

Alberta Cities Safety Council Meeting December 5, 2023 via Teams

Facilitator: Shannon Thomas, AMHSA Program Evaluation Manager 10:00 am - 3:00 pm







Solutions



Advocacy & Representation







ACSC December 2023





Agenda

- 9:45 10:00 Check-in, coffee
- 10:00 10:10 Call to order, virtual & in-person housekeeping, introductions
- 10:10 10:15 Health and Safety Moment
- 10:15 10:45 WCB Update Sanjeev Bhagrath
- 10:45 11:00 Partnerships Update
- 11:00 11:10 Coffee Break
- 11:10 11:25 AMHSA Auditing Update Shannon Thomas
- 11:25 12:15 AMHSA Update Olana Todoruk
- 12:15 1:15 Lunch Break
- 1:15 2:45 Member Roundtable incidents, innovations, audits, claims, trends, etc.
- 2:45 Next Meeting Discussion and Adjournment

ACSC December 2023





Virtual Housekeeping

Introductions



Health and Safety Moment





OHS Emerging Issues 2022: Overhead Power-line Contact with Excavators

Alberta OHS November 21, 2022

PDF

- Trending PSI
- Seriousness
- Who affected
- Industries affected
- Risk factors
- Hazard mitigations
- Risk assessment
- OHS Resources





Impairment in the Workplace: OHS information for Workers and Employers

OHS eNews - Dec 3 (updated August 2023)

- Understanding Impairment
- Responsibilities under Alberta's OHS Legislation
- Best Practices
- Resources

COFFEE BREAK



Member Access to 26 AMHSA Health | Safety | Environment collected CSA Standards AMH **APR 18** Ergonomics Coaching & MSI Prevention NIN(O) MSI Prevention for Facilities, Parks, and Recreation Employees TELUS Health CALGARY Supported by funding from AMHSA the Government of Alberta Health | Safety | Environmen **Rural First Responder Mental Health** Free PTSI Prevention Training and Resources

Alberta's Updated OHS Code

Updated versions of the Occupational Health and Safety Code (effective March 31, 2023) are now available to download or purchase from Alberta King's Printer

AMHSA Discussion Forums

Join the Conversation www.forum.amhsa.net

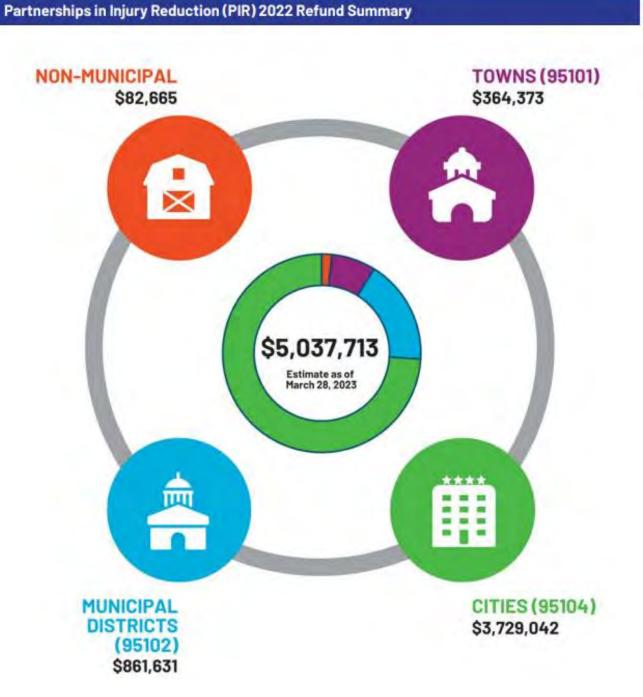
AMHSA COR Auditing





PIR Participation

2022 Refund Summary



AMHSA Auditing Update





External peer audit process cooperation

Member auditing larger employer City of Leduc (Rhonda) – City of Red Deer

Volunteers City of Airdrie assisted City of Leduc (Shawn)

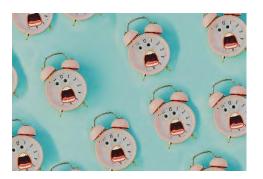


AMHSA Auditing Update

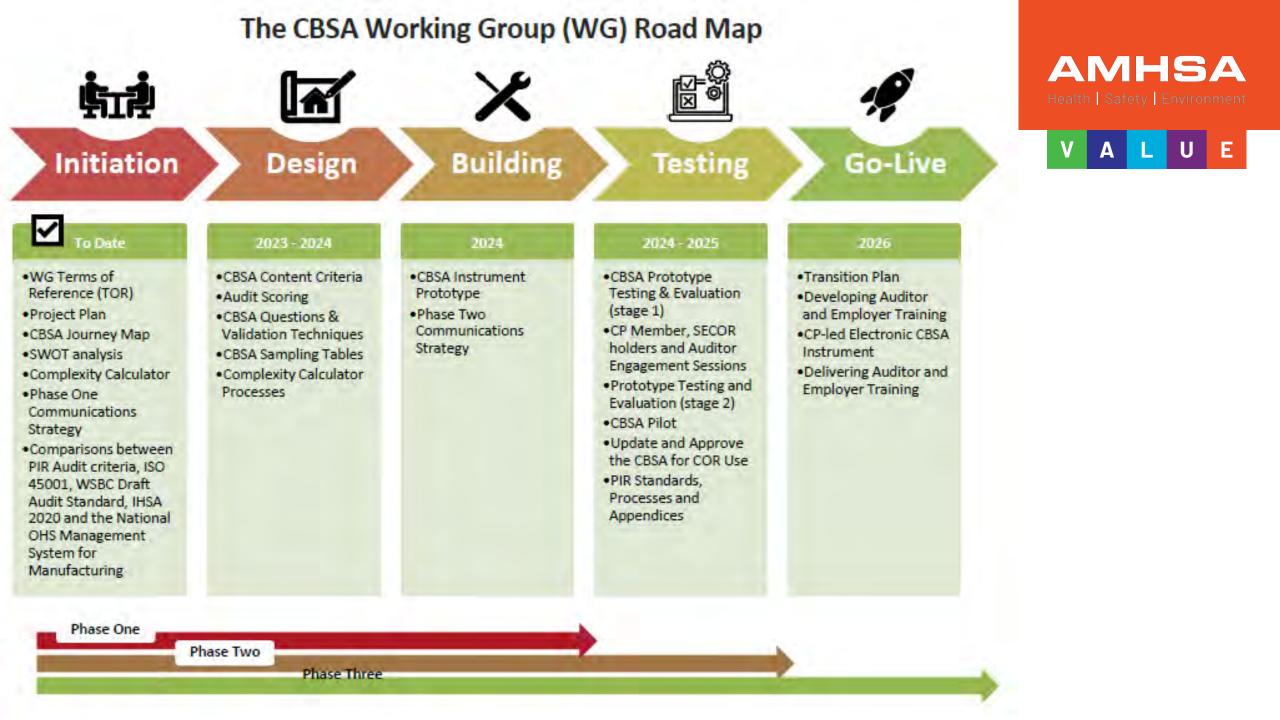




2023 TIMELINES – Quality Assurance



- COR Certification: 2 weeks
- COR Maintenance: 4 weeks
- Auditor Qualification: 5 weeks
- Revisions: 2-3 days.
 - Remember 90-day deadline overall regardless of number of rounds of revisions are required



Complexity-Based Scalable Audit





WHAT'S NEXT?

- ✓ Information sheet communication via Auditor Update (included FAQs) – October 2023
- ✓ Prototype audit tool March 2024
- ✓ COR-holder and auditor engagement May July 2024
- ✓ Ultimate goal: launch **2026** (training, transition to new tool)

Auditor Updates





COR & Auditing

Audit News

About PIR & COR

Audit Tools & Resources

Audits & Municipal Council Information

Consultant Auditors

ISO 45001 Training

PHS Audit

Subscribe

AUDITOR UPDATE ARCHIVE

Please note that contact information on archived

2023	2022
• January	• January
 July October 	MarchJune
- October	 September
	• Dec - Council
	Update
	December

Upcoming 2024 Training





Health and Safety Management Systems

February 6,7 March 5,6

Health and Safety Auditing

February 20, 21 March 19, 20

Audit Refresher

February 8 April 11 Email audits@amhsa.net to register!

2024 Changes





Training

- PHS supplemental training for HSMS and HS Auditing (online)
- Developing extended HS Auditing course to 3 full days of training for new auditors – implementation in 2025

Process

• Approval of sampling plans in advance of auditing will be mandatory in 2024

Watch Auditor Updates for details!

AMHSA Auditing Update





Questions or need support while auditing?

- ✓ <u>audits@amhsa.net</u>
- ✓ <u>Shannon@amhsa.net</u> 780 691 6449
- ✓ <u>Jessica@amhsa.net</u> 780 965 4601

AMHSA Updates

Olana Todoruk Director of Learning and Assurance





The Working Mind First Responder Grant

Expanded Eligibility....

- Supports first responders living with or at risk of post-traumatic stress injuries (PTSI)
- PTSI is a non-clinical term encompassing a range of mental health injuries, including some operational stress injuries (OSI), clinically diagnosed PTSD, anxiety & depression.
 - Fire Services
 - Emergency Health Care Workers
 - Law Enforcement
 - Paramedical Sector
 - Indigenous First Responders
 - Family Members



AMHSA

Email <u>safety@amhsa.net</u> to register!

Cognitive-Psychosocial Job Demands Analysis

Background

Many WCB processes still focus on physical injury/illness.

• Physical Demands Analysis

NEW Cognitive-Psychosocial Job Demands Analysis workshop

Change in process was required given psychological injury claim:

- Increased number, duration, claim costs, etc.
- Challenges Return to Work (RTW), Traumatic Psychological Injury (TPI) wait times, etc.
- Impacts Minimum staffing levels (first responders)



Cognitive-Psychosocial JDA





Psychological Injury Working Group (PIWG)

The WCB-Alberta / Industry Task Force (ITF) Association have worked together to establish a pilot of a new Cognitive-Psychosocial Job Demands Analysis (JDA).

- For ITF members only, but extended to municipalities through AMHSA
- **New** psychological injury claims only:
 - *On a case by case basis, the claim owner may also reach out on other active claims where a Cognitive-Psychosocial JDA could be helpful in the RTW process.
 - \checkmark Complete fillable PDF and submit it with claim or to the claim owner.
 - \checkmark Please direct any claim specific questions to the WCB Adjudicator.

Cognitive-Psychosocial JDA





Resources

• Cognitive-Psychosocial JDA - Fillable PDF

• Cognitive-Psychosocial JDA – Sample PDF



EDMONTON, AB T5J 285

FAX: 780-427-5863

1-800-661-1993

C1447 Cognitive-Psychosocial Job Demand Analysis

Employer

			Claim Numb	er: 123-4567	
Worker's Surname: Mann	First Name: Otto			Initial:	
Job Title: Transit Operator	Hours per shift: 7.5 - 9 h	Hours per shift: 7.5 - 9 hours/shift		Shifts per week/shift rotation: 35 hours/week	
Company Name: City of Champions		Comple	ted by: Joe Quim	nbey	
Employer Contact: Joe Quimbey		Phone	Number: 780-555	-5555	

Tasks	Date of Accident Job Demand Intensity	Date of Accident Job Demand Frequency	Comments (brief description of job tasks)
Short term memory and recall The ability to recall and retrieve, on demand, information that has been previously learned.	 Not Required Low Demand – Minimal need to remember and recall information that is applied to work tasks and/or there are clear processes/instructions available to carry out work tasks. Moderate Demand – Recall information that is harder to remember because it is not often used or there are time constraints within which to recall the information. High Demand – Recall many different pieces of detailed information and/or sequences which may have to be recalled in demanding situations (e.g. tight timeline pressures or being out of control). 	Not Required Rare Cccasional Frequent Constant Not Daily	-Recalling route information -Bus schedules -Timing points -Pre/post inspection protocol
Attention to Detail The ability to perform work tasks that require significant attention or understanding.	 Not Required Low Demand – Minimal attention or concentration is required and this is not at an intense level. Errors made would not create serious difficulty. Moderate Demand – Significant attention or concentration is required for many tasks. Errors made would not impact safety of others. High Demand – Intense level of attention or concentration is required. Errors made would have detrimental consequences (e.g. safety of others). 	 Not Required Rare Occasional Frequent Constant Not Daily 	-Safe driving and operation of the bus -Awareness of road conditions and navigating traffic.
Completing multiple tasks The ability to perform and/or monitor more than one task or function at a time, and identify when tasks or functions require attention.	 Not Required Low Demand – Completion of one task at a time with few interruptions until completion or until further direction from a supervisor. Moderate Demand – Completion of multiple tasks at a time with need to exercise some time management and judgement to determine priorities. High Demand – Completion of multiple, concurrent tasks with need to exercise a high degree of time management and judgement to determine when to attend to each task. 	Constant Not Daily	-Driving -Radio and ipad communication -Taking payments -Issuing transfers -Some responsibility for completing multiple tasks but clear guidance or cues about when to perform each task

Is the date of accident position considered *safety-sensitive and/or *risk sensitive and/or *decision critical?

Set State in the set of the se

□ <u>*Risk sensitive</u> – a position or class of positions identified by the employer normally remote from a work site but that has authority to direct safety-sensitive employees or make potentially high-consequence decisions within a hazardous work site. They include supervisors, technical experts, etc. who reside off-site but make safety-critical decisions and direct on-site employees conducting potentially dangerous tasks in potentially dangerous work environments. Performance limitations (e.g. due to substance use) could result in an incident or near miss as described above.

Decision critical – a lapse in memory, attention, concentration may impact effective performance, productivity, financial/legal reputation, and liability of the workplace organization. This may include but is not limited to risks to property damage, digital information loss, proprietary breaches, legal liability, delayed completion of time sensitive job tasks or economic loss. Occupations may include corporate executives, supervisors/managers, lawyers, schoolteachers, information technology workers.

☑ Driving

- Working with and around equipment (Example: fork lift, bulldozer, crane, tractor, etc.)
- Tool usage affecting safety of self and/or others (Example: knife, grinders, torch, etc.)
- □ Working with animals
- □ Climbing or working at heights
- Providing direct care to persons
- Tasks including decision making which would affect another individual
- □ Tasks in which errors made would have negative consequences including privacy of information/confidentiality, legal and/ or financial implications
- □ Other (Specify):

ADDENDUM – FREQUENCY KEY

Frequency	% of workday	Duration of a 4-hour workday	Duration of an 8-hour workday	Duration of a 12- hour workday
Not Required (N/R)	0%	0	0	0
Rare	1 - 5%	1 to 12 minutes	< 25 minutes per day	1 to 36 minutes per day
Occasional	6 - 33%	13 minutes to 1 hour 19 minutes per day	25 minutes to 2 hours 40 minutes per day	37 minutes to 3 hours 58 minutes per day
Frequent	34 - 66%	1 hour 20 minutes to 2 hours 38 minutes per day	2 hours 41 minutes to 5.5 hours per day	3 hours 59 minutes to 7 hours 55 minutes per day
Constant	67 - 100%	2 hours 39 minutes to 4 hours per day	5.51 hours to 8 hours per day	7 hours 56 minutes to 12 hours per day
Not Daily	Tasks not required on a daily basis	N/A	N/A	N/A

Source: Workers' Compensation Board – Alberta Recommendations





Aquatic H&S Awareness Campaign Background





 Incident – Lifeguard seriously injured – Fell into an empty pool basin

 Creative Sentence – Aquatic Health & Safety Awareness Campaign

Aquatic H&S Awareness Campaign Objectives

3: AMHSA Vision/Mandate

Association (HSA) to deliver

employer/worker injury/illness

as a Health and Safety

prevention education.

Support AMHSA's vision/mandate

5: OHS Education Barriers

Remove employer barriers to OHS education by providing aquatic health and safety awareness resources free of charge.

7: Outreach

Provide platforms and avenues of connection to separate audiences through working groups, webinars, and free OHS resources.

AMHSA

2: OHS Awareness

1: OHS Prevention Initiative

Support GoA Prevention Initiative

for Alberta's Occupational Health

and Safety System, inclusive of

protection of vulnerable worker

populations.

Raise awareness of OHS worker rights and supervisor responsibilities.

4: Aquatic Certification

Bring awareness to aquatic safety best practices such as the Aquatic Safety Operator and Safety Recreation Facility Operator Certification program.

6: Subject Matter Experts

Provide access to SME including fall protection engineers, municipal employers, worker representatives, and recreation associations.







- Working Group
- Draft Material: Posters, Safety Talks
- Marketing Plan



Municipal Workers



Health | Safety | Environment



A DIVISION OF FLEXIBLE LIFELINE SYSTEMS

Aquatic H&S Awareness Campaign

Subject Matter Experts

Municipal Employers

Website & Live + Recorded Webinars

📞 1.800.267.9764 🛛 safety@amhsa.net

ome Initiatives 🛩 Shop Upcoming Webinars Contact Us



Surface to Surface

Slips are commonly related to surface conditions that are relatively even, but slips can occur when the walking surface is wet, icy, oily, or if a mat has loose traction from underneath it. These conditions do not allow the foot to be securely placed on ground/walking surface to take the next step.

A trip from walking may occur when a foot is caught on something that is preventing it from moving in the intended direction. When a foot gets caught on an uneven surface or on something like the edge of a mat, it causes body to continue to move in the initial direction but without the "caught" foot to help keep the body upright.

Falls can be the result of these slips and trips, which can lead to an injury.

Download resources

Poster | Safety Talk



Elevated Surfaces

Underestimating the severity of fall is common, but falls are the cause of many workplace lost time claims, and a fall from, as little as one metre, can result in serious injury or death.

Falls are often the result of a combination of a slip, loss of balance, and misjudging the height of a surface or step. Therefore, identifying and addressing these elevated surface conditions will help build a control measures that supports in preventing injury.

Download resources

Poster | Safety Talk



Empty Pool Basin

Having an empty pool basin can be a reoccurring condition on the work site due to regular maintenance. An empty pool basin with a fall hazard of three vertical metres or more requires a Fall Protection Plan if workers are not protected by guardrails. Although not having guardrails may initiate creating and adhering to the Fall Protection Plan, the employer and supervisor must ensure workers are protected from the fall hazard.

Understanding when a Fall Protection Plan is required is fundamental.

Download resources

Poster | Safety Talk



Diving Boards

Workers who inspect and maintain diving boards with a fall hazard of three metres or more will require a Fall Protection Plan as guardrails are not an option because of the amount of space required is limited. Although the landing surface of the fall may be water or a solid surface the vertical distance of three metres or more requires a Fall Protection Plan.

Knowing the elements to create an effective Fall Protection Plan will provide clarity to the effected employees and parties at the work site.

Download resources

Poster | Safety Talk



AMHSA

Pool Slides

Workers who inspect and maintain water play structures such as slides, may be exposed to a fall hazard of three metres or more which will require a Fall Protection Plan as guardrails are not an option because of the amount of space required is limited.

If the fall hazard is less than three meters and there is not an unusual possibility of an injury, if the injury may be worse than an injury from landing on a solid, flat surface, a hazard assessment is still required and the identified slips, trips and falls hazards will call for control measures to prevent injury.

Falls are often the result of a combine to oft a slip, loss of balance, and misjudgine the pht of a surface or step. Therefore, ide the pht of a addressing these elevated surface of dictors will help build a control measures that supports in preventing injury.

Although the landing surface of the fall may be water or a solid surface the vertical distance of three metres or more requires a Fall Protection Plan.

2024 Deliverables and Your Contribuition



Communication of Campaign Launch

- Use email signatures
- Share AMHSA's Newsletter containing Campaign information
- Share Campaign information on social media

*Campaign information: website, posters, safety talks, webinar (live and recorded)



Municipal Compliance Snapshot

(Jan 1, 2023 to Oct 3, 2023)

Inspections & Re-Inspections Conducted				
WCB Industry Code	Inspection	Re-inspection	Total (All)	
95100 Villages	1	1	2	
95101 Towns	25	21	46	
95103 Municipal District	13	2	15	
95104 City	146	28	174	
Total (All)	185	52	237	

Orders Issued to Villages, Towns, Municipa	al Districts, and Cities
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WCB Industry Code	Order	Stop Work Order	Total (All)
95100 Villages	0	0	0
95101 Towns	31	1	32
95103 Municipal District	6	0	6
95104 City	51	1	52
Total (All)	88	2	90



(Jan 1, 2023 to Oct 3, 2023)

WCB Industry Code - 95104 Cities (Table 1)				
Legislation	Order	Stop Work	Grand Total	
Act 10 General Obligations - Obligations of Prime Contractors	1		1	
Act 3 General Obligations - Obligations of Employers	2		2	
Act 33 Compliance & Enforcement - Serious Injuries, Illnesses, Incidents & Worker Exposure to Radiation	3		3	
Code 12 185 General Safety Precautions - Housekeeping	1		1	
Code 12 186 General Safety Precautions - Lighting	1		1	
Code 13 197 Joint Health & Safety Committees & HSR - Terms of Ref	2		2	
Code 13 198 Joint Health & Safety Committees & HSR - Special Meetings of Committees	1		1	
Code 14 210 Lifting & Handling Loads - Manual Handling Hazards	1		1	
Code 14 211.1 Lifting & Handling Loads - Training to Prevent MSI	1		1	
Code 15 212 Managing the Control of Hazardous Energy - Isolation Machinery, Equipment or Powered Mobile Equipment	1		1	
Orders 1 to 10 - Continued on Table 2	14	0	14	



(Jan 1, 2023 to Oct 3, 2023)

WCB Industry Code - 95104 Cities (Table 2)					
Legislation	Order	Stop Work	Grand Total		
Code 15 214 Managing the Control of Hazardous Energy - Assigning Personal Locks	1		1		
Code 16 221 Noise – Noise Management	3		3		
Code 16 222 Noise - Hearing Protection	1		1		
Code 18 245 Personal Protective Equipment - RPE - Code of Practice	2		2		
Code 18 250 Personal Protective Equipment - Respiratory Protective Equipment - Effective Facial Seal	2		2		
Code 19 258 Powered Mobile Equipment - Dangerous Movement	1		1		
Code 2 7 Hazard Assessment, Elim & Control - Hazard Assessment	8		8		
Code 2 8 Hazard Assessment, Elim & Control - Worker Participation	1		1		
Code 22 310 Safeguards - Safeguards	2		2		
Code 24 361 Toilets and Washing Facilities - Condition of Facilities	1		1		
Code 27 390.7 Violence & Harassment - Review of Plans	1		1		
Orders 11 to 20 - Continued on Table 3	23	0	23		



(Jan 1, 2023 to Oct 3, 2023)

WCB Industry Code - 95104 Cities (Table 3)				
Legislation	Order	Stop Work	Grand Total	
Code 27 391 Violence & Harassment - Training of Workers	1		1	
Code 28 394 Working Alone - Precautions Required	1		1	
Code 29 397 WHMIS - Training	2		2	
Code 29 398 WHMIS - Label Required	1		1	
Code 29 407 WHMIS - Availability of Safety Data Sheet	2		2	
Code 3 12 Specifications & Certifications - Following Specifications	1		1	
Code 4 21 Chemical Hazards, Biological Hazards & Harmful Substances - Potential Worker Exposure	2		2	
Code 4 24 Chemical Hazards, Biological Hazards & Harmful Substances - General Requirements - Emergency Baths, Showers, Eye Wash Equip	1		1	
Code 4 25 Chemical Hazards, Biological Hazards & Harmful Substances - General Requirements - Prohibited Activities	1		1	
Code 5 44 Confined Spaces - Code of Practice	1		1	
Orders 21 to 30 - Continued on Table 4	13	0	13	



(Jan 1, 2023 to Oct 3, 2023)

WCB Industry Code - 95104 Cities (Table 4)				
Legislation	Order	Stop Work	Grand Total	
Code 7 115 Emergency Preparedness & Response - Emergency Response Plan	1		1	
Code 12 189 General Safety Precautions - Securing Equipment & Materials		1	1	
Orders 31 to 32 - Continued on Table 5	1	1	2	

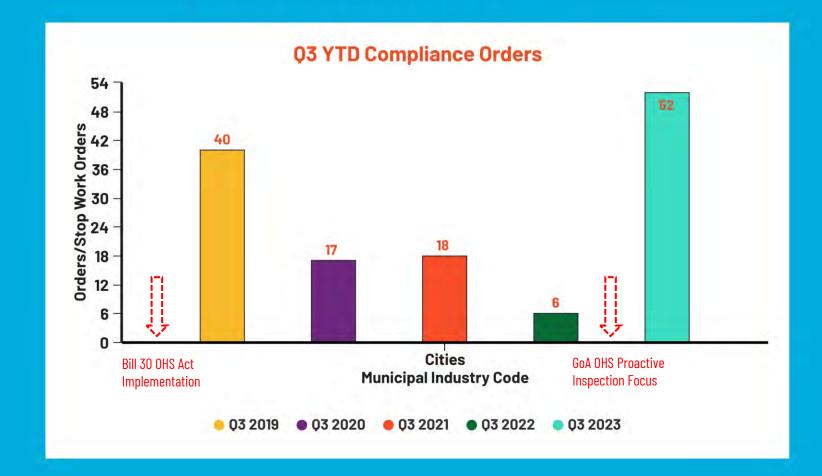


(Jan 1, 2023 to Oct 3, 2023)

WCB Industry Code - 95104 Cities (Table 5)				
Legislation	Order	Stop Work	Total (All)	
Orders 1 to 10 (Table 1) Subtotal	14		14	
Orders 11 to 20 (Table 2) Subtotal	23		23	
Orders 21 to 30 (Table 3) Subtotal	13		13	
Orders 31 to 32 (Table 34) Subtotal		1	2	
Total (All)	51	1	52	

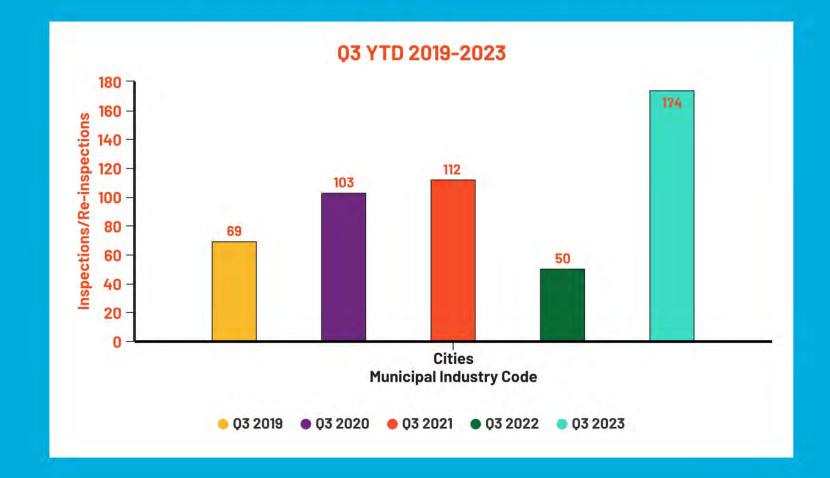


Q3 YTD Orders Issued Snapshot





Q3 YTD Inspections Snapshot



95104 Cities - OHS Compliance Trends





Strategic Partnerships

Product and Service Value Generation

- My Workplace Health
- Ember Experience
- Pacific Coast University
- Mental Health Commission of Canada
- Ergonomics Wellness Innovation (EWI)
- RED The Agency
- Northern Alberta Institute of Technology
- CSA Group
- BIS Safety Software
- University of New Brunswick
- Devco





A LEADING POLYTECHNIC COMMITTED TO YOUR SUCCESS













OnDemand Access to CSA Standards AMHSA Members Only

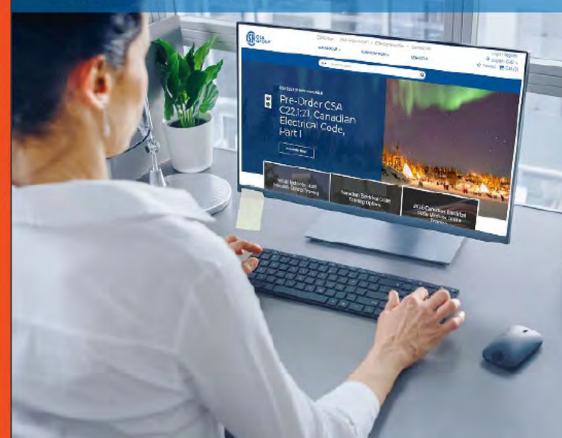






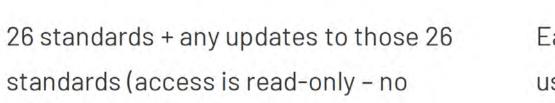
CSA OnDemand[™] Subscription View Access

AMHSA Member Quick User Guide



OnDemand Access to CSA Standards





printing or downloads)

•

- AMHSA's access code will be valid for 1 year from program launch (a new code will be provided in 2024)
- Our code is good for 100 admin memberships (1 use per municipality)

Each admin account can assign up to 10 user accounts with access to the standards

- 1 admin (with access) + 9 users (with access)
- 1 admin (no access) + 10 users (with access)

CSA Association Discounts





- A no cost partnership that allows AMHSA to offer discounts for CSA training, resources, and supplementary materials
- These discount codes have unlimited uses and can be provided to any member or nonmember.

Product	Discount	Coupon Code	
Online Course	25%	AMHSAWT25	
Public/Virtual Course	15%	AMHSASE15	
Handbook	20%	AMHSAHB20	
Virtual/In-Person Onsite	15%	AMHSAS015	

Contacts





- More information on access, discount codes, initial access, basic account assistance:
 - Contact AMHSA by phone or email
 - 587-952-2268
 - safety@amhsa.net

- Technical assistance, account changes, website issues, changing account access:
 - o <u>sales@csagroup.org</u>

Website chat function 1-800-463-6727

Mon-Fri, 8;00 am - 5:30 pm EST

CSA Coordinator, Sophia Jaffer
 <u>Sophia.jaffer@csagroup.org</u>
 514-428-2441

PHS eLearning Certificate(s) - Leadership

<u>Leaders Certificate – 5 Courses</u>

- Psychological Health and Safety Management
- Be a Psychologically Safe Leader
- Enhance Your Emotional Intelligence and Resilience
- Managing Mental Health Issues in Your Workplace
- Creating a Civil and Respectful Workplace







PHS eLearning Certificate(s) - Worker





<u>Workers Certificate – 4 Courses</u>

- Staying Mentally Healthy & Resilient
- Civility and Respect in Communication and Conflict
- Common Mental Health Issues
- Finding Work-Life Harmony



Member Advocacy / Representation





- COR Working Group Industry Consultation
- **WCB-Alberta** Policy Consultation Advisory Group (PCAG)
- **ITF Association** Psychological Injury Working Group (PIWG)
- **Conference Board of Canada** Council for Safe Workplaces (CSW)
- **GoA** Injury Prevention Working Groups





Temporary Traffic Accommodation

- Relevant legislation
- Industry standards
- Traffic Accommodation Strategy (TAS)

Supporting Psychologically Safe Workplaces

Powered By:





SPARK Supporting Psychologically Safe Spaces

<u>SPARK</u> was designed to meet the needs of municipalities



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LUNCH BREAK







Alberta's Updated OHS Code

Updated versions of the Occupational Health and Safety Code (effective March 31, 2023) are now available to download or purchase from Alberta King's Printer









MEMBER REPORT

FORM

Municipality:	Mu	nicipality	Date:	Date
Contact:	Coi	ntact	Phone:	Phone
Reporting Peri	od:	Reporting Period		
LTC in Period:		LTC in Period	LT Frequency:	LT Frequency
LT Severity:		LT Severity	WCB Rate:	WCB Rate

- Significant incidents
- Trends
- Projects/initiatives
- Innovations
- Other

Potential changes:

- Leading Indicators
- Other?

Member Roundtable





Next Meeting

Date: May 28, 2024 Format: Hybrid

Host? H&S Moment Volunteers? Guest speakers/topics?





ANHSA Health | Safety | Environment

amhsa.net 1-800-267-9764

Calgary:

Alberta Municipal Health and Safety Association #21, 5720 Silver Springs Boulevard NW Calgary, Alberta, T3B 4N7 Phone: 587.952.2268

Edmonton:

Alberta Municipal Health and Safety Association #176, 2755 Broadmoor Blvd. Sherwood Park, Alberta, T8H 2W7 Phone: 780.417.3900

OHS Emerging Issues 2022: Overhead power-line contact with excavators

Alberta Occupational Health and Safety

November 21, 2022





Classification: Protected A

Issue: Overhead power-line contact with excavators

- Through weekly potentially serious incident (PSI)) trending, OHS Surveillance identified:
 - Within a year, five PSIs among four employers were reported where excavator booms contacted overhead power lines.
- All in the mobile equipment operations industry (40604).
- Occurred in the spring and summer months
- OHS Code Part 17 Overhead power lines s.225, 226, 227
- Workers or equipment operating within **seven metres** of overhead power lines must contact utilities company
- Employers don't always get clearance approval paperwork from utility company



How serious is this issue?

Research (USA data)

- 2011-2020:
 - Almost half of all fatal and nearly a quarter of work-related nonfatal electrical injuries occurred in construction, even though the industry employs only 7% of the U.S. workforce.
 - More than one-third of fatal electrical injuries were caused by direct exposure to voltage greater than 220 volts (ex. overhead power lines & industrial transformers
- 1997–2003, the use of mobile cranes represented over 84% of crane/derrick fatalities.
 - "Electrocutions" ranked second as a proximal cause of fatalities, all involved mobile cranes and were the result of a crane's boom and/or wire rope getting extremely close to or touching high voltage lines.
- 1992 to 2007, 43% of all occupational electrical fatalities can be attributed to contact with overhead power lines.
 - Worker contact with overhead power lines was involved in only 2% of nonfatal electrical accidents; accidents involving
 power lines are far more likely to kill rather than injure the worker.



How serious is this issue?

Alberta Surveillance

- Workers' Compensation Board (WCB) data:
 - No injury claims (2017-2021) or fatality claims (1990-2021)
- PSIs (2019-2022):
 - 24 PSIs
 - 12% of all PSIs in this industry
 - 11 (46%) involved contact by an industrial vehicle (powered)
 - 2 workers injured

- DASH data*:
 - Serious incidents (2011-2022)
 - 1 (<1%) fatal incident contact with a metal pole from a work platform
 - 1 hospitalization
 - 3 explosions
 - 14 PSI follow-up inspections
 - Immediate dangers (2012-2022)
 - 7 (2%) immediate danger complaints included overhead power lines as a topic
 - Orders (2012-2022)
 - 21 (1%) orders in the industry were for Part 17: Overhead Power Lines
 - 8 stop work orders under OHS Code s.225: Safe limit of approach distances
 - Complaints (2012-2022)
 - 21 (<2%) complaints included overhead power lines as a topic

* Data and statistics hub - Alberta OHS compliance information management system

Who is affected?

Research (USA data)

- Occupations involved in electrical fatalities:
 - 44% Construction and Extraction
 - 20% Installation, Maintenance, and Repair
 - 13% Building and Grounds Cleaning and Maintenance
 - 6% Transportations and Material Moving
 - 5% Management
 - 3% Farming, Fishing, and Forestry
- In 2020 in USA, there were 2,220 nonfatal electrical injuries involving days away from work.
 - This was a 17% increase over 2019 and a return to the same levels as 2017.
 - This was 0.19% of all nonfatal injuries involving days away from work.

Alberta Surveillance

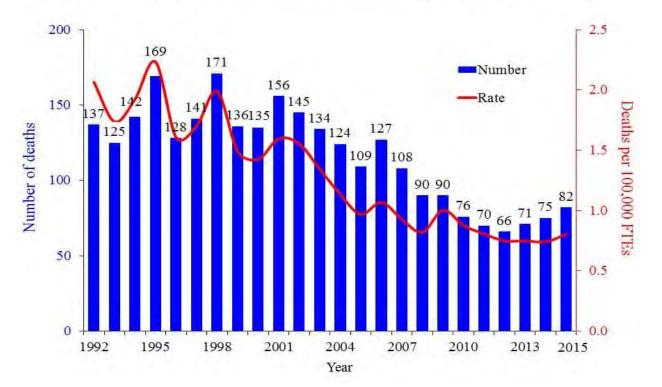
- PSIs (2019-2022):
 - Top employer industries with contact with overhead power lines

Industry	Count	%
Mobile equipment operation	21	30
Cities	4	6
Utilities - electric and natural gas	4	6
Trucking service - general	3	4
Trucking service - oilfield	3	4

- Small number of workers injured
 - 2 workers injured
- Mostly medium and large employers

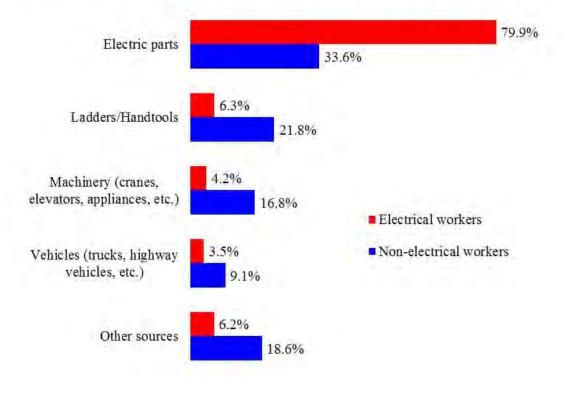
Who is affected?

Research (USA data)



46a. Number and rate of electrocution deaths in construction, 1992-2015

46c. Primary source of electrocution deaths in construction, electrical workers versus non-electrical workers, 2011-2015 total



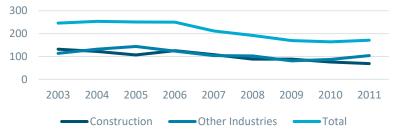
6 Classification: Protected A

How are industries affected?

Research

- US data:
 - The mining industry had the highest rate of fatal electrical injuries (0.8 / 100,000) followed by the construction industry (0.6 / 100,000) in 2020. All industries had 0.1 fatalities per 100,000 workers.
 - Industries with the leading number of nonfatal electrical injuries:
 - Construction: 20%
 - Accommodation and Food Services: 22%
 - Wholesale Trade: 17%
 - Manufacturing: 14%

Number of Electrical Fatalities



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• DASH assignment topics identified as:

Overhead power lines

- Mobile equipment operation industry
 - 51 employers
- All other industries
 - 73 industries
 - 280 employers
- Both Overhead power lines and powered mobile equipment
 - Mobile equipment operation industry
 - 10 employers
 - All other industries
 - 32 industries
 - 67 employers

What are the risk factors?

Research

- MSHA accident data for overhead line contacts in the mining industry from 1980 to 1997 reveal that in 57% of the cases, personnel were unaware of the line contact until after one or more workers touched either the equipment or a hoisted load and were injured.
- A survey in the USA construction industry in 1993:
 - Training employees is the most common method contractors use to prevent worker/equipment contact with overhead power lines.
 - When contractors were asked about how they would address a situation where power lines crossed a portion of the site, the most common preferred method was installing line warning devices to the power lines such as tapes, flags, and orange balls.

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PSI records show:

Top sources associated with contact with overhead power lines for all industries (n=89)

Sources of incident	Count	%
Industrial vehicle - powered	28	31
Motor vehicle	10	11
Crane-mobile, truck, rail mounted	10	11
Construction, log, mine machinery	9	10

- Contributed factors from investigation findings (PSIs and serious incidents):
 - **Procedures not followed** when moving excavator to site.
 - Lack of contact with **utility** company prior to starting work.
 - **Inadequately trained** spotter walked equipment to location.
 - No spotter when parking equipment.
 - Spotter did not notify the operator of proximity to overhead power line.
 - No overhead power line **warning signs or lack of signage**.
 - Mechanical failure of equipment.

What are hazard mitigations?

- Identify overhead power lines by consulting the utility company
- Maintain minimum distance from energized overhead power lines.
- De-energize lines.
- Use and train an observer (spotter) to warn the operator of impending contact.
- Use of warning signs for presence of overhead power lines.
- Use barriers to prevent physical contact with an energized line.
- Use proximity warning devices (mount onto machines to detect electric fields that surround an overhead power line).
 - Despite being available for many years, these devices have found limited acceptance, due to technical and operational limitations.
- Use drones to monitor between cranes and lines.
- Use of an insulating load link in the hoisting line of a crane, providing electrical insulation between the load and the crane, including the hoist rope.
 - High cost
 - Surface contamination and moisture can reduce a load link's insulation resistance.
 - Workers in contact with parts of the crane other than the isolated load would be unprotected by a load link.

Risk assessment

- Several industries affected (mobile equipment operations, utilities, construction, trucking, oil and gas, and cities have reported incidents with overhead power line contact)
- No WCB claims or fatalities within mobile equipment operations. One serious incident fatality in 2021.
- Severity of injury/illness is high
 - Serious incidents two resulted in injuries; one fatality
 - One PSI two injured workers
- Potential for injury/illness is high
 - Electrocution
 - Shock
 - Burns
- Frequency of hazard and exposure is moderate
 - Average of 3 PSIs reported per year
- Risk factors are known and well documented
- Controls are identified and effective (engineering and policy)





- <u>A handbook for Alberta employers and workers: Hazard Assessment and Control</u>
- Guide to OHS: Workers



Questions or comments?

Contact the OHS Surveillance program: OHSsurveillance@gov.ab.ca

