CALGARY SAFETY CONSULTANTS

Risk Assessment Worksheet

Rate initial risk, control it, confirm residual risk

How to use this worksheet

Use this worksheet to rate the risk of the hazards in one job, task, area or project with a team, using a 5 x 5 risk matrix. It works for a formal hazard assessment, a job hazard analysis or a review after an incident or change. Fill it in on screen or print it for the rating session.

- **Part A** records what is being assessed. **Part B** records the team, and the calibration you do before rating.
- **Part C** holds the likelihood and severity definitions. Keep the samples or add your own examples, and use the same definitions every time.
- **Part D** is the matrix with its bands, actions and approval levels. **Part E** rates each hazard: initial risk first, then controls chosen by the hierarchy of controls, then residual risk and a decision.
- **Part F** is the team sign-off and the dissent record. The last page is a completed worked example.
- Never give a hazard credit for a control that isn't in place. If the residual risk is too high, go back up the hierarchy, stop the work or escalate.

Key terms

Term	What it means
Hazard	Anything with the potential to cause harm, such as a moving part, a chemical, a height, a vehicle or a person's behaviour.
Risk	The combination of how likely a hazard is to cause harm and how serious that harm could be.
Initial risk	Also called inherent risk: the risk of the hazard before any controls are applied.
Residual risk	The risk that remains after the selected controls are in place and working. It decides whether the work can go ahead.
Hierarchy of controls	Choosing the most effective controls first: eliminate, substitute, engineering, administrative, then personal protective equipment (PPE).
Calibration	Rating a few familiar hazards together before the session so everyone reads the levels the same way.

Part A: What is being assessed

Organization

Site, area or department

Date

Job, task or process

Assessment or JHA number

Next review date

Province, territory or federal

Session led by

Location of session

Type of assessment and reason

- ☐ Formal hazard assessment
- ☐ Job hazard analysis (JHA)
- ☐ Field-level assessment review
- ☐ Scheduled review
- ☐ After an incident or near miss
- ☐ After a change in work, equipment or materials

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Part B: Team and participants record

Risk assessment is a team job. Include workers who do the work, the supervisor, someone with specialist knowledge and the committee member or representative where you have one. Tick each person's role.

Name	Position	Worker doing job	Super-visor	Specialist	JHSC or rep	Initials
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	

Team check before rating

- ☐ At least one worker who does the job regularly is on the team.
- ☐ The supervisor who can commit to controls is present.
- ☐ Someone with specialist knowledge (maintenance, engineering, supplier, hygienist) took part or was consulted.
- ☐ The committee member or representative took part, or was given the chance to.
- ☐ Task steps, past incidents and near misses, inspection findings, SDSs and manuals are on hand.
- ☐ Everyone has the likelihood and severity definitions in Part C in front of them.

Calibration: rate two or three familiar hazards first

Each person writes down likelihood and severity privately, then the team compares. If answers are far apart, talk about why and agree on what the levels mean before rating new work.

Familiar hazard used for calibration	Lowest score	Highest score	Agreed L x S	What the team agreed

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Part C: Likelihood definitions

Likelihood is how often the harm could happen, considering how often and how long people are exposed, how many people, equipment condition and crew experience. Keep the sample wording or replace it, and add an example from your own work for each level.

Level	Sample definition	Your definition or workplace example
5 Almost certain	Expected to happen. It happens here regularly, or near misses are frequent.	
4 Likely	Will probably happen. It has happened here, or near misses are reported from time to time.	
3 Possible	Might happen. It has happened at similar workplaces and conditions here allow it.	
2 Unlikely	Could happen, but not expected. Rare in this industry.	
1 Rare	Only in exceptional circumstances. Not known here or at similar workplaces.	

Severity definitions

Severity is the realistic worst outcome, not the most common one. Include health effects such as noise, silica, chemicals and psychological harm.

Level	Sample definition	Your definition or workplace example
5 Catastrophic	Fatality, permanent total disability, or several people seriously hurt.	
4 Major	Permanent injury or illness (for example amputation, serious burn, hearing loss), or a long recovery.	
3 Moderate	Lost-time injury or illness with full recovery expected (for example simple fracture, concussion).	
2 Minor	Medical aid or modified work, recovered within days (for example stitches, mild sprain).	
1 Insignificant	First aid only, no lost time (for example small cut bandaged, brief eye irritation).	

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Part D: The 5 x 5 risk matrix, bands and actions

LIKELIHOOD	SEVERITY OF CONSEQUENCE				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
5 Almost certain	5 MOD	10 HIGH	15 HIGH	20 EXT	25 EXT
4 Likely	4 LOW	8 MOD	12 HIGH	16 HIGH	20 EXT
3 Possible	3 LOW	6 MOD	9 MOD	12 HIGH	15 HIGH
2 Unlikely	2 LOW	4 LOW	6 MOD	8 MOD	10 HIGH
1 Rare	1 LOW	2 LOW	3 LOW	4 LOW	5 MOD

Low 1 to 4
Maintain controls and monitor.

Moderate 5 to 9
Improve controls where practicable; supervisor review.

High 10 to 16
Additional controls required before work begins.

Extreme 17 to 25
Do not proceed until the risk is reduced.

Risk score = likelihood x severity. Same matrix, bands and actions as the CSC JHA template. Any severity 5 hazard gets a documented control review, whatever the score.

Who can accept the risk at each band (sample levels: change them to match your procedure and spending authority)

Band	Required action and sample approval	Your approval level
Low 1 to 4	Maintain controls and monitor. Sample: supervisor accepts.	
Moderate 5 to 9	Improve controls where practicable; supervisor review. Sample: supervisor accepts with reasons recorded; open actions get an owner and a date.	
High 10 to 16	Additional controls required before work begins. Sample: manager approves the added controls and the residual rating.	
Extreme 17 to 25	Do not proceed until the risk is reduced; stop work under way. Sample: senior manager informed; work resumes only after re-rating.	

Our acceptance rule for residual risk (tick the rules your organization uses)

- ☐ Routine work may go ahead at low residual risk with supervisor acceptance.
- ☐ Moderate residual risk is accepted only after the team confirms a stronger control isn't reasonably practicable, with reasons recorded.
- ☐ High or extreme residual risk is never accepted for routine work: go back up the hierarchy, stop the work or escalate.
- ☐ Any hazard with severity 5 gets a documented review of its controls, whatever its score.
- ☐ Controls not yet in place are tracked as corrective actions with an owner and a due date.

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Part E: Hazard rating table

Rate each hazard in order: initial risk with no controls, then the controls selected from the top of the hierarchy, then residual risk with those controls in place, then the decision. Name controls specifically: "interlocked guard on infeed", not "be careful". For more hazards, print this part again or use the free Risk Matrix Calculator (Excel).

HAZARD 1

Task or step

Hazard and realistic worst harm

1. Initial risk (before any controls) L ____ S ____ Score ____ Band ____

2. Controls selected, by hierarchy level (tick every level used)

☐ Eliminate ☐ Substitute ☐ Engineering ☐ Administrative ☐ PPE

3. Residual risk (controls in place) L ____ S ____ Score ____ Band ____

4. Decision

☐ Accepted ☐ Not accepted: go back up ☐ Work stopped ☐ Escalated

Accepted or approved by

Owner of open controls

Due date

HAZARD 2

Task or step

Hazard and realistic worst harm

1. Initial risk (before any controls) L ____ S ____ Score ____ Band ____

2. Controls selected, by hierarchy level (tick every level used)

☐ Eliminate ☐ Substitute ☐ Engineering ☐ Administrative ☐ PPE

3. Residual risk (controls in place) L ____ S ____ Score ____ Band ____

4. Decision

☐ Accepted ☐ Not accepted: go back up ☐ Work stopped ☐ Escalated

Accepted or approved by

Owner of open controls

Due date

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

HAZARD 3

Task or step

Hazard and realistic worst harm

1. Initial risk (before any controls) L S Score Band

2. Controls selected, by hierarchy level (tick every level used)

☐ Eliminate ☐ Substitute ☐ Engineering ☐ Administrative ☐ PPE

3. Residual risk (controls in place) L S Score Band

4. Decision

☐ Accepted ☐ Not accepted: go back up ☐ Work stopped ☐ Escalated

Accepted or approved by

Owner of open controls

Due date

HAZARD 4

Task or step

Hazard and realistic worst harm

1. Initial risk (before any controls) L S Score Band

2. Controls selected, by hierarchy level (tick every level used)

☐ Eliminate ☐ Substitute ☐ Engineering ☐ Administrative ☐ PPE

3. Residual risk (controls in place) L S Score Band

4. Decision

☐ Accepted ☐ Not accepted: go back up ☐ Work stopped ☐ Escalated

Accepted or approved by

Owner of open controls

Due date

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Part F: Team sign-off

Each team member confirms they took part and the ratings reflect the team's consensus. Signing doesn't mean you agree with every rating: record any disagreement below.

Name	Role	Signature	Date	Agree
				☐
				☐
				☐
				☐
				☐
				☐

Dissent record

If someone disagrees with a rating after discussion, write down their view and reason. It's valuable information, not a failure.

Hazard no.	Person	Their rating (L x S)	Team rating	Reason and how it was handled

Approval and communication

Supervisor accepting the assessment	Signature	Date

Manager (for high or extreme initial risk)	Signature	Date

- ☐ Results shared with every worker who does this job, including the highest-rated hazards and their controls.
- ☐ Open controls entered in the corrective action log with owners and due dates.
- ☐ JHA, formal hazard assessment and inspection checklists updated to match.
- ☐ Highest-rated hazards reported to senior management and the committee.

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.

Worked example: clearing jams on an infeed conveyor

A packaging line's infeed conveyor jams several times a shift. Workers have been reaching past the end guard to pull out crushed cartons while the belt runs. The team: two line operators, the line supervisor, a maintenance technician and the committee worker co-chair.

Stage	What the team decided	Rating
Hazard	Hand drawn into the nip point between belt and roller. Realistic worst harm: hand or finger amputation.	Severity 4 (major)
1. Initial risk	No controls. Done several times every shift, so harm is expected sooner or later.	L5 x S4 = 20, Extreme. Reaching in stops now.
First attempt	Retraining, a "do not reach in" sign and cut-resistant gloves. Gloves don't stop a nip point; signs don't stop a rushed worker.	L4 x S4 = 16, High. Not accepted: back up the hierarchy.
2. Controls (second attempt)	Engineering: chute adjusted to cut jams at the source; interlocked guard that stops the belt when opened, with a jam-clearing tool. Administrative: lockout before removing the guard; training; interlock added to the pre-shift check.	Levels: engineering and administrative
3. Residual risk	Contact now needs a defeated interlock. Severity is unchanged, because the guard reduces the chance of contact, not the harm if it happens.	L2 x S4 = 8, Moderate
4. Decision	Accepted by the supervisor; manager informed; interlock check monitored at inspections. One operator's view that likelihood should be 3 until the interlock had run a month was recorded in the dissent record and reviewed after 30 days.	Accepted

Common mistakes to avoid

- ☐ Rating alone instead of as a team.
- ☐ Rating everything moderate because the definitions are vague.
- ☐ Lowering severity because of a guard, procedure or training that isn't in place yet.
- ☐ Letting a rare but fatal hazard drop down the list because its score is low.
- ☐ Using a low score to justify skipping reasonably practicable controls.
- ☐ Lowering a rating to make the problem go away, instead of improving the controls.

Legal note

Every Canadian jurisdiction expects hazards to be identified and controlled, directly or through a required health and safety program, and many require workers, committees or representatives to take part. None of the laws checked for the guide prescribes a risk matrix, so the method is yours to define and use consistently. Check the rules for your province, territory or federally regulated workplace.

Want help? Calgary Safety Consultants helps employers set up risk assessment methods, facilitate team rating sessions, and build formal hazard assessments and JHAs. Call 1-888-231-0358 or visit calgarysafetyconsultants.ca. Free guide: calgarysafetyconsultants.ca/safety-guides/hazard-management/risk-matrix/.

General information, not legal advice. Occupational health and safety requirements differ between provinces, territories and federally regulated workplaces, so adapt this form to your workplace and confirm the requirements that apply to you.