



Washington State Department of
Labor & Industries

Industries and Risk Classifications Eligible for Ergonomic Rulemaking

November 2023

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Executive Summary

Work-related musculoskeletal disorders (WMSDs) account for at least one-third of all workers’ compensation claims that result in time loss, are more severe than the average nonfatal injury or illness, and are a common cause of long-term disability in the state. Engrossed Substitute Senate Bill (ESSB) 5217, passed by the 2023 Legislature and codified under RCW 49.17.520, repeals the prohibition on regulating working practices related to musculoskeletal injuries and disorders and allows the Washington State Department of Labor & Industries (L&I, the department) to adopt one rule for either one industry or one risk class in a 12-month period, and no rule can be in effect before July 1, 2026. Additionally, the state Legislature requires the department to publish annually by November a list of industries and risk classes eligible for rulemaking. To be eligible for inclusion on the “eligibility list,” the industry or risk class must be at least twice the statewide rate of WMSDs. For this report, the statewide rate is 4.4 per 1,000 full time employees (FTEs).

L&I must also provide a list of industries or risk classes most likely to be selected for future rulemaking and prioritize efforts to provide technical assistance to those employers. This second, prioritized list is referred to as the “high-priority list” for these purposes.

Considerations for inclusion in the high-priority list were industries or risk classes with a high number and/or high rate of compensable WMSDs. Further, considerations were given to industries included on the list that represented a variety of industrial sectors in Washington. The following industries and risk classes, listed simply in numerical order for both the North American Industry Classification System (NAICS) and risk class, are most likely to be selected for future rulemaking. This is the “high-priority” list:

NAICS Code	NAICS industry description (and excluded NAICS)
23814	Masonry Contractors
31171	Seafood Product Preparation and Packaging
31181	Bread and Bakery Product Manufacturing
31211	Soft Drink and Ice Manufacturing
42441	General Line Grocery Merchant Wholesalers
42481	Beer and Ale Merchant Wholesalers
44413	Hardware Stores
44511	Supermarkets and Other Grocery (except Convenience) Stores
45291	Warehouse Clubs and Supercenters
48111	Scheduled Air Transportation
48412	General Freight Trucking, Long-Distance
48421	Used Household and Office Goods Moving
492	Couriers and Messengers
562	Waste Management and Remediation Services (exclude 5629)

62191	Ambulance Services
62321	Residential Intellectual and Developmental Disability Facilities
92216	Fire Protection

Risk classes (4-digit) code	Risk classes (four-digit) description and excluded sub-classes
0302	Masonry Construction
0507	Roof Work – Construction and Repair
2002	Freight Handling Services (exclude 2002-13, 2002-31)
2103	Fulfillment Centers
3403	Aircraft Manufacturing
3906	Bakeries, Cracker, Pasta, Confection-Manufacturing/Wholesale, NOC (exclude 3906-05)
6105	Hospitals, NOC
6108	Nursing and Convalescent Homes
6402	Supermarkets
6407	Wholesale Stores, NOC incl. wholesale/retail combination
6801	Scheduled Airlines – Flight Crew (exclude 6801-01)
6802	Scheduled Airlines – Ground Crew (exclude 6802-01)
6904	County and City Fire fighters – Salaried
7201	State Patient and Health Care Personnel, NOC

L&I expects to select an industry or risk class for initial rulemaking in spring 2024 from this list. Following the selection, the department will establish an advisory committee of business and labor stakeholders to assist in developing rule language. L&I will also provide technical assistance to employers on this high-priority list as required by RCW 49.17.520(8)(c).

Introduction

Overview and purpose

The Washington Department of Labor & Industries' (L&I, the department) Division of Occupational Safety and Health (DOSH) administers the Washington Industrial Safety and Health Act (WISHA) under chapter 49.17 RCW by developing and enforcing rules that protect workers from workplace hazards and providing training, outreach, education, and assistance to help ensure employers keep workers safe.

In 2023, the Washington State Legislature enacted Engrossed Substitute Senate Bill (ESSB) 5217, which authorizes L&I to adopt rules to regulate work-related musculoskeletal disorder (WMSD) hazards for industries¹ or risk classes² with WMSD workers' compensation compensable claim rates that are greater than two times the overall state rate. L&I can only adopt one rule for either one industry or one risk class in a 12 month period, with an effective date of July 1, 2026 or later for the first rule.

The Legislature required L&I to publish annually by November a list of industries and risk classes eligible for rulemaking. From this list L&I must identify a list of industries or risk classes most likely to be selected for future rule making. The department refers to this as the "high priority" list. Additionally, L&I must publish the results of the review of compensable workers' compensation claims to ensure the data used to establish eligibility for rulemaking are consistent with the definition of musculoskeletal injuries or disorders detailed in ESSB 5217. The purpose of this report is to provide both of these lists and the results of the claim review. Information related to selecting a specific industry or risk class where rulemaking will occur is not part of this report. Rather, it is expected to be identified in spring 2024.

¹ ESSB 5217 defines an "industry" as any classification in the North American Industry Classification System (NAICS) that defines an industry subsector at the three-digit level, industry group at the four-digit level, and industry at the five-digit level. The NAICS is a federal standard for classifying business establishments by type of economic activity. The NAICS structure is hierarchical: the first two digits are sector level classification of general categories of economic activities, followed by three-digit subsectors, four-digit industry groups, five-digit industries, and six-digit industries.

² Risk classification is a method for grouping risks with similar characteristics to set insurance rates. Washington has its own risk classification system that is based on the degree of hazard for each occupation or industry and tailored to Washington's businesses and industries. L&I's Insurance Services Division assigns every employer one or more risk classifications based on the nature of their business. Each risk classification has separate base workers' compensation premium rates that apply to the employers and workers in that classification.

Background

Work-related musculoskeletal disorders

WMSDs are injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs associated with exposure to risk factors in the workplace. Musculoskeletal injuries and disorders include sprains, strains, tears, back pain, soreness, pain, carpal tunnel syndrome, musculoskeletal system or connective tissue diseases and disorders when the event or exposure leading to the injury or illness is a bodily reaction from bending, climbing, crawling, reaching, twisting, sitting, or standing; being rubbed or abraded by kneeling on a surface; being rubbed, abraded, or jarred by vibration; overexertion; or repetition.

WMSDs occur when the physical requirements (intensity, frequency, and duration) of the job exceed the physical capacity of the human body. WMSDs are generally caused by overuse or overexertion, repetitive motions or postures, unnatural positions, and/or vibration. WMSDs do not include injuries resulting from impact, such as falls, struck by or against, cuts, or motor vehicle crashes.

WMSDs often develop gradually over time, with an accumulation of exposures leading to wear and tear on the body. WMSDs may also appear as an immediate effect of certain exposures, which are more common with high-force exertions.

WMSDs are the leading type of occupational injury in Washington State and are costly to workers and their families, industry, and the workers' compensation system. Washington workers' compensation claims involving WMSDs account for an estimated one-third of all workers' compensation compensable claims and more than one-third of all compensable claim costs. Compensable claims are those in which the worker's injury or illness was serious enough to cause them to miss work and qualify for wage replacement benefits, referred to as time-loss compensation. They involve wage replacement for lost work time of four or more days or restricted duty, permanent disability, fatality, or a worker kept on salary by the employer during disability.

WMSDs are preventable. They can be prevented by reducing the frequency, intensity, and duration of work tasks that have excessive force, high repetition, awkward postures, and vibration.

History of L&I regulation of WMSD hazards

In 2000, L&I adopted a rule, referred to as the Workplace Ergonomic Rule, requiring employers to reduce worker exposure to hazards that cause or contribute to WMSDs. The rule had a delayed implementation schedule phased in over a four-year period, with the first compliance date set to start July 1, 2004. In 2003, the rule was repealed by a statewide voter initiative, codified under RCW 49.17.370. The initiative also prohibited L&I from adopting any new or amended rules dealing with musculoskeletal disorders, or that deal with the same or similar activities as the repealed rules unless required by federal law. Employers, however, have an obligation under RCW 49.17.060(1) to provide employees with a workplace free from recognized hazards that cause or are likely to cause serious injuries to their employees. L&I retained the ability to take enforcement action for WMSD hazards under this provision.

Engrossed Substitute Senate Bill 5217

In 2023, the Legislature passed ESSB 5217, which repealed RCW 49.17.370, and restored L&I's authority to regulate working practices to prevent WMSDs.

The new law, codified under RCW 49.17.520, limits L&I's WMSD rulemaking authority, such that L&I may:

- Adopt only one set of rules, either for one industry or one workers' compensation risk class per 12- month period.
- Adopt rules only for industries or risk classes in which the WMSD compensable claims rate was greater than two-times the overall state WMSD compensable claim rate over a recent five-year period. If the selected industry or risk class has subdivisions that were less than 2-times the statewide rate, they were to be excluded from rulemaking. The rules would apply to an establishment engaged in activities as defined by the industry or risk class.³
- Not adopt emergency rules or rules applicable to home offices.

L&I is required to publish annually, by November a list of industries and risk classes eligible for rulemaking and identify those industries or risk classes most likely to be selected for future rulemaking. L&I is to prioritize efforts to provide technical assistance to those employers. Additionally, the Legislature directed L&I to review claims to verify the data used to identify industries and risk classes is consistent with the definition of WMSDs in the new law.

When selecting an industry or risk class for rulemaking, L&I is to consider whether the trend of the WMSD compensable claim rate in an industry or risk class is:

- Demonstrating a statistical downward trend in the claims rate that is greater than the statewide average; and
- Whether the statistical trend suggests the industry or risk classification will have a rate lower than two-times the state average in the next three years.

Within 90 days of starting the formal rulemaking process, L&I is required to provide a report to the members of the relevant legislative committees, including the criteria L&I used to select the industry or risk class and information on how L&I will develop the rules.

As part of the each rule development process, L&I must convene an advisory committee of equal employer and worker representatives. L&I must also consider options for an employer to demonstrate

³ An establishment is generally a single physical location where business is conducted or where services or industrial operations are performed. For activities where employees do not work at a single physical location (such as construction; transportation; communications, electric, gas and sanitary services; and similar operations) the establishment is represented by main or branch offices, terminals, stations, etc., that either supervise such activities or are the base from which personnel carry out these activities. An enterprise (company) may consist of more than one establishment. Under the NAICS system, an establishment is classified in a NAICS industry when its primary activity meets the definition for that industry.

alternative control methods where:

- The alternative methods are at least as effective as the rule requirements;
- Affected employees are trained and monitored for compliance; and
- The employer has documented all efforts.

In addition, L&I is directed to solicit input on the effective date for each rule, which must be at least 120 days following the rule adoption and no rule may be effective prior to July 1, 2026.

Eligible List

Overview

This report relies on Washington workers' compensation claims data. In Washington State, all employers are required to obtain workers' compensation insurance through L&I (the "state fund"), unless they are able to self-insure, are covered under an alternative workers compensation program (e.g. federal government, harbor and longshore workers), or are self-employed. Other minor exemptions exist, including children employed on a family farm and select domestic servants. A complete list can be found in Chapter 51.12 RCW.

Occupational Injury and Illness Classification System coding

Identifying WMSDs in the workers' compensation data relies on Bureau of Labor Statistics (BLS) Occupational Injury and Illness Classification System (OIICS) codes. Trained coders assign OIICS codes to a claim using the information on the Report of Accident (ROA) or Report of Industrial Injury or Occupational Disease (ROIID). When a worker is injured or made ill at work, generally, the worker and health care provider initiate a workers' compensation claim by filing an ROA/ROIID. The ROA/ROIID contains worker-reported demographic information, employment information, and information from the health care provider regarding the initial medical diagnoses and treatment. On the ROA/ROIID, the worker and health care provider describe the injury event and resulting injury. These worker and physician descriptions are then coded to assign BLS OIICS codes for the Nature of the Injury or Illness (Nature), Event or Exposure (Event), Part of Body Affected (Body Part) and the Source of Injury or Illness (Source). The BLS OIICS is the standard national classification system for occupational injury and illnesses; Washington uses BLS OIICS v 1.01. The definition of a WMSD in Washington State law relies on using the BLS OIICS codes⁴ and is codified in RCW 49.17.020.

Industry and risk class codes

Each insured employer's account and business location has a North American Industry Classification System (NAICS) six-digit hierarchical code identifying the employer's primary economic activity. Risk classes are insurance groupings based on the type of work performed and risk for financial loss. An employer's account is assigned all relevant risk classes associated with the types of work performed. During 2017–2021, there were 324 active major risk classes, which are subdivided into 840 detailed classifications in the Washington industrial insurance classification system. When an injury or illness occurs and a workers' compensation claim starts, the claim is linked to the employer's account and assigned the appropriate risk class. Washington requires State Fund employers to pay quarterly workers' compensation premiums based on the aggregated number of hours worked by their employees. Self-insured employers are also required to report hours to L&I quarterly. Hours worked by each individual employee are not reported to the workers' compensation insurance system. At the account level, employers report the sum of all employee work hours by

⁴ Marcum, J. Case Definition for Surveillance of Work-Related Musculoskeletal Disorders (WMSDs) in the Washington Workers' Compensation System, September 2020. SHARP Technical Report 99-05-2020. Washington State Department of Labor & Industries, Safety and Health Assessment and Research for Prevention (SHARP) program. Olympia, WA

specific industrial insurance risk classes quarterly.

Industry and risk class code structure and rulemaking

There are specific restrictions included in the recently passed legislation regarding the scope of regulations when using NAICS and risk classes. NAICS is a six- digit hierarchical coding system, with each additional digit indicating a more detailed description of the primary economic activity of the employer’s establishment. The example below demonstrates the progression from the two-digit NAICS ‘sector’ code through the six-digit NAICS ‘national industry’ code.

Example Table #1: NAICS

Number of Digits	NAICS Description	Example
2	Sector	72 – Accommodation and Food Services
3	Subsector	722 – Food Services and Drinking Places
4	Industry Group	7223 – Special Food Services
5	Industry	72232 – Caterers
6	National Industry	722320 – Caterers

The Washington State risk class system uses a simple hierarchical structure with two levels: a main risk class level with four digits, which can be subdivided into six-digit sub-risk classifications.

Example Table #2: Washington Risk Classes

Number of Digits	Risk Class Description	Example
4	Main	6904
6	Subclass	6904-00 – Salaried firefighters of cities or towns
6	Subclass	6904-01 – Salaried firefighters of counties and taxing districts

Under the new law, when L&I regulates an industry (defined as a three-, four-, or five- digit NAICS code) or a risk class, there is an exclusion of a subdivision of the industry or risk class when the rate is less than two-times the overall state workers' compensation compensable claim rate for musculoskeletal injuries and disorders. The language of the law [RCW 49.17.520 (3)(b-d)] is below.

- b) When adopting rules by industry subsector at the three-digit level, the department must exclude from regulation North American industry classification system industry group at the four-digit level and industry classification at the five-digit level within the industry subsector that have a musculoskeletal injuries and disorders rate less than two times the overall state workers' compensation compensable claim rate for musculoskeletal injuries and disorders over a recent five-year period.
- c) When adopting rules by industry group at the four-digit level, the department must exclude from regulation North American industry classification system industry classifications at the five-digit level within the industry group that have a musculoskeletal injuries and disorders rate less than two times the overall state workers' compensation compensable claim rate for musculoskeletal injuries and disorders over a recent five-year period.

- d) When adopting rules by risk classification at the four-digit level, the department must exclude six-digit risk classifications within the four-digit risk classification if they have a musculoskeletal injuries and disorders rate less than two times the overall state workers' compensation compensable claim rate for musculoskeletal injuries and disorders over a recent five-year period.

Compensable claims, compensable claim rates, and claim rate ratios

Claims may be accepted or rejected as work-related injuries or illnesses in accordance with state laws, regulations, and case law. Accepted claims are divided into medical-only claims and compensable claims. Medical-only claims involve those with medical expenses only. Compensable claims have additional expenses, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims, where the employer continues to pay the injured workers' wages in lieu of paying time loss, are considered compensable claims. In accordance with the legislation, WMSD rates are calculated for compensable claims.

A compensable claim rate is calculated by dividing the number of compensable claims by the number of FTE workers. Hours reported by employers for premium payments in the state fund and by self-insured employers are converted into FTE with one FTE being equal to 2,000 hours. Compensable claim rates for each industry or risk class are calculated by dividing the number of compensable claims by 1,000 FTE.

A compensable claim rate ratio is a comparison of two compensable claim rates. The rate ratio is calculated by dividing the compensable WMSD claim rate of the specific industry or risk classification by the overall statewide compensable WMSD claim rate. For example, if an industry's claim rate is 8.8 per 1,000 FTE, the rate ratio comparing it to the statewide rate (4.4 per 1,000) would be 2.0 [$8.8 / 4.4 = 2.0$].

Compensable claim rate trends

A compensable claim rate trend is the direction the rate is moving over a period of time. Trends can be decreasing, considered a negative trend, or increasing, a positive trend. Alternatively, if the rate isn't changing over time, it is considered to have no observed trend direction. Compensable WMSD claim rates were calculated over a 10-year period (calendar years 2012–2021) for each individual industry and risk class. WMSD claim trends were then evaluated using negative binomial regression modeling to determine if they were significantly increasing or decreasing, or if there was no statistically significant observed change. Regression modeling is a statistical technique used here to measure how the WMSD claim rate changes over time and whether that change is statistically meaningful (i.e., statistically significant). The statistical significance level used for this analysis was $\alpha=0.05$. The regression modeling technique also allows us to predict the WMSD claim rate in a subsequent year, based on the previous years' trend. We estimated the claim rate in 2024 using the trend information from the regression model to determine if the rate was likely to go below two-times the statewide average.

Eligible list

Workers' compensation compensable claims with a date of injury from calendar year 2012 to 2021

were retrieved from the L&I data systems on August 16, 2023. Per the legislation, the time period from 2017 through 2021 is under analysis for WMSD compensable claim rates. During this period, there were 59,423 compensable WMSD claims and 13,402,836 FTE, and the overall WMSD compensable claim rate for all of Washington was 4.4 compensable claims per 1,000 FTE.

This report focuses on those industries and risk classes meeting the eligibility criteria for possible rulemaking under the law (compensable WMSD claim rate ratio above two as compared to statewide). All industries and risk classes eligible for rulemaking are listed in Appendix A. Among the eligible industries and risk classes, the department has identified those with a statistically significant decreasing trend that suggests the industry or risk class will have a rate lower than two-times the statewide average in the next three years. These industries and risk classes are considered low priority for rulemaking at this time.

High-priority industries and risk classes are discussed further in the next section of this report. WMSD data for all industries and risk classes (i.e., those currently eligible and ineligible for rulemaking) are summarized on the [Ergonomics Initiative webpage](#).

High-Priority List

As mandated in the new legislation at RCW 49.17.520(8)(c), L&I is required to publish a list of industries and risk classifications that are likely to be selected for future rulemaking — a ‘high-priority’ list. These high-priority industries and risk classes are also prioritized to receive safety and health technical assistance and consultation resources. L&I believes that voluntary efforts by industry associations, labor groups, individual employers, and the occupational safety and health community to identify and implement best practices to reduce WMSD risk are essential to reducing WMSDs in Washington State. Further, significant engagement by industries and their partners to reduce WMSDs and improve workplace safety takes time to implement and demonstrate a positive impact. Thus, this high-priority list represents current priorities for 2023 and will likely change in future years due to voluntary efforts by the business and labor community to impact WMSD rates.

Considerations for inclusion on the high-priority list

For this current report, considerations for inclusion on the high-priority list were industries or risk classes for which, as required by the law, the WMSD compensable claim rate was more than two-times the overall statewide compensable claim rate for WMSDs. Industries and risk classifications with a high annual number and high annual rate of compensable WMSD claims were prioritized. The high-priority list was created to include industries and risk classes that represent a range of industry sectors in Washington.

Considerations for not including an industry or risk class on the high-priority list

Some industries and risk classes with a WMSD rate more than twice the statewide average are eligible for rulemaking but were not included on the 2023 high-priority list. Reasons for not including these industries or risk classes include:

- As of the writing of this report, they were considered unlikely to be subject to future regulatory efforts.
- Having fewer FTEs or a small number of WMSDs annually (most common).
- A predicted rate below two-times the state average based on a 10- year trend.
- Risk classes that involved temporary agencies were not selected as high priority this year. The department is exploring the relationship between temporary agencies and permanent risk classes for future regulatory approaches.

High-priority list for Industry based on NAICS Codes; Washington State WMSD Compensable¹ Claims, 2017–2021

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of compensable WMSD claims per year	Average number of FTE ² per year
23814	Masonry Contractors	2.9	12.9	N	588	22.8	1,762.8
31171	Seafood Product Preparation and Packaging	2.3	10.3	N	67	36.2	3,501.4
31181	Bread and Bakery Product Manufacturing	2.3	10.4	N	630	54.4	5,246.5
31211	Soft Drink and Ice Manufacturing	2.5	10.9	N	49	27.2	2,494.9
42441	General Line Grocery Merchant Wholesalers	3.3	14.8	N	179	137.0	9,253.0
42481	Beer and Ale Merchant Wholesalers	2.7	11.8	N	101	36.80	3,126
44413	Hardware Stores	2.4	10.9	N	327	96.60	8,901
44511	Supermarkets and Other Grocery (except Convenience) Stores	2.5	11.2	N	898	424.60	38,062
45291	Warehouse Clubs and Supercenters	2.9	12.8	N	12	364.60	28,452
48111	Scheduled Air Transportation	4.7	21.0	N	49	226.60	10,789
48412	General Freight Trucking, Long-Distance	2.5	10.9	N	1,373	107.40	9,848
48421	Used Household and Office Goods Moving	3.9	17.3	N	399	31.80	1,836
492	Couriers and Messengers	4.2	18.8	N	664	278.4	14,839.3
562 ⁵	Waste Management and Remediation Services	2.5	11.0	N	705	105.0	9,584.5
62191	Ambulance Services	4.7	21.0	N	58	49.40	2,354
62321	Residential Intellectual and Developmental Disability Facilities	3.4	15.1	N	22	41.20	2,729
92216	Fire Protection	3.3	14.8	N	281	83.80	5,681

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

⁵Excludes NAICS 5629

High-priority list for Washington Risk Classifications; Washington State WMSD Compensable Claims, 2017-2021

Risk class (4-digit) code	Risk class (4-digit) description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of compensable WMSD claims per year	Average number of FTE ² per year
0302	Masonry Construction	3.9	17.3	N	1,025	24.4	1,407.3
0507	Roof Work – Construction and Repair	3.2	14.3	N	3,479	55.4	3,872.2
2002 ⁵	Freight Handling Services	3.2	14.1	N	408	68.6	4,852.0
2103	Fulfillment Centers	10.5	46.5	N	6	306.2	6,580.0
3403	Aircraft Manufacturing	2.3	10.2	N	31	523.0	51,256.3
3906 ⁵	Bakeries, Cracker, Pasta, Confection-Manufacturing/Wholesale, NOC	2.9	12.9	N	299	59.8	4,619.5
6105	Hospitals, NOC	2.3	10.0	N	81	858.2	85,789.4
6108	Nursing and Convalescent Homes	2.2	9.6	N	355	173.2	18,126.4
6402	Supermarkets	2.6	11.5	N	475	436.2	37,998.1
6407	Wholesale Stores, NOC incl. wholesale/retail combination	2.8	12.5	N	1,851	252.0	20,145.1
6801 ⁵	Scheduled Airlines - Flight Crew	3.0	13.3	N	22	60.6	4,545.2
6802 ⁵	Scheduled Airlines - Ground Crew	10.6	47.0	N	37	167.4	3,558.5
6904	County and City Fire fighters - Salaried	4.9	21.8	N	247	206.4	9,456.3
7201	State Patient and Health Care Personnel, NOC	4.5	19.9	N	44	69.6	3,495.1

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

⁵Excludes the following risk classes: 2002-13, 2002-31, 3906-05, 6801-01, 6802-01

Claim Review

The department reviewed compensable workers' compensation claims used in this report to ensure that the data only reflects injuries or disorders consistent with the definition in the new law. The new law, codified at RCW 49.17.020(11) states,

“Work-related musculoskeletal injuries and disorders” means injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs associated with exposure to risk factors in the workplace. Musculoskeletal injuries and disorders include sprains, strains, tears, back pain, soreness, pain, carpal tunnel syndrome, musculoskeletal system or connective tissue diseases and disorders when the event or exposure leading to the injury or illness is bodily reaction from bending, climbing, crawling, reaching, twisting, sitting, or standing; being rubbed or abraded by kneeling on a surface; being rubbed, abraded, or jarred by vibration; overexertion; or repetition. The department may update this definition in accordance with changes to the United States department of labor's definition or updates to the United States bureau of labor statistics' occupational injury and illness classification system.

This definition aligns with specific OIICS codes describing the nature of the injury or illness and the event or exposure that led to injury or illness. The OIICS codes that define a WMSD case for the Washington State workers' compensation system are described in detail in the Eligible List section of this report.

The department reviewed the OIICS nature and event codes for all claims identified in this analysis, and the results of that review are in Appendix B. All claims used in this analysis were consistent with the definition presented above.

Next Steps

Initiating the first rulemaking

In the coming months, L&I will review the industries and risk classes on the high-priority list to determine which will be selected for the initial rulemaking effort. The department expects to select the industry or risk class in spring 2024.

Following the selection, L&I will begin the formal rulemaking process by filing the notice of intent to adopt rules/preproposal statement of inquiry (CR-101) with the Office of the Code Reviser for publication in the Washington State Register. At that time the department will solicit nominations for employer and worker representatives from the selected industry or risk class to serve on an advisory committee to help develop the proposed rule language as required by RCW 49.17.520(6). In addition to convening with the advisory committee, L&I will seek input from affected stakeholders on the rule development, including the effective date of any new rules. According to RCW 49.17.520(7), the effective date may not be less than 120 days after adoption, and no rule may be effective before July 1, 2026.

In addition, within 90 days of filing the CR-101, L&I will provide a report to the members of the relevant legislative committees.

Technical assistance

The Legislature directed the department to provide additional ergonomists to provide consultation services in an effort to help employers voluntarily reduce WSMD hazards. L&I will use these new and existing resources to work collaboratively with industry associations, employers, employees, and labor advocates to provide technical assistance from DOSH consultation services related to WMSD hazards, prioritizing employers in industries included on the high-priority list in this report as required by RCW 49.17.520(8)(c). Consultation services are free and confidential, with no fines or penalties resulting from identified hazards. As part of the consultation, however, employers must agree to correct any serious identified hazards.

The new law contemplates on-going rule-making, no more than one per year, to reduce WMSD hazards. While the industries and risk classes included are currently divided into “high-priority,” “eligible for rule-making” and “not eligible for rule-making,” over time, these lists are expected to change as claims data change. Technology changes, industry-mix of hours, and adoption of best practices are just a few factors expected to influence an industry or risk class inclusion on one of these lists. The department will continue to review data, and publish these annual lists as required by the new law.

Appendix

A1. Compensable¹ WMSD claims by NAICS three-digit subsector code, Washington State, 2017–2021

The “Eligible List” - Industries with a rate greater than two-times the statewide rate.

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of WMSD claims per year	Average number of FTE ² per year
---	All statewide	1.0	4.4	--	275,056	11,884.6	2,680,567.2
114	Fishing, Hunting and Trapping	2.4	10.7	N	80	7.2	672.6
445	Food and Beverage Stores	2.1	9.4	N	3,079	455.6	48,379.8
452	General Merchandise Stores	2.4	10.7	N	241	437.2	40,757.2
481	Air Transportation	4.6	20.4	N	124	227.2	11,130.3
482	Rail Transportation	7.2	31.8	N	1	0.2	6.3
484	Truck Transportation	2.4	10.6	N	3,532	218.8	20,691.2
485	Transit and Ground Passenger Transportation	2.3	10.4	N	346	80.2	7,707.7
491	Postal Service	4.4	19.5	N	73	9.8	501.9
492	Couriers and Messengers	4.2	18.8	N	664	278.4	14,839.3
562	Waste Management and Remediation Services	2.5	11.0	N	705	105.0	9,584.5

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and was compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

A2. Compensable¹ WMSD claims by NAICS four-digit industry group code, Washington State, 2017–2021

The “Eligible List” - industries with a rate greater than two-times the statewide rate.

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of WMSD claims per year	Average number of FTE ² per year
---	All statewide	1.0	4.4	--	275,056	11,884.6	2,680,567.2
1141	Fishing	2.4	10.7	N	80	7.2	672.6
3115	Dairy Product Manufacturing	2.3	10.1	N	44	20.2	1,990.7
3117	Seafood Product Preparation and Packaging	2.3	10.3	N	67	36.2	3,501.4
3118	Bakeries and Tortilla Manufacturing	2.1	9.4	N	658	59.0	6,298.0
3131	Fiber, Yarn, and Thread Mills	2.2	9.5	N	3	2.2	230.5
3161	Leather and Hide Tanning and Finishing	4.9	21.7	N	6	0.2	9.2
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	2.5	11.2	N	9	0.6	53.7
3312	Steel Product Manufacturing from Purchased Steel	2.1	9.5	N	15	1.6	167.9
3315	Foundries	2.1	9.4	N	43	19.4	2,074.8
3379	Other Furniture Related Product Manufacturing	2.1	9.3	Y	15	3.0	322.7
4244	Grocery and Related Product Merchant Wholesalers	2.1	9.3	N	1,505	264.8	28,496.6
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	2.3	10.3	N	325	52.8	5,124.6
4451	Grocery Stores	2.3	10.2	N	1,999	433.2	42,469.6
4483	Jewelry, Luggage, and Leather Goods Stores	2.3	10.2	N	293	182.0	17,925.3
4529	Other General Merchandise Stores	2.7	12.1	N	200	391.2	32,437.1

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of WMSD claims per year	Average number of FTE ² per year
4811	Scheduled Air Transportation	4.7	21.0	N	49	226.6	10,788.9
4821	Rail Transportation	7.2	31.8	N	1	0.2	6.3
4841	General Freight Trucking	2.4	10.4	N	1,832	135.6	12,990.9
4842	Specialized Freight Trucking	2.4	10.8	N	1,705	83.2	7,700.2
4851	Urban Transit Systems	2.2	9.6	Y	22	29.2	3,039.0
4852	Interurban and Rural Bus Transportation	4.8	21.2	N	4	13.4	631.2
4855	Charter Bus Industry	2.7	11.8	N	33	22.2	1,878.4
4859	Other Transit and Ground Passenger Transportation	2.1	9.2	N	131	11.6	1,259.7
4879	Scenic and Sightseeing Transportation, Other	2.9	13.0	N	11	0.2	15.3
4911	Postal Service	4.4	19.5	N	73	9.8	501.9
4921	Couriers and Express Delivery Services	4.4	19.7	N	358	196.4	9,986.9
4922	Local Messengers and Local Delivery	3.8	16.9	N	306	82.0	4,852.4
5621	Waste Collection	3.1	13.7	N	223	49.6	3,611.0
5622	Waste Treatment and Disposal	3.1	13.8	N	53	36.0	2,614.3
6219	Other Ambulatory Health Care Services	2.8	12.6	N	152	54.0	4,302.5
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	2.5	11.0	N	72	44.4	4,054.1

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and was compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

A3. Compensable¹ WMSD claims by NAICS five-digit industry code, Washington State, 2017–2021

The “Eligible List” - industries with a rate greater than two-times the statewide rate.

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE ²	Predicted ³ rate ratio <2 2024	Number of workers' compensation accounts ⁴	Average number of WMSD claims per year	Average number of FTE ² per year
---	All statewide	1.0	4.4	--	275,056	11,884.6	2,680,567.2
11211	Beef Cattle Ranching and Farming, including Feedlots	2.3	10.3	N	319	19.4	1,891.1
11232	Broilers and Other Meat Type Chicken Production	3.3	14.6	N	13	0.4	27.5
11293	Fur-Bearing Animal and Rabbit Production	8.4	37.3	N	9	0.6	16.1
11411	Fishing	2.4	10.7	N	80	7.2	672.6
23814	Masonry Contractors	2.9	12.9	N	588	22.8	1,762.8
23834	Tile and Terrazzo Contractors	2.5	10.9	N	468	10.4	952.5
31123	Breakfast Cereal Manufacturing	2.6	11.4	N	10	0.2	17.5
31151	Dairy Product (except Frozen) Manufacturing	2.3	10.2	N	36	20.0	1,951.7
31171	Seafood Product Preparation and Packaging	2.3	10.3	N	67	36.2	3,501.4
31181	Bread and Bakery Product Manufacturing	2.3	10.4	N	630	54.4	5,246.5
31183	Tortilla Manufacturing	2.1	9.2	N	7	0.4	43.3
31191	Snack Food Manufacturing	2.4	10.8	N	16	16.2	1,504.1
31211	Soft Drink and Ice Manufacturing	2.5	10.9	N	49	27.2	2,494.9
31311	Fiber, Yarn, and Thread Mills	2.2	9.5	N	3	2.2	230.5
31611	Leather and Hide Tanning and Finishing	4.9	21.7	N	6	0.2	9.2
32521	Resin and Synthetic Rubber Manufacturing	2.5	11.2	N	9	0.6	53.7
32592	Explosives Manufacturing	3.5	15.6	N	2	0.2	12.9

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
32621	Tire Manufacturing	4.1	18.1	N	6	2.6	143.8
32791	Abrasive Product Manufacturing	5.1	22.8	N	1	1.2	52.7
33121	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	2.5	11.1	N	8	1.6	143.6
33151	Ferrous Metal Foundries	2.2	9.8	N	25	11.6	1,186.7
33511	Electric Lamp Bulb and Part Manufacturing	7.9	35.1	N	3	0.2	5.7
33634	Motor Vehicle Brake System Manufacturing	3.1	13.7	N	3	0.2	14.6
33635	Motor Vehicle Transmission and Power Train Parts Manufacturing	2.7	12.2	N	4	0.2	16.4
33791	Mattress Manufacturing	3.4	15.0	N	11	2.8	187.2
42313	Tire and Tube Merchant Wholesalers	2.4	10.7	N	39	3.2	298.7
42441	General Line Grocery Merchant Wholesalers	3.3	14.8	N	179	137.0	9,253.0
42442	Packaged Frozen Food Merchant Wholesalers	2.1	9.4	N	79	10.4	1,104.1
42443	Dairy Product (except Dried or Canned) Merchant Wholesalers	2.8	12.4	N	60	5.6	450.0
42444	Poultry and Poultry Product Merchant Wholesalers	2.7	12.1	N	15	9.0	745.4
42481	Beer and Ale Merchant Wholesalers	2.7	11.8	N	101	36.8	3,125.8
44413	Hardware Stores	2.4	10.9	N	327	96.6	8,901.3
44511	Supermarkets and Other Grocery (except Convenience) Stores	2.5	11.2	N	898	424.6	38,062.3
44831	Jewelry Stores	2.3	10.2	N	267	181.2	17,739.1
45291	Warehouse Clubs and Supercenters	2.9	12.8	N	12	364.6	28,451.9

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
48111	Scheduled Air Transportation	4.7	21.0	N	49	226.6	10,788.9
48211	Rail Transportation	7.2	31.8	N	1	0.2	6.3
48412	General Freight Trucking, Long-Distance	2.5	10.9	N	1,373	107.4	9,848.2
48421	Used Household and Office Goods Moving	3.9	17.3	N	399	31.8	1,836.0
48511	Urban Transit Systems	2.2	9.6	Y	22	29.2	3,039.0
48521	Interurban and Rural Bus Transportation	4.8	21.2	N	4	13.4	631.2
48551	Charter Bus Industry	2.7	11.8	N	33	22.2	1,878.4
48599	Other Transit and Ground Passenger Transportation	2.1	9.2	N	131	11.6	1,259.7
48799	Scenic and Sightseeing Transportation, Other	2.9	13.0	N	11	0.2	15.3
48811	Airport Operations	2.1	9.1	N	71	21.2	2,325.7
49111	Postal Service	4.4	19.5	N	73	9.8	501.9
49211	Couriers and Express Delivery Services	4.4	19.7	N	358	196.4	9,986.9
49221	Local Messengers and Local Delivery	3.8	16.9	N	306	82.0	4,852.4
49319	Other Warehousing and Storage	2.5	11.3	N	42	4.4	389.6
51114	Directory and Mailing List Publishers	2.3	10.4	N	11	17.4	1,671.6
52592	Trusts, Estates, and Agency Accounts	2.2	9.6	N	20	0.6	62.4
52593	Real Estate Investment Trusts	5.5	24.6	N	4	0.2	8.1
56174	Carpet and Upholstery Cleaning Services	2.5	11.0	N	304	9.4	851.1
56211	Waste Collection	3.1	13.7	N	223	49.6	3,611.0
56221	Waste Treatment and Disposal	3.1	13.8	N	53	36.0	2,614.3
62191	Ambulance Services	4.7	21.0	N	58	49.4	2,353.7

NAICS code	NAICS description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
62321	Residential Intellectual and Developmental Disability Facilities	3.4	15.1	N	22	41.2	2,729.0
92111	Executive Offices	2.2	9.6	N	45	195.4	20,360.8
92216	Fire Protection	3.3	14.8	N	281	83.8	5,681.2

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and was compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

A4. Compensable¹ WMSD claims by Washington State four-digit Risk Class, Washington State, 2017–2021

The “Eligible List” - risk classes with a rate greater than two-times the statewide rate.

Risk class	Risk class description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
---	All statewide	1.0	4.4	--	275,056	11,884.6	2,680,567.2
0105	Fence Erection and Repair, NOC	2.7	11.9	Y	1,188	11.8	994.7
0106	Tree Care and Pruning Services, NOC	2.4	10.8	Y	957	13.0	1,208.8
0201	Bridge, Bulkhead and Tunnel Construction	2.2	9.8	N	277	7.4	756.7
0202	Pile Construction, Wharf, Pier & Dock Construction, Diving Operations	2.4	10.7	N	206	5.0	465.3
0214	Concrete Work -Highways, Streets, Roads and Sidewalks	2.3	10.1	Y	505	11.2	1,113.4
0301	Landscape Construction and Renovation	2.7	11.9	N	3,529	61.6	5,196.1
0302	Masonry Construction	3.9	17.3	N	1,025	24.4	1,407.3
0303	Plastering, Stuccoing and Lathing: Buildings	2.6	11.5	N	217	3.8	330.0
0502	Floor and Counter Covering Installation	2.7	11.8	N	3,555	23.4	1,991.4
0507	Roof Work - Construction and Repair	3.2	14.3	N	3,479	55.4	3,872.2
0510	Wood Frame Building Construction and Alterations	2.4	10.6	Y	7,816	89.2	8,411.9
0511	Glass Installation: Buildings	3.9	17.4	N	856	31.0	1,782.2
0514	Garage Door Installation, Service and Repair	3.3	14.6	N	563	10.6	724.2
0516	Building Repair, Remodeling and Carpentry, NOC	2.3	10.4	Y	11,600	107.0	10,287.9

Risk class	Risk class description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
0517	Factory Built Home Set-up by Contractor/Manufacturer	3.0	13.3	N	107	1.0	75.0
0540	Wallboard Installation - Discounted Rate	5.1	22.4	N	194	19.4	865.4
0550	Wallboard Installation - Undiscounted Rate	4.4	19.4	N	873	10.4	536.4
0604	Scrap Metal Dealers and Processors	2.2	9.7	N	80	7.2	738.8
0606	Vending Machine Installation, Service and Repair	2.3	10.4	Y	209	10.2	981.0
0607	Appliance Install, Svc, Repair & Store Display Svs Contractor	2.8	12.5	N	1,274	47.8	3,827.0
0803	Cities and Towns-All Other Employees, NOC	2.9	12.9	N	279	169.4	13,091.0
1002	Sawmills and Automated Shake and Shingle Mills	2.2	9.6	N	86	43.6	4,552.9
1101	Delivery Services	4.8	21.3	N	2,680	471.4	22,130.6
1102	Trucking, NOC	2.5	11.0	N	2,981	114.8	10,406.5
1103	Solid Fuel, Firewood, Composting, Topsoil and Pallet Dealers	2.3	10.3	N	204	7.6	735.5
1108	Glass Merchants	2.1	9.4	N	296	18.0	1,912.4
1303	Telephone Companies - All Other Employees, NOC	2.8	12.4	N	184	21.8	1,764.8
1404	Cabulance and Paratransit	3.3	14.7	N	141	24.6	1,671.8
1405	Ambulance Services	2.2	9.7	Y	37	47.8	4,927.3
1407	Bus Companies	2.4	10.7	N	140	26.0	2,429.6
1501	County and Tribal Councils-All Other Employees, NOC	3.6	16.1	N	537	295.8	18,340.8
2002	Freight Handling Services	3.2	14.1	N	408	68.6	4,852.0
2103	Fulfillment Centers	10.5	46.5	N	6	306.2	6,580.0

Risk class	Risk class description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
2105	Beer, Wine, and Soft Drink Distributors	4.0	17.9	N	133	92.4	5,176.3
2202	Carpet Cleaning	3.1	13.8	N	299	7.4	534.6
2905	Furniture and Casket Manufacturing - Wood	3.2	14.2	N	145	6.0	421.1
3104	Soapstone & Plasterboard Manufacturing; Wood preserving	2.2	9.7	N	239	13.4	1,376.9
3403	Aircraft Manufacturing	2.3	10.2	N	31	523.0	51,256.3
3415	Factory Built Housing Dealers	2.9	13.0	N	40	2.0	153.5
3501	Brick and Clay Product Manufacturing, NOC	5.9	26.0	N	6	1.8	69.2
3509	Statuary and Ornament Manufacturing	3.0	13.5	N	28	1.0	74.1
3906	Bakeries, Cracker, Pasta, Confection-Manufacturing/Wholesale, NOC	2.9	12.9	N	299	59.8	4,619.5
4301	Meat Products Manufacturing/ Slaughter and Packing Houses	3.3	14.5	N	55	54.6	3,757.3
4302	Custom Meat Cutting	2.3	10.3	N	77	2.0	193.7
4305	Solid Waste Collection Services/Landfill Operations	3.6	16.2	N	456	70.0	4,332.6
4402	Ice Manufacturing and Dealers	3.3	14.8	N	20	1.4	94.3
5001	Logging Operations, NOC*	2.5	11.2	N	482	4.2	376.0
5003	Log Hauling	3.0	13.4	N	377	8.6	641.1
5101	Pipe Manufacturing - Iron or Steel	2.3	10.2	N	10	1.6	156.7
5103	Foundries, NOC	2.2	9.9	N	34	10.0	1,005.7
5106	Blacksmithing and Forging Works	2.6	11.7	N	11	0.6	51.3
6104	Schools, Churches and Day Care -All Other Staff	2.8	12.4	N	4,328	281.6	22,720.4

Risk class	Risk class description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
6105	Hospitals, NOC	2.3	10.0	N	81	858.2	85,789.4
6108	Nursing and Convalescent Homes	2.2	9.6	N	355	173.2	18,126.4
6110	Home Health Services and Nursing Care, NOC	2.3	10.2	N	278	53.4	5,228.9
6201	Mortuaries	2.5	10.9	N	158	6.2	567.7
6202	Cemeteries	3.2	14.3	N	101	3.4	238.6
6207	Carnivals and Circuses - Traveling	2.2	9.8	N	41	0.8	81.9
6402	Supermarkets	2.6	11.5	N	475	436.2	37,998.1
6405	Tire Sales and Service Centers	2.1	9.4	N	432	42.6	4,549.3
6407	Wholesale Stores, NOC incl wholesale/retail combination	2.8	12.5	N	1,851	252.0	20,145.1
6625	Horse racing grooms & asst trainers-major track	83.1	368.5	N	1	0.2	0.5
6801	Scheduled Airlines - Flight Crew	3.0	13.3	N	22	60.6	4,545.2
6802	Scheduled Airlines - Ground Crew	10.6	47.0	N	37	167.4	3,558.5
6809	Baseball, Basketball and Soccer Teams	4.7	21.0	N	14	1.2	57.0
6904	County and City Fire fighters - Salaried**	4.9	21.8	N	247	206.4	9,456.3
6907	Moving and Storage Companies	4.8	21.1	N	469	37.0	1,755.3
7107	Temp. Help - Food Services	2.1	9.1	N	85	3.6	393.7
7108	Temp. Help - Warehousing Services	2.7	11.8	N	131	47.6	4,050.2
7112	Temp. Help - Agricultural Services	3.3	14.7	Y	48	4.8	326.1
7113	Temp. Help - Maintenance Services	2.6	11.7	N	132	11.6	993.8
7114	Temp. Help - Assembly Work and Freight Handling	4.3	18.9	N	195	66.8	3,543.1

Risk class	Risk class description	WMSD claim rate compared to all statewide (Rate Ratio)	WMSD claim rate per 1,000 FTE²	Predicted³ rate ratio <2 2024	Number of workers' compensation accounts⁴	Average number of WMSD claims per year	Average number of FTE² per year
7115	Temp. Help - Food Processing Services	3.2	14.0	N	71	24.2	1,727.2
7117	Temp. Help - Machine Operators and Skilled Craftsmen	3.8	16.6	N	264	26.8	1,610.3
7118	Temp. Help - Flagging for Construction Services NOC	4.6	20.6	N	215	25.4	1,232.6
7119	Temp. Help - Vehicle Operations	6.2	27.3	N	100	11.4	418.0
7122	Temp. Help - Laborers for Manufacturing	4.1	18.1	N	139	32.8	1,808.1
7201	State Patient and Health Care Personnel, NOC	4.5	19.9	N	44	69.6	3,495.1
7204	Preferred Workers	4.4	19.6	N	640	3.6	183.8

¹Only compensable claims were used for this analysis. Compensable claims have expenses beyond medical treatment, including payments for time loss, permanent partial disability awards, total permanent disability, and survivor benefits. Kept-on salary claims are considered compensable claims.

²FTE (full time equivalent): 1 FTE= 2,000 hours

³Trend analysis of a ten-year period (2012–2021) used to predict claim rate in 2024, and was compared to the predicted statewide claim rate in 2024 to calculate the rate ratio. Y=yes; N=no

⁴Number of workers' compensation accounts reporting any hours during 2017–2021

B. Compensable WMSD claims, Washington workers' compensation system, 2017–2021

Results of claim review:

Nature of injury or illness	Event or exposure	Percent of claims (n=59,423)
Musculoskeletal injuries: injuries of muscles, joints, tendons, and ligaments such as sprains, strains, or tears.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	60.2%
Musculoskeletal injuries: injuries of muscles, joints, tendons, and ligaments such as sprains, strains, or tears.	Repetitive motion.	12.0%
Musculoskeletal injuries: injuries of muscles, joints, tendons, and ligaments such as sprains, strains, or tears.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	4.4%
Musculoskeletal disorders: Carpal Tunnel Syndrome.	Repetitive motion.	3.8%
Musculoskeletal injuries: soreness, pain, or hurt in areas other than the back.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	3.4%
Musculoskeletal injuries: soreness, pain, or hurt in areas other than the back.	Repetitive motion.	2.9%
General symptoms or other conditions not classifiable.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	2.7%
Musculoskeletal injuries: back pain, hurt back.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	2.5%
Musculoskeletal disorders: rheumatism in areas other than the back.	Repetitive motion.	2.3%
Musculoskeletal disorders: rheumatism in areas other than the back.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%

Nature of injury or illness	Event or exposure	Percent of claims (n=59,423)
Musculoskeletal disorders: dorsopathies.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal injuries: dislocations.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal injuries: injuries of muscles, joints, tendons, and ligaments such as sprains, strains or tears.	Rubbed, abraded, or jarred by vibration.	<1%
General symptoms or other conditions not classifiable	Repetitive motion.	<1%
Musculoskeletal injuries: soreness, pain, or hurt in areas other than the back.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal injuries: back pain, hurt back.	Repetitive motion.	<1%
Musculoskeletal injuries: back pain, hurt back.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
General symptoms or other conditions not classifiable	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion which imposed stress or strain on the body.	<1%
Musculoskeletal injuries: injuries of muscles, joints, tendons, and ligaments such as sprains, strains or tears.	Rubbed or abraded by kneeling on a surface.	<1%
Musculoskeletal disorders: arthropathies.	Repetitive motion.	<1%
Musculoskeletal disorders: dorsopathies.	Repetitive motion.	<1%
Musculoskeletal injuries: injuries to bones, nerves, and spinal cord.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal disorders: dorsopathies.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or	<1%

Nature of injury or illness	Event or exposure	Percent of claims (n=59,423)
	strain on the body.	
Musculoskeletal injuries: dislocations.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal injuries: dislocations.	Repetitive motion.	<1%
Musculoskeletal injuries: back pain, hurt back.	Rubbed, abraded, or jarred by vibration.	<1%
Musculoskeletal disorders: bursitis.	Repetitive motion.	<1%
Musculoskeletal injuries: soreness, pain, or hurt in areas other than the back.	Rubbed, abraded, or jarred by vibration.	<1%
Musculoskeletal injuries: soreness, pain, or hurt in areas other than the back.	Rubbed or abraded by kneeling on a surface.	<1%
Musculoskeletal disorders: rheumatism in areas other than the back.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal disorders: bursitis.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal disorders: bursitis.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal disorders: arthropathies.	Overexertion in lifting, pulling, pushing, turning, wielding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal disorders: bursitis.	Rubbed or abraded by kneeling on a surface.	<1%
Musculoskeletal disorders: disorders of the peripheral nervous system not including Carpal Tunnel Syndrome.	Repetitive motion.	<1%
Musculoskeletal disorders: dorsopathies.	Rubbed, abraded, or jarred by vibration.	<1%
Musculoskeletal disorders: rheumatism in areas other than the back.	Rubbed or abraded by kneeling on a surface.	<1%
General symptoms or other conditions not classifiable	Rubbed, abraded, or jarred by vibration.	<1%

Nature of injury or illness	Event or exposure	Percent of claims (n=59,423)
General symptoms or other conditions not classifiable	Rubbed or abraded by kneeling on a surface.	<1%
Musculoskeletal disorders: Carpal Tunnel Syndrome.	Overexertion in lifting, pulling, pushing, turning, welding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal injuries: injuries to bones, nerves, and spinal cord.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal disorders: arthropathies.	Bodily reaction from bending, climbing, crawling, twisting, prolonged sitting or standing, or other single incidents of free bodily motion that imposed stress or strain on the body.	<1%
Musculoskeletal injuries: dislocations.	Rubbed, abraded, or jarred by vibration.	<1%
Musculoskeletal disorders: arthropathies.	Rubbed or abraded by kneeling on a surface.	<1%
Musculoskeletal disorders: disorders of the peripheral nervous system not including Carpal Tunnel Syndrome.	Overexertion in lifting, pulling, pushing, turning, welding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal disorders: osteopathies, chondropathies, and acquired deformities.	Repetitive motion.	<1%
Musculoskeletal injuries: injuries to bones, nerves, and spinal cord.	Repetitive motion.	<1%
Musculoskeletal injuries: injuries to bones, nerves, and spinal cord.	Rubbed, abraded, or jarred by vibration.	<1%
Musculoskeletal disorders: osteopathies, chondropathies, and acquired deformities.	Overexertion in lifting, pulling, pushing, turning, welding, holding, carrying, throwing, or other excessive physical effort directed at the source of the injury/illness.	<1%
Musculoskeletal disorders: rheumatism in areas other than the back.	Rubbed, abraded, or jarred by vibration.	<1%
TOTAL		100%