$363	$13,100,267	688 (29.2)	$17,557	66 (2.8)

Rate per 10,000 FTE

Table 15c: Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claims Rates* by Year by *Nature* of Injury (> 1.0 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304. Trends for years 1994 to 1999.

	1994-1999		1994		1995		1996		1997		1998		1999	
Nature of Injury (Code No.)	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Burn - Heat (120)	497	31	86	33	81	31	79	31	89	34	79	30	83	30
Burn - Chemical (130)	291	18	56	22	41	16	53	21	46	17	32	12	63	23
Contusions (160)	4,894	309	869	334	837	323	815	318	787	299	771	288	815	293
Cut (170)	6,503	411	1,220	469	1,180	456	1,067	416	1,125	427	950	355	961	346
Fractures (210)	1,350	85	236	91	232	90	225	88	203	77	217	81	237	85
Hearing Loss (230)	341	22	60	23	78	30	54	21	60	23	45	17	44	16
Bursitis (260)	1,093	69	77	30	170	66	189	74	229	87	217	81	211	76
Scratches (300)	1,603	101	331	127	248	96	258	101	244	93	234	88	288	104
Sprains (310)	11,737	741	2,363	908	2,065	798	1,867	729	1,877	712	1,791	670	1,774	638
Multiple Injuries (400)*	689	43	162	62	129	50	106	41	131	50	90	34	71	26
Eye Disorder (530-2)	360	23	79	30	56	22	71	28	59	22	50	19	45	16
Nerve Disorder (560-2)	575	36	106	41	88	34	85	33	88	33	100	37	108	39
Ill-Defined Disorder (580)	2,357	149	324	125	317	122	327	128	400	152	467	175	522	188

Rates per 10,000 FTE

Table 16(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Rate* by Type of Injury (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304 for 1994 to 1999.

	WIC ALL		*WIC 2101*		*WIC 2104*		*WIC 3304*		*WIC 3702*		*WIC 3902*		*WIC 3906*		*WIC 4002*		*WIC 4001*		*WIC 4302*		*WIC 4304*	
Type of Injury (Code)	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
Struck Against (01)	3,540	223	207	238	987	158	816	298	214	323	655	240	282	219	95	312	192	261	29	546	63	321
Struck By (020-023, 029)	7,333	463	429	492	1,797	287	1,970	720	309	466	1,072	393	482	374	160	525	799	1,086	90	1,693	225	1,145
Fall - Elevation (03)	1,463	92	167	192	438	70	243	89	86	130	273	100	85	66	58	190	56	76	x	x	55	280
Fall - Same Level (05)	2,883	182	151	173	848	135	651	238	127	192	589	216	242	188	85	279	138	188	5	94	47	239
Caught In, Under, Bet (06)	1,793	113	129	148	608	97	310	113	84	127	345	127	186	144	49	161	58	79	x	x	24	122
Rubbed or Abraded (08)	1,275	80	142	163	554	88	212	77	45	68	195	72	36	28	14	46	53	72	x	x	22	112
Bodily Reaction (100)	1,544	97	95	109	505	81	293	107	101	152	275	101	117	91	48	157	92	125	x	x	16	81
Overexertion (120 - 129)	9,968	629	525	603	3,155	504	2,349	858	476	718	1,450	532	810	629	325	1,066	767	1,042	39	734	72	366
Unspecified (120)	3,081	195	133	153	989	158	800	292	117	177	449	165	209	162	100	328	251	341	9	169	24	122
Lifting (121)	3,885	245	224	257	1,171	187	914	334	200	302	620	227	381	296	121	397	211	287	18	338	25	127
Pull/Push (122)	1,183	75	54	62	350	56	247	90	67	101	143	52	105	82	47	154	160	217	x	x	6	31
Carrying (124)	216	14	17	20	59	9	43	16	24	36	36	13	15	12	5	16	15	20	x	x	x	x
NEC (129)	1,522	96	85	98	565	90	328	120	64	97	189	69	99	77	51	167	120	163	7	132	14	71
Contact - Temp. Ext. (150)	508	32	23	26	82	13	55	20	54	82	163	60	47	36	20	66	57	77	x	x	5	25
Contact - Subst. (180)	1,604	101	71	81	573	91	330	121	80	121	354	130	51	40	40	131	93	126	x	x	12	61
Unclassified (990)	738	47	23	26	187	30	204	75	33	50	154	57	43	33	24	79	60	82	x	x	6	31

x is less than Five claims

**** Rates per 10,000 FTE***

Table 16(b): Washington State Workers' Compensation State Fund Claims; Food Processing and Claim Rates* by Type of Injury (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304, for 1994 to 1999.

Type of Injury (Code)	*No.*	*Rate*	*Avg Cost per Claim*	*Median Cost*	*Total Cost*	*No. Compensable Claims (%)*	*Avg Cost per Comp Claim*	*Hospitalized No. (%)*
Struck Against (01x)	3,540	223	$1,453	$211	$ 5,144,671	424 (12.0)	$9,977	37 (1.0)
Struck By (020-023, 029)	7,333	463	$2,037	$229	$ 14,934,611	1068 (14.6)	$12,057	87 (1.2)
Fall - Elevation (03x)	1,463	92	$6,886	$393	$ 10,074,803	492 (33.6)	$19,433	62 (4.2)
Fall - Same Level (05x)	2,883	182	$5,050	$338	$ 14,558,507	807 (28.0)	$16,684	72 (2.5)
Caught In, Under, Bet (06x)	1,793	113	$4,532	$292	$ 8,125,997	464 (25.9)	$16,270	56 (3.1)
Rubbed or Abraded (08x)	1,275	80	$636	$149	$ 811,390	16 (1.3)	$32,721	5 (0.4)
Bodily Reaction (10x)	1,544	97	$5,093	$409	$ 7,863,283	503 (32.6)	$14,152	36 (2.3)
Overexertion (120 - 129)	9,968	629	$4,968	$439	$ 49,522,437	3349 (33.6)	$13,590	166 (1.7)
Unspecified (120)	3,081	195	$6,215	$477	$ 19,148,755	1103 (35.8)	$16,184	54 (1.8)
Lifting (121)	3,885	245	$4,381	$425	$ 17,020,591	1280 (32.9)	$12,149	68 (1.8)
Pull/Push (122)	1,183	75	$3,882	$452	$ 4,592,888	366 (30.9)	$11,133	17 (1.4)
Carrying (124)	216	14	$3,551	$391	$ 767,116	68 (31.5)	$9,964	3 (1.4)
NEC (129)	1,522	96	$5,049	$439	$ 7,685,022	505 (33.2)	$13,993	23 (1.5)
Contact - Temp. Ext. (15x)	508	32	$1,831	$220	$ 930,189	98 (19.3)	$8,472	12 (2.4)
Contact - Subst. (18x)	1,604	101	$1,424	$201	$ 2,283,370	135 (8.4)	$12,502	39 (2.4)
Unclassified (99x)	738	47	$4,570	$306	$ 3,372,613	201 (27.2)	$15,407	17 (2.3)

**** Rates per 10,000 FTE***

Table 16c: Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Claim Rates by Year by *Type* of Injury (≥ 1.0 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304. Trends for years 1994 to 1999.

	1994-1999		*1994*		*1995*		*1996*		*1997*		*1998*		*1999*	
Type of Injury (Code)	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
Struck Against (01)	3,540	223	674	259	671	259	615	240	585	222	492	184	503	181
Struck By (020-023, 029)	7,333	463	1374	528	1225	473	1179	460	1268	481	1153	431	1134	408
Fall - Elevation (03)	1,463	92	268	103	297	115	236	92	249	95	210	79	203	73
Fall - Same Level (05)	2,883	182	518	199	503	194	546	213	466	177	433	162	417	150
Caught In, Under, Bet (06)	1,793	113	373	143	312	121	255	100	238	90	286	107	329	118
Rubbed or Abraded (08)	1,275	80	255	98	212	82	207	81	205	78	176	66	220	79
Bodily Reaction (100)	1,544	97	240	92	264	102	244	95	240	91	247	92	309	111
Overexertion (120)	9,968	629	1912	735	1689	652	1553	606	1596	606	1633	611	1585	570
Unspecified (120)	3,081	195	626	241	615	238	411	160	396	150	558	209	475	171
Lifting (121)	3,885	245	756	291	664	256	605	236	623	236	591	221	646	232
Pull/Push (122)	1,183	75	231	89	202	78	190	74	181	69	220	82	159	57
Carrying (124)	216	14	37	14	28	11	34	13	36	14	35	13	46	17
NEC (129)	1,522	96	240	92	171	66	305	119	352	134	210	79	244	88
Contact - Temp. Ext. (150)	508	32	91	35	82	32	81	32	99	38	84	31	71	26
Contact - Subst. (180)	1,604	101	332	128	230	89	219	85	331	126	252	94	240	86
Unclassified (990)	738	47	145	56	134	52	124	48	119	45	100	37	116	42

Rates per 10,000 FTE

Table 17(a): Washington State Workers' Compensation State Fund Claims; Food Processing Claims and Rates* by Body Parts (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304 for 1994 to 1999.

	ALL WIC		*WIC 2101*		*WIC 2104*		*WIC 3304*		*WIC 3702*		*WIC 3902*		*WIC 3906*		*WIC 4002*		*WIC 4301*		*WIC 4302*		*WIC 4304*	
Body Part (Code)	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
HEAD (1XX)	4,075	257	368	422	1,438	230	697	255	221	334	747	274	179	139	88	289	218	296	10	188	109	555
EAR INTNL (124)	365	23	41	47	114	18	45	16	23	35	83	30	17	13	11	36	20	27	x	x	8	41
EYE(S) (130)	2,321	147	211	242	907	145	423	155	106	160	407	149	64	50	36	118	122	166	x	x	42	214
NECK (200)	526	33	33	38	166	26	94	34	27	41	92	34	53	41	18	59	32	43	x	x	9	46
UPPER EXT (3XX)	12,599	795	569	653	3,236	517	3,499	1,278	551	832	2,085	765	1,011	785	286	938	1,112	1,511	114	2,145	136	692
ARM(S)UNS (310)	393	25	18	21	113	18	87	32	15	23	59	22	28	22	5	16	61	83	x	x	5	25
ELBOW (313)	776	49	52	60	218	35	158	58	36	54	164	60	58	45	15	49	58	79	x	x	14	71
FOREARM (315)	781	49	28	32	158	25	209	76	31	47	139	51	51	40	19	62	130	177	7	132	9	46
WRIST (320)	2,197	139	80	92	689	110	589	215	80	121	318	117	191	148	57	187	166	226	13	245	14	71
HAND (330)	2,235	141	105	121	563	90	637	233	102	154	359	132	172	134	65	213	190	258	16	301	26	132
FINGER(S) (340)	5,703	360	266	305	1,348	215	1,661	607	270	408	983	361	478	371	110	361	459	624	69	1,298	59	300
UPPER EXT (398)	355	22	8	9	102	16	115	42	11	17	41	15	26	20	11	36	35	48	x	x	5	25
TRUNK (4XX)	8,813	556	580	666	2,645	422	1,918	701	449	678	1,432	525	690	536	285	935	650	883	20	376	144	733
ABDOMEN (410)	565	36	46	53	157	25	110	40	22	33	89	33	43	33	24	79	58	79	x	x	14	71
BACK (420)	5,520	348	373	428	1,652	264	1,168	427	315	475	917	336	457	355	177	581	375	510	13	245	73	371
CHEST (430)	651	41	42	48	208	33	141	52	21	32	109	40	35	27	17	56	52	71	x	x	25	127
SHOULDER (450)	1,516	96	82	94	473	76	356	130	62	94	218	80	118	92	57	187	127	173	x	x	21	107
LOWER EXT (5XX)	4,617	291	343	394	1,406	224	88	32	306	462	787	289	293	227	168	551	294	400	19	357	113	575
KNEE (513)	1,394	88	90	103	421	67	250	91	98	148	267	98	109	85	56	184	73	99	x	x	28	142
ANKLE (520)	848	54	71	81	279	45	143	52	65	98	154	56	46	36	31	102	45	61	x	x	12	61
FOOT (530)	1,093	69	79	91	335	53	244	89	65	98	165	61	63	49	34	112	79	107	5	94	24	122
TOE(S) (540)	367	23	32	37	124	20	74	27	21	32	59	22	23	18	14	46	15	20	x	x	x	x
BACK/NECK (600)	1,084	68	64	73	420	67	165	60	44	66	181	66	95	74	32	105	51	69	12	226	20	102
MULTIPLE (700)	1,462	92	78	90	437	70	311	114	60	91	285	105	107	83	55	180	96	130	x	x	31	158
BODY SYS (8XX)	575	36	28	32	298	48	99	36	18	27	91	33	18	14	11	36	6	8	x	x	6	31

**** = rates per 10,000 FTE; x = indicates 4 or less claims.***

Table 17(b): Washington State Workers' Compensation State Fund Claims. Food Processing Claim Cost by Body Part (>1.0% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302 for 1994 to 1999.

Body Part (Code)	*No.*	*Rate*	*Average Cost per Claim*	*Median Cost*	*Total Cost*	*Compensable No. (%)*	*Average Cost per Comp Claim*	*Hospitalized No. (%)*
HEAD (1XX)	4,075	257	$2,552	$200	$10,397,969	376 (9.2)	$19,196	37 (0.9)
EAR INTNL (124)	365	23	$14,903	$12,534	$5,439,671	191 (52.3)	$17,371	0 (0)
EYE(S) (130)	2,321	147	$380	$164	$880,885	56 (2.4)	$6,271	8 (0.3)
NECK (200)	526	33	$5,993	$424	$3,152,231	128 (24.3)	$22,258	13 (2.5)
UPPER EXT (3XX)	12,599	795	$2,536	$246	$10,397,969	2470 (19.6)	$11,470	111(8.8)
ARM(S)UNS (310)	393	25	$2,677	$240	$1,051,892	66 (16.8)	$13,493	7 (1.8)
ELBOW (313)	776	49	$2,638	$265	$2,047,123	160 (20.6)	$11,075	3 (0.4)
FOREARM (315)	781	49	$3,416	$230	$2,667,675	142 (18.2)	$17,604	13 (1.7)
WRIST (320)	2,197	139	$5,041	$378	$11,075,291	743 (33.8)	$13,953	10 (0.5)
HAND (330)	2,235	141	$1,868	$222	$4,174,158	337 (15.1)	$10,604	24 (1.1)
FINGER(S) (340)	5,703	360	$1,570	$228	$8,956,076	864 (15.1)	$8,555	50 (0.9)
UPPER EXT (398)	355	22	$4,056	$343	$1,439,795	07 (30.1)	$12,561	0 (0.0)
TRUNK (4XX)	8,813	556	$5,018	$405	$44,222,937	2861(32.5)	$14,238	223 (2.5)
ABDOMEN (410)	565	36	$2,655	$456	$1,500,223	258 (45.7)	$5,357	13 (2.3)
BACK (420)	5,520	348	$5,214	$448	$28,779,460	1855 (33.6)	$14,271	151 (2.7)
CHEST (430)	651	41	$1,071	$235	$697,278	104 (16.0)	$5,031	9 (1.4)
SHOULDER (450)	1,516	96	$6,888	$439	$10,442,269	493 (32.5)	$19,743	33 (2.2)
LOWER EXT (5XX)	4,617	291	$3,797	$255	$17,529,045	1287 (27.8)	$12,703	125 (2.7)
KNEE (513)	1,394	88	$6,572	$352	$9,161,634	493 (35.4)	$17,595	38 (2.7)
ANKLE (520)	848	54	$2,882	$290	$2,444,291	268 (31.6)	$8,360	27 (3.2)
FOOT (530)	1,093	69	$1,929	$207	$2,107,996	241 (22.0)	$7,847	21 (1.9)
TOE(S) (540)	367	23	$1,030	$205	$378,078	69 (18.8)	$4,507	4 (1.1)
BACK/NECK (600)	1,084	68	$5,118	$721	$5,548,109	287 (26.5)	$16,186	16 (1.5)
MULTIPLE (700)	1,462	92	$10,427	$471	$15,244,127	503 (34.4)	$29,133	64 (4.4)

Table 17c: Washington State Workers' Compensation State Fund Claims. Food Processing Claims and Claim Rates by Year by *Body Part* (≥1 % total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, *4002, 4301, 4302, 4304. Trends for years 1994 to 1999.*

	1994-1999		***1994***		***1995***		***1996***		***1997***		***1998***		***1999***	
Body Part	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
HEAD (1XX)	4,075	257	760	292	685	265	701	274	647	246	621	232	661	238
EAR INTNL (124)	365	23	61	23	84	32	58	23	66	25	48	18	48	17
EYE(S) (130)	2,321	147	472	181	357	138	395	154	357	136	342	128	398	143
NECK (200)	526	33	104	40	91	35	83	32	91	35	81	30	76	27
UPPER EXT (3XX)	12,599	795	2,435	936	2,165	836	2,011	785	2,062	783	1,939	725	1,987	715
ARM(S)UNS (310)	393	25	81	31	60	23	63	25	55	21	60	22	74	27
ELBOW (313)	776	49	158	61	119	46	127	50	124	47	121	45	127	46
FOREARM (315)	781	49	149	57	128	49	129	50	119	45	136	51	120	43
WRIST (320)	2,197	139	414	159	384	148	338	132	346	131	363	136	352	127
HAND (330)	2,235	141	421	162	399	154	358	140	371	141	324	121	362	130
FINGER(S) (340)	5,703	360	1,109	426	995	384	913	356	963	366	855	320	868	312
UPPER EXT (398)	355	22	65	25	53	20	60	23	65	25	54	20	58	21
TRUNK (4XX)	8,813	556	1,619	622	1,508	582	1,404	548	1,451	551	1,381	517	1,450	522
ABDOMEN (410)	565	36	104	40	116	45	85	33	91	35	88	33	81	29
BACK (420)	5,520	348	1,034	398	926	358	903	352	916	348	869	325	872	314
CHEST (430)	651	41	131	50	101	39	91	36	98	37	117	44	113	41
SHOULDER (450)	1,516	96	259	100	271	105	241	94	241	91	232	87	272	98
LOWER EXT (5XX)	4,617	291	795	306	823	318	753	294	783	297	721	270	742	267
KNEE (513)	1,394	88	229	88	238	92	251	98	227	86	212	79	237	85
ANKLE (520)	848	54	142	55	145	56	123	48	135	51	159	59	144	52
FOOT (530)	1,093	69	206	79	198	76	175	68	207	79	150	56	157	56
TOE(S) (540)	367	23	66	25	70	27	64	25	56	21	54	20	57	21
BACK/NECK (600)	1,084	68	242	93	200	77	179	70	182	69	151	56	130	47
MULTIPLE (700)	1,462	92	242	93	256	99	251	98	220	84	257	96	236	85

Note: (3XX) denotes codes from 300 to 399.

TABLE 17d. Washington State Accepted Worker's Compensation Claims; *Nature* and *Source* of Injury for Selected *Body Parts* in WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304; 1994 to 1999.

Nature	**N (%)**	**Source**	**N (%)**
Eye	**2,321 (6.9%)**		
Scratches	1,365 (58.8)	Particles	882 (64.6)
		Metal chips	209 (15.3)
		All other	274 (20.1)
Conjunctivitis	348 (15.0)	Particles	101 (29.0)
		Chemicals, UNS	63 (18.1)
		All other	164 (52.9)
Wrist	**2,197 (6.5%)**		
Sprains	759 (34.5)	Boxes/Cartons	117 (15.4)
		Fruits and Produce	81 (10.7)
		All Others	561 (73.9)
Nerve Cond.	515 (23.4)	Unknown/Unidentified	109 (21.2)
		Miscellaneous, NEC	57 (11.1)
		Fruits and Produce	54 (10.5)
Bursitis	383 (17.4)	Fruits and Produce	81 (21.1)
		Boxes/Cartons	44 (11.5)
		Unknown/Unidentified	43 (11.2)
		All other	215 (56.1)
Hand	**2,235 (6.6%)**		
Cuts	921 (41.2)	Nonpower knife	313 (34.0)
		Fasteners-metal	45 (04.9)
		All other	289 (61.1)
Contusions	626 (28.0)	Powered Conveyor	66 (10.5)
		Machine, UNS	58 (09.3)
		All other	502 (80.2)
Fingers	**5,703 (16.8)**		
Cuts	3,585 (62.9)	Nonpower knife	1299 (36.2)
		Machine, UNS	172 (04.8)
		All other	2114 (59.0)
Contusions	664 (11.6)	Machine, UNS	73 (11.0)
		Powered Conveyor	46 (06.9)
		Machine, NEC	42 (06.3)
		All other	503 (75.8)
Fractures	536 (09.4)	Machine, UNS	59 (11.0)
		Machine, NEC	48 (09.0)
		All other	429 (80.0)
Back	**5,520 (16.3)**		
Sprains	4,785 (86.7)	Boxes/Cartons	1176 (24.6)
		Bodily Motion	367 (07.7)
		Sacks/Bags	257 (05.4)
		All other	2985 (62.4)

Shoulder	**1,516 (04.5)**		
Sprains	975 (86.7)	Boxes/Cartons	198 (20.3)
		Unknown/Unidentified	57 (05.8)
		All other	720 (62.4)
Bursitis	170 (17.4)	Boxes/Cartons	29 (17.1)
		Fruits/Produce	24 (14.1)
		All other	117 (68.8)
Ill-Def Sx	162 (10.7)	Boxes/Cartons	25 (15.4)
		Unknown/Unidentified	18 (11.1)
		All other	119 (73.5)
Knee	**1,394 (4.1)**		
Sprains	627 (45.0)	Bodily Motion	195 (31.1)
		Work Surface UNS	64 (10.2)
		All other	368 (58.7)
Contusion	400 (28.7)	Floor	98 (24.5)
		Work Surface UNS	39 (09.8)
		All other	263 (65.8)
Ill-Def Sx	166 (11.9)	Bodily Motion	57 (30.3)
		Floor	21 (12.7)
		All other	88 (53.0)
Foot	**1,093 (3.2)**		
Contusions	479 (43.8)	Powered Carrier	92 (19.2)
		Dollies	61 (12.7)
		Pallets	50 (10.4)
		All other	276 (57.6)
Cuts	234 (21.4)	Fastners, metal	165 (70.5)
		All other	69 (29.5)
Sprains	162 (14.8)	Bodily Motion	40 (24.7)
		Work Surface UNS	16 (09.9)
		All other	106 (64.4)

Table 18a(1): Washington State Workers' Compensation State Fund Claims; Number of Food Processing Claims by Source of Injury (≥1% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906 4002, 4301, 4302, and 4304 for years 1994 to 1999

Code	Source	WIC ALL	WIC 2101	WIC 2104	WIC 3304	WIC 3702	WIC 3902	WIC 3906	WIC 4002	WIC 4301	WIC 4302	WIC 4304
2XX	*Live Animals*	*471*	*21*	*66*	*113*	*16*	*26*	*9*	*6*	*62*	*x*	*149*
400	*Bodily Motion*	*1,545*	*95*	*505*	*293*	*102*	*275*	*117*	*48*	*92*	*x*	*16*
6XX	*Containers*	*6,837*	*389*	*2,319*	*1,462*	*431*	*1,106*	*634*	*227*	*237*	*13*	*19*
630	Boxes/Cartons	3,090	22	1,488	716	118	386	135	112	110	x	x
635	Sacks, Bags	663	131	229	50	10	144	67	13	15	x	x
670	Tanks/Bins	664	13	292	188	19	76	40	10	23	x	x
680	Trays/Racks	532	5	136	138	14	36	183	6	14	x	x
7XX	*Buldings/Structures*	*614*	*39*	*149*	*96*	*28*	*118*	*46*	*17*	*39*	*x*	*81*
9XX	*Chemicals*	*1,123*	*22*	*431*	*188*	*71*	*277*	*33*	*34*	*64*	*x*	*x*
900	Chemical Uns	364	9	125	64	20	108	8	12	17	x	x
13XX	*Conveyors*	*690*	*35*	*379*	*83*	*36*	*98*	*37*	*7*	*14*	*x*	*x*
1350	Powered Conveyor	545	29	301	65	29	74	28	6	12	x	x
18XX	*Food Products*	*1,675*	*16*	*655*	*509*	*7*	*107*	*93*	*28*	*244*	*15*	*x*
1810	Fruits & Prod	641	x	612	x	x	25	x	x	x	x	x
1840	Meats & Prod	468	x	x	200	x	10	x	x	238	15	x
19XX	*Furnishings*	*327*	*13*	*90*	*87*	*19*	*46*	*38*	*7*	*23*	*x*	*x*
22XX	*Nonpower tools*	*3,269*	*152*	*439*	*1,217*	*75*	*418*	*198*	*28*	*623*	*84*	*35*
2245	Nonpower Knife	2,286	46	215	1,000	48	230	137	11	516	79	x
3XXX	*Machines*	*1,495*	*99*	*383*	*301*	*62*	*351*	*193*	*39*	*63*	*x*	*x*
3000	Machines Uns	829	31	244	160	41	204	90	25	32	x	x
3999	Machines NEC	535	28	108	134	19	121	81	13	30	x	x
41XX	*Metal Items*	*2,050*	*181*	*776*	*277*	*98*	*393*	*101*	*72*	*103*	*7*	*42*
4115	Structural Mtl	432	39	159	55	27	75	31	19	18	x	9
4155	Fasteners-Metal	397	29	197	63	12	46	16	10	8	x	15
4400	*Noise*	*341*	*37*	*109*	*43*	*22*	*76*	*16*	*9*	*18*	*x*	*8*
4600	Particles	1,106	143	478	184	39	163	29	12	38	x	19
56XX	*Vehicles*	*1,951*	*183*	*601*	*463*	*126*	*225*	*125*	*88*	*105*	*x*	*31*
5620	Hiway Veh Power	505	71	125	113	40	35	49	22	30	x	18
5631	Dollies	568	21	81	213	43	72	52	57	27	x	x
5635	Powered Carrier	730	64	344	117	34	99	20	5	43	x	x
57XX	*Wood Items*	*906*	*41*	*378*	*148*	*54*	*158*	*49*	*29*	*35*	*x*	*13*
5720	Pallets, Etc	594	18	212	107	39	132	36	22	27	x	x
58XX	*Work Surface*	*3,823*	*252*	*1,150*	*786*	*172*	*772*	*297*	*123*	*180*	*x*	*87*
5800	Work Surface Uns	990	86	313	215	43	188	61	29	39	x	15
5801	Floor	1,520	60	388	356	61	344	168	46	86	x	8
5810	Ground-Outdoors	646	74	227	96	31	91	26	21	20	x	60
5840	Stairs/Steps	459	11	161	77	25	118	24	13	29	x	x
8800	*Misc NEC*	*1,287*	*83*	*299*	*288*	*61*	*271*	*117*	*43*	*105*	*x*	*16*
9800	*Unk/Unidentified*	*1,416*	*45*	*347*	*414*	*51*	*265*	*111*	*54*	*115*	*5*	*9*

x = less than five claims; Note: 3XXX indicates codes from 3000 to 3999.

Table 18a(2): Washington State Workers' Compensation State Fund Claims. Food Processing Claim Rates by Source of Injury (≥1% of total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906 4002, 4301, 4302, and 4304 for years 1994 to 1999

Code	Source	WIC ALL No.	WIC Rate	WIC 2101	WIC 2104	WIC 3304	WIC 3702	WIC 3902	WIC 3906	WIC 4002	WIC 4301	WIC 4302	WIC 4304
2XX	*Live Animals*	*471*	*30*	*24*	*11*	*41*	*24*	*10*	*7*	*20*	*84*	*x*	*758*
400	*Bodily Motion*	*1,545*	*98*	*109*	*81*	*107*	*154*	*101*	*91*	*157*	*125*	*x*	*81*
6XX	*Containers*	*6,837*	*432*	*447*	*370*	*534*	*651*	*406*	*492*	*745*	*322*	*244*	*97*
630	Boxes/Cartons	3,090	195	25	238	262	178	142	105	367	150	x	x
635	Sacks, Bags	663	42	150	37	18	15	53	52	43	20	x	x
670	Tanks/Bins	664	42	15	47	69	29	28	31	33	31	x	x
680	Trays/Racks	532	34	6	22	50	21	13	142	20	19	x	x
7XX	*Buldings/Structures*	*614*	*39*	*45*	*24*	*35*	*42*	*43*	*36*	*56*	*53*	*x*	*412*
9XX	*Chemicals*	*1,123*	*71*	*25*	*69*	*69*	*107*	*102*	*26*	*112*	*87*	*x*	*x*
900	Chemical Uns	364	23	10	20	23	30	40	6	39	23	x	x
13XX	*Conveyors*	*690*	*44*	*40*	*60*	*30*	*54*	*36*	*29*	*23*	*19*	*x*	*x*
1350	Powered Conveyor	545	34	33	48	24	44	27	22	20	16	x	x
18XX	*Food Products*	*1,675*	*106*	*18*	*105*	*186*	*11*	*39*	*72*	*92*	*332*	*282*	*x*
1810	Fruits & Prod	641	40	x	98	x	x	9	x	x	x	x	x
1840	Meats & Prod	468	30	x	x	73	x	4	x	x	324	282	x
19XX	*Furnishings*	*327*	*21*	*15*	*14*	*32*	*29*	*17*	*29*	*23*	*31*	*x*	*x*
22XX	*Nonpower tools*	*3,269*	*206*	*174*	*70*	*445*	*113*	*153*	*154*	*92*	*847*	*1,579*	*178*
2245	Nonpower Knife	2,286	144	53	34	365	72	84	106	36	701	1,485	x
3XXX	*Machines*	*1,495*	*94*	*114*	*61*	*110*	*94*	*129*	*150*	*128*	*86*	*x*	*x*
3000	Machines Uns	829	52	36	39	58	62	75	70	82	44	x	x
3999	Machines NEC	535	34	32	17	49	29	44	63	43	41	x	x
41XX	*Metal Items*	*2,050*	*129*	*208*	*124*	*101*	*148*	*144*	*78*	*236*	*140*	*132*	*214*
4115	Structural Mtl	432	27	45	25	20	41	28	24	62	24	x	46
4155	Fasteners-Metal	397	25	33	31	23	18	17	12	33	11	x	76
4400	*Noise*	*341*	*22*	*42*	*17*	*16*	*33*	*28*	*12*	*30*	*24*	*x*	*41*
4600	*Particles*	*1,106*	*70*	*164*	*76*	*67*	*59*	*60*	*23*	*39*	*52*	*x*	*97*
56XX	*Vehicles*	*1,951*	*123*	*210*	*96*	*169*	*190*	*83*	*97*	*289*	*143*	*x*	*158*
5620	Hiway Veh Power	505	32	82	20	41	60	13	38	72	41	x	92
5631	Dollies	568	36	24	13	78	65	26	40	187	37	x	x
5635	Powered Carrier	730	46	73	55	43	51	36	16	16	58	x	x
57XX	*Wood Items*	*906*	*57*	*47*	*60*	*54*	*82*	*58*	*38*	*95*	*48*	*x*	*66*
5720	Pallets, Etc	594	38	21	34	39	59	48	28	72	37	x	x
58XX	*Work Surface*	*3,823*	*241*	*289*	*184*	*287*	*260*	*283*	*231*	*404*	*245*	*x*	*443*
5800	Work Surface Uns	990	63	99	50	79	65	69	47	95	53	x	76
5801	Floor	1,520	96	69	62	130	92	126	130	151	117	x	41
5810	Ground-Outdoors	646	41	85	36	35	47	33	20	69	27	x	305
5840	Stairs/Steps	459	29	13	26	28	38	43	19	43	39	x	x
8800	*Misc NEC*	*1,287*	*81*	*95*	*48*	*105*	*92*	*99*	*91*	*141*	*143*	*x*	*81*
9800	*Unk/Unidentified*	*1,416*	*89*	*52*	*55*	*151*	*77*	*97*	*86*	*177*	*156*	*94*	*46*

**** Claim rates per 10,000 FTEs.***

x indicates number of claims < Five.

Table 18b: Washington State Workers' Compensation State Fund Claims; Food Processing Claims by *Source* of Injury (≥ 1% total claims) for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, 4304 for 1994 to 1999.

Code	Source	No.	Rate	Average Cost	Median Cost	Total Cost	No. Comp Claims (%)	Avg Comp Clm Costs	Hospitalized No. (%)
2XX	*Live Animals*	*471*	*30*	*$2,442*	*$225*	*$1,150,302*	*97 (20.6)*	*$10,426*	*11(2.3)*
400	*Bodily Motion*	*1,545*	*98*	*$5,090*	*$408*	*$7,863,560*	*503 (32.6)*	*$14,152*	*36 (2.3)*
6XX	*Containers*	*6,837*	*432*	*$3,715*	*$323*	*$25,396,619*	*1889 (27.6)*	*$12,106*	*116 (1.7)*
630	Boxes/Cartons	3,090	195	$3,799	$347	$11,738,880	881 (28.5)	$11,987	53 (1.7)
635	Sacks, Bags	663	42	$3,401	$373	$2,254,967	189 (28.5)	$10,559	9 (1.4)
670	Tanks/Bins	664	42	$2,973	$277	$1,973,845	147 (22.1)	$11,985	17 (2.6)
680	Trays/Racks	532	34	$3,405	$274	$1,811,703	126 (23.7)	$12,863	6 (1.1)
7XX	*Bldgs/Structures*	*614*	*39*	*$4,308*	*$252*	*$2,644,841*	*104 (16.9)*	*$23,616*	*12 (2.0)*
9XX	*Chemicals*	*1,123*	*71*	*$1,796*	*$231*	*$2,016,790*	*102 (9.1)*	*$15,323*	*38 (3.4)*
900	Chemical Uns	364	23	$1,031	$192	$375,253	28 (7.7)	$10,618	2 (0.5)
13XX	*Conveyors*	*690*	*44*	*$3,990*	*$297*	*$2,752,970*	*170 (24.6)*	*$15,015*	*21 (3.0)*
1350	Pwered Convey	545	34	$4,314	$306	$2,350,900	134 (24.6)	$16,272	20 (3.7)
18XX	*Food Products*	*1,675*	*106*	*$4,348*	*$344*	*$7,282,575*	*516 (30.8)*	*$12,923*	*13 (0.8)*
1810	Fruits & Prod	641	40	$4,350	$320	$2,788,187	186 (29.0)	$13,443	20 (3.1)
1840	Meats & Prod	468	30	$4,414	$497	$2,065,712	164 (35.0)	$11,464	3 (0.6)
19XX	*Furnishings*	*327*	*21*	*$2,269*	*$258*	*$742,068*	*64 (19.6)*	*$9,507*	*2 (0.6)*
22XX	*Nonpower tools*	*3,269*	*206*	*$1,603*	*$235*	*$5,241,212*	*473 (14.5)*	*$9,211*	*16 (0.5)*
2245	Nonpower Knife	2,286	144	$1,141	$230	$2,608,314	273 (11.9)	$7,380	9 (0.4)
3XXX	*Machines*	*1,495*	*94*	*$4,339*	*$280*	*$6,486,786*	*533 (24.0)*	*$15,572*	*53 (2.4)*
3000	Machines Uns	829	52	$4,284	$288	$3,551,303	190 (22.9)	$17,143	16 (1.9)
3999	Machines NEC	535	34	$4,171	$274	$2,231,651	131 (24.5)	$15,898	17 (3.2)
41XX	*Metal Items*	*2,050*	*129*	*$1,528*	*$209*	*$3,132,150*	*216 (10.5)*	*$11,589*	*16 (0.8)*
4115	Structural Mtl	432	27	$1,496	$239	$646,135	57 (13.2)	$9,258	1 (0.2)
4155	Fasteners-Metal	397	25	$718	$148	$284,914	29 (7.3)	$7,328	2 (0.5)
4400	*Noise*	*341*	*22*	*$15,849*	*$13,462*	*$5,404,552*	*188 (55.1)*	*$17,526*	*0 (0)*
4600	*Particles*	*1,106*	*70*	*$304*	*$144*	*$336,077*	*9 (0.8)*	*$10,840*	*2 (0.2)*
56XX	*Vehicles*	*1,951*	*123*	*$6,026*	*$313*	*$11,757,317*	*511 (26.2)*	*$21,732*	*67 (3.4)*
5620	Hiway Veh Power	505	32	$12,661	$460	$6,394,039	165 (32.7)	$37,540	27 (5.3)
5631	Dollies	568	36	$2,759	$266	$1,567,066	130 (22.9)	$10,848	8 (1.4)
5635	Powered Carrier	730	46	$4,439	$323	$3,240,364	188 (25.8)	$15,878	29 (4.0)
57XX	*Wood Items*	*906*	*57*	*$2,239*	*$243*	*$2,028,425*	*183 (20.2)*	*$9,609*	*11 (1.2)*
5720	Pallets, Etc	594	38	$2,360	$267	$1,401,797	132 (22.2)	$9,159	6 (1.0)
58XX	*Work Surface*	*3,823*	*241*	*$5,971*	*$373*	*$22,825,226*	*1179 (30.8)*	*$18,098*	*122 (3.2)*
5800	Work Surface Uns	990	63	$8,105	$390	$8,024,380	298 (30.1)	$25,668	40 (4.0)
5801	Floor	1,520	96	$5,539	$366	$8,419,861	455 (29.9)	$17,089	40 (2.6)
5810	Ground-Outdoors	646	41	$5,172	$438	$3,341,371	240 (37.2)	$13,013	29 (4.5)
5840	Stairs/Steps	459	29	$4,221	$347	$1,937,616	136 (29.6)	$13,016	8 (1.7)
8800	*Misc NEC*	*1,287*	*81*	*$4,439*	*$319*	*$5,713,065*	*354 (27.5)*	*$14,633*	*17 (1.3)*
9800	*Unk/Unidentified*	*1,416*	*89*	*$6,074*	*$336*	*$8,600,861*	*441 (31.1)*	*$18,335*	*33 (2.3)*

Note: 02xx denotes codes between 0200 and 0299

Table 18(c): Washington State Workers' Compensation State Fund Claims; Food Processing Claim Rates* by Year by Source of Injury (>1% total claims) for WIC codes 2101, 2104, 3304, 3702, 390: 3906, 4002, 4301, 4302, and 4304; 1994 to 1999.

		1994-1999		1994		1995		1996		1997		1998		1999	
Code	Source	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
2XX	*Live Animals*	*471*	*30*	*116*	*45*	*85*	*33*	*67*	*26*	*61*	*23*	*63*	*24*	*79*	*28*
400	*Bodily Motion*	*1,545*	*98*	*241*	*93*	*264*	*102*	*244*	*95*	*240*	*91*	*247*	*92*	*309*	*111*
6XX	*Containers*	*6,837*	*432*	*1,359*	*522*	*1,156*	*446*	*1,019*	*398*	*1,100*	*418*	*1,072*	*401*	*1,131*	*407*
630	Boxes/Cartons	3,090	195	580	223	512	198	438	171	513	195	496	186	551	198
635	Sacks, Bags	663	42	149	57	99	38	96	37	98	37	105	39	116	42
670	Tanks/Bins	664	42	136	52	138	53	98	38	123	47	84	31	85	31
680	Trays/Racks	532	34	109	42	99	38	79	31	78	30	88	33	79	28
7XX	*Buldings/Structures*	*614*	*39*	*109*	*42*	*96*	*37*	*92*	*36*	*112*	*43*	*95*	*36*	*110*	*40*
9XX	*Chemicals*	*1,123*	*71*	*253*	*97*	*134*	*52*	*148*	*58*	*255*	*97*	*162*	*61*	*171*	*62*
900	Chemical Uns	364	23	72	28	29	11	41	16	72	27	63	24	87	31
13XX	*Conveyors*	*690*	*44*	*117*	*45*	*118*	*46*	*121*	*47*	*115*	*44*	*117*	*44*	*102*	*37*
1350	Powered Conveyor	545	34	101	39	91	35	93	36	99	38	86	32	75	27
18XX	*Food Products*	*1,675*	*106*	*318*	*122*	*339*	*131*	*278*	*108*	*262*	*99*	*271*	*101*	*207*	*74*
1810	Fruits & Prod	641	40	154	59	143	55	100	39	96	36	81	30	67	24
1840	Meats & Prod	468	30	65	25	87	34	81	32	64	24	90	34	81	29
19XX	*Furnishings*	*327*	*21*	*54*	*21*	*65*	*25*	*61*	*24*	*61*	*23*	*47*	*18*	*39*	*14*
22XX	*Nonpower tools*	*3,269*	*206*	*596*	*229*	*555*	*214*	*535*	*209*	*570*	*216*	*536*	*200*	*477*	*172*
2245	Nonpower Knife	2,286	144	407	156	368	142	374	146	410	156	383	143	344	124
3XXX	*Machines*	*1,495*	*94*	*311*	*120*	*258*	*100*	*239*	*93*	*242*	*92*	*209*	*78*	*236*	*85*
3000	Machines Uns	829	52	146	56	124	48	119	46	129	49	134	50	177	64
3999	Machines NEC	535	34	140	54	111	43	86	34	96	36	58	22	44	16
41XX	*Metal Items*	*2,050*	*129*	*425*	*163*	*332*	*128*	*337*	*132*	*317*	*120*	*319*	*119*	*320*	*115*
4115	Structural Mtl	432	27	102	39	77	30	74	29	54	20	69	26	56	20
4155	Fasteners-Metal	397	25	68	26	65	25	74	29	74	28	54	20	62	22
4400	*Noise*	*341*	*22*	*59*	*23*	*76*	*29*	*56*	*22*	*60*	*23*	*46*	*17*	*44*	*16*
4600	*Particles*	*1,106*	*70*	*249*	*96*	*191*	*74*	*179*	*70*	*184*	*70*	*145*	*54*	*158*	*57*
56XX	*Vehicles*	*1,951*	*123*	*353*	*136*	*351*	*136*	*348*	*136*	*344*	*131*	*274*	*102*	*281*	*101*
5620	Hiway Veh Power	505	32	86	33	83	32	91	36	101	38	67	25	77	28
5631	Dollies	568	36	111	43	111	43	98	38	95	36	64	24	89	32
5635	Powered Carrier	730	46	134	52	128	49	131	51	122	46	122	46	93	33
57XX	*Wood Items*	*906*	*57*	*171*	*66*	*142*	*55*	*158*	*62*	*121*	*46*	*154*	*58*	*160*	*58*
5720	Pallets, Etc	594	38	115	44	88	34	93	36	90	34	106	40	102	37
58XX	*Work Surface*	*3,823*	*241*	*665*	*256*	*691*	*267*	*673*	*263*	*598*	*227*	*589*	*220*	*607*	*218*
5800	Work Surface Uns	990	63	256	98	192	74	165	64	156	59	111	42	110	40
5801	Floor	1,520	96	229	88	262	101	253	99	231	88	293	110	252	91
5810	Ground-Outdoors	646	41	80	31	119	46	140	55	107	41	84	31	116	42
5840	Stairs/Steps	459	29	67	26	88	34	75	29	70	27	69	26	90	32
8800	*Misc NEC*	*1,287*	*81*	*81*	*31*	*163*	*63*	*214*	*84*	*259*	*98*	*250*	*94*	*320*	*115*
9800	*Unk/Unidentified*	*1,416*	*89*	*285*	*110*	*281*	*109*	*228*	*89*	*227*	*86*	*200*	*75*	*195*	*70*

* Rates per 10,000 FTE; Note: 02XX indicates codes between 0200 and 0299.

Table 19(a): Washington State Workers' Compensation State Fund Claims. Food Processing Claims by Washington State Priority Conditions for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304; 1994 to 1999.

Priority Condition	*No.*	*Rate**	*Med. Age*	*% Male*	*Avg Cost / Claim*	*Median Cost*	*Total Cost*	*% Compensable*
Workplace Violence	57	3.6	32	64.9	$2,414	$285	$137,582	17 (29.8)
Dermatitis	307	19.4	32	50.5	$950	$137	$291,521	34 (11.1)
Hospitalized Occ Burns	13	0.8	35	84.6	$66,647	$12,456	$866,408	11 (84.6)
Work-related Asthma	16	1.0	39	56.3	$18,855	$643	$301,687	7 (43.8)
Carpal Tunnel Synd. (CTS)	789	49.8	38	30.4	$14,520	$4,487	$11,456,595	534 (67.7)
Rotator Cuff Synd.	569	35.9	38	49.9	$17,338	$2,358	$9,865,324	312 (54.8)
Epicondylitis	343	21.7	42	44.9	$11,153	$1,328	$3,825,327	154 (44.9)
Sciatica	97	6.1	39	64.9	$33,581	$9,221	$3,257,349	73 (75.3)
WMSD -Neck	912	57.6	37	51.2	$16,228	$1,826	$14,799,599	442 (48.5
WMSD -Back	4,572	288.6	34	75.4	$6,132	$474	$28,036,396	1623 (35.5)
WMSD -Upper Extremity	1,565	98.8	38	40.9	$13,671	$2,769	$21,394,944	892 (57.0)

**** Average Annual Rate per 10,000 FTE***

Table 19(b): Washington State Workers' Compensation State Fund Claims; Food Processing Claims Rates by Year and WIC Code for Washington State Priority Conditions for WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304, 1994 to 1999. Priority conditions with avg. annual claims rates ≥ 10 per 10,000 FTEs.

Condition	*No.*	*Rate**	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*
Dermatitis	307	19.4	27.3	16.3	13.9	20.8	14.0	14.5
Carpal Tunnel Synd. (CTS)	789	49.8	55.0	46.3	46.1	46.7	55.0	49.7
Rotator Cuff Synd.	569	35.9	36.9	38.6	31.6	39.5	31.8	37.1
Epicondylitis	343	21.7	25.4	20.9	19.5	19.7	22.1	22.3
WMSD -Neck	912	57.6	69.2	57.9	54.2	63.8	52.0	48.9
WMSD -Back	4,572	288.6	326.4	299.7	277.5	287.7	274.2	268.1
WMSD -Upper Extremity	1,565	98.8	106.9	98.9	89.8	97.6	101.0	98.6

**** Average Annual Rate per 10,000 FTEs***

Table 19(c): Washington State Worker's Compensation Food Processing State Fund Claims Rates by WIC Code for Work-Related Musculoskeletal Disorders for 1994-1999.

Condition	*No.*	*WIC ALL FP*	*WIC 2101*	*WIC 2104*	*WIC 3304*	*WIC 3702*	*WIC 3902*	*WIC 3906*	*WIC 4002*	*WIC 4301*	*WIC 4302*	*WIC 4304*
Carpal Tunnel Synd. (CTS)	789	49.8	18.4	29.9	96.4	33.2	42.2	59.0	95.1	97.9	112.8	x
Rotator Cuff Synd.	569	35.9	28.7	32.4	50.8	27.2	23.1	37.3	95.1	54.4	x	x
Epicondylitis	343	21.7	18.4	16.4	34.3	24.2	18.7	21.0	45.9	28.5	x	x
WMSD -Neck	912	57.6	43.6	46.5	80.0	46.8	51.0	70.6	108.3	82.9	x	25.4
WMSD -Back	4,572	288.6	343.2	223.3	353.6	419.6	263.8	305.8	469.2	428.2	206.8	234.1
WMSD -Upper Extremity	1,565	98.8	59.7	71.8	165.9	78.5	79.2	108.7	216.5	168.5	169.2	x

**** Average Annual Rate per 10,000 FTEs***

x is less than 5 claims

Table 20(a): Washington State Workers' Compensation State Fund Claims for 'Falls From Elevation' (Code 03x) in Food Processing; WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302, and 4304 for 1994 to 1999.

Type (Code)	*Claims (%)*	*Total Cost*	*% Compensable*
Fall from Elevation (030)	60 (4.1)	$1,389,742	40.0
Fall from Platforms (031)	61(4.2)	$296,734	31.1
Fall from Ladders (032)	233 (15.9)	$2,338,653	36.5
Fall from Piled Matter (033)	6 (0.4)	$7,390	33.3
Fall from Vehicles (034)	299 (20.4)	$1,611,476	36.8
Fall on Stairs (035)	432 (29.5)	$1,874,996	30.8
Fall into Openings (036)	76 (5.2)	$512,765	31.6
Fall from Roof (037)	3 (0.2)	$963	
Fall to Lower Level (039)	293 (20.0)	$2,042,084	32.4

Nature [1]	*Body Part* [2]			
SPRAINS	**All**	**648**	**$3,410,549**	**33.6**
	Back	172	$1,042,122	33.7
	Ankle	106	$186,394	36.8
	Knee	98	$564,188	37.8
	Back/Neck	65	$307,790	29.2
	Multiple	44	$306,125	31.8
	Foot	37	$58,010	32.4
	Shoulder	32	$466,165	37.5
	Other	94	$479,754	28.7
CONTUSION	**All**	**380**	$1,994,375	25.0
	Multiple	53	$211,332	26.4
	Knee	53	$404,646	41.5
	Back	51	$228,015	25.5
	Chest	42	$20,149	14.3
	Foot	24	$270,612	25.0
	Trunk Mult	23	$72,743	39.1
	Hips	21	$180,865	19.0
	Other	113	$606,014	18.6
FRACTURE	**All**	**114**	**$2,822,970**	**69.3%**
MULT INJURIES	**All**	**112**	**$753,066**	**28.6%**
	Multiple	89	$544,581	29.2%
	Other	23	$208,485	26.1%
ILL-DEF SYMP	**All**	**72**	**$509,788**	**38.9%**
CUT	**All**	**60**	**$107,381**	**16.7%**

[1] ***Limited to 30 Claims per Nature Code, Source Code***

[2] ***Limited to > 20 Claims per Body Part Code***

Table 20(b): Washington State Workers' Compensation State Fund Claims for 'Falls From Same Level' (Code 05x) in Food Processing; WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4301, 4302 and 4304 for 1994 to 1999.

Nature [1]	*Body Part* [2]	Number	Total Cost	Compensable(%)
SPRAINS	**All**	**1,154**	**$6,541,648**	**329 (28.5)**
	Back	387	$2,559,196	116 (30)
	Back/Neck	177	$1,238,027	49 (27.7)
	Knee	97	$761,890	39 (40.2)
	Multiple	92	$617,139	30 (32.6)
	Ankle	86	$69,350	22 (25.6)
	Wrist	77	$126,453	14 (18.2)
	Shoulder	58	$475,212	17 (29.3)
	Other	180	$694,381	42 (23.3)
CONTUSION	**All**	**873**	**$2,830,567**	**161(18.4)**
	Knee	154	$741,397	32 (20.8)
	Chest	120	$97,077	16 (13.3)
	Back	111	$469,655	28 (25.2)
	Multiple	100	$523,977	20 (20.0)
	Elbow	57	$47,215	8 (14.0)
	Hips	44	$180,425	7 (15.9)
	Shoulder	44	$468,132	12 (27.3)
	Other	243	$302,689	38 (15.6)
FRACTURE	**All**	**210**	**$2,155,702**	**133 (63.3)**
	Wrist	45	$513,120	33 (73.3)
	Other	165	$1,642,582	100 (60.6)
ILL-DEFINED SX	**All**	**167**	**$1,026,966**	**63 (37.7)**
MULT INJURIES	**All**	**159**	**$965,360**	**59 (37.1)**
CUT	**All**	**159**	**$286,194**	**23 (14.5)**

[1] ***Limited to > 50 Claims per Nature Code, Source Code***

[2] ***Limited to > 40 Claims per Body Part Code***

Table 21: Washington State Workers' Compensation State Fund Claims for 'Forklift' Injuries in Food Processing; WIC codes 2101, 2104, 3304, 3702, 3902, 3906, 4002, 4302 and 4304 for 1994 to 1999.

		N	*Total Cost*	*Compensable*
Type	**All**	**730**	**$3,240,364**	**25.8**
Struck by		307	$987,239	30.3
Overexertion		77	$323,984	28.6
Caught On, Under, Between		74	$330,241	16.2
Non- Hwy MV Non Collision		71	$425,992	19.7
Struck Against		63	$43,761	19.7
Non- Hwy MV Both Moving		41	$64,097	22.0
Non- Hwy MV Stationary Object		30	$195,275	33.3
Other		67	$869,775	28.4
Nature [1] and Body Part [2]				
Contusion	**All**	**282**	**$293,851**	**16.3**
	Foot	92	$72,816	19.6
	Ankle	20	$12,275	25.0
	Knee	19	$51,780	15.8
	Toe(s)	17	$2,752	5.9
	Chest	17	$7,381	17.6
	Hand	14	$4,561	0.0
	Other	103	$142,286	15.5
Sprains	**All**	**232**	**$1,011,879**	**25.0**
	Back	73	$436,885	28.8
	Back/Neck	50	$309,463	22.0
	Neck	17	$21,746	35.3
	Multiple	15	$85,899	26.7
	Ankle	13	$34,482	23.1
	Elbow	11	$2,581	0.0
	Other	53	$120,823	24.5
Fracture	**All**	**65**	**$835,760**	**58.5**
	Finger	**14**	$46,858	35.7
	Foot	**12**	$72,855	58.3
	Toe(s)	**12**	$33,303	50.0
	Other	**27**	$682,744	74.0
Cut	**All**	**45**	**$323,554**	**6.7**
	Fingers	14	$10,355	7.1
	Other	31	$313,199	6.5
Ill-Defined Sym	**All**	**39**	**$218,544**	**30.8**
	Back	11	$57,905	27.3
	Other	28	$160,639	32.1
Mult Injuries	**All**	**25**	**$293,558**	**36.0**
Other		**42**	**$263,218**	**52.4**

[1] ***Limited to 25 Claims per Nature Code***

[2] ***Limited to > 10 Claims per Body Part Code***

Table 22: Washington State Workers' Compensation Claims Data compared to Washington State BLS Data by Number and Incidence of Cases; Food Processing SIC codes; 1996 to 1998. †

SIC Code	Year	WA WC Claims	BLS* Cases	WA WC 100 FTE	BLS* 100 FTE	WA WC Clm Rate	BLS Rate	95% CI of BLS Rate	BLS Number of Employed (00's)‡
20	1996	5825	6300	333.6	390.1	17.5	16.1	(15.0;17.2)	419
	1997	5068	7400	325.9	385.4	15.6	19.2	(16.1;22.3)	414
	1998	4771	5900	320.8	385.6	14.9	15.3	(14.5;16.1)	400
201	1996	889	1200	41.6	43.8	21.4	27.4	(27.3;27.5)	43
	1997	844	900	42.8	41.7	19.7	21.6	(21.5;21.7)	42
	1998	856	1200	43.2	48.4	19.8	24.8	(24.7;24.9)	45
203	1996	1754	1500	122.5	130.4	14.3	11.5	(9.4;13.6)	133
	1997	1611	1800	129.8	124.1	12.4	14.5	(11.6;17.4)	136
	1998	1472	1600	128.0	126.0	11.5	12.7	(10.8;14.6)	135
205	1996	455	600	22.7	38.2	20.0	15.7	(12.7;18.7)	37
	1997	317	600	10.3	39.0	30.8	15.4	(11.9;18.9)	37
	1998	272	200	†	24.7	†	8.1	(7.0;9.2)	32
208	1996	635	400	36.4	30.8	17.4	13	(11.4;14.6)	33
	1997	546	500	38.2	26.6	14.3	18.8	(16.7;20.9)	32
	1998	531	300	39.1	25.9	13.6	11.6	(11.5;11.7)	32
209	1996	1190	1800	64.8	106.5	18.4	16.9	(14.9;18.9)	129
	1997	1003	2900	63.7	110.7	15.7	26.2	(16.5;35.9)	122
	1998	892	1700	59.0	103.7	15.1	16.5	(14.4;18.6)	110

† *Data for WA Workers' Compensation represents totals of State Fund and Self-Insured claims (including rejected claims) and FTE's; Self-insured data is not complete for 1999; SI reporting of FTE and non-compensable claims is not mandated and and therefore may not accurately reflect the true number and rate of injury and illness in those companies (See Text)*

** BLS data given is publicly available; rounding to nearest 100 per BLS; Both FTE's and number of cases are survey estimates and subject to sampling error.*

‡ *BLS employment data is collected from Wa ESD Average Annual Employment.*