



# FALL PROTECTION RESCUE GUIDE



## FALL PROTECTION RESCUE GUIDE

This rescue planning resource is intended to assist employers with developing effective and compliant procedures for rescue of a worker who has fallen and is suspended by a personal fall protection system. The forms included in this guide may be used as an addendum to WorkSafeBC's fall protection plan template.

Rescue planning is essential for preventing the serious consequences of suspension trauma and leaving a worker stranded in their fall protection system because:

- Without a rescue plan, workers may have to rely on untrained coworkers to rescue them, which can lead to further injuries or accidents.
- A well-designed rescue plan can minimize the risks of rescue operations and ensure that workers are rescued quickly and safely.

### Suspension Trauma

Suspension trauma, also known as harness hang syndrome, occurs when a worker is left suspended in their fall protection system for an extended period of time. In this position, blood pools in the legs and the heart has to work harder to pump blood, which can lead to unconsciousness, brain damage, or even death. A rescue plan ensures that workers are rescued as soon as possible, reducing the risk of suspension trauma.

### Assessing Rescue Options

Workplace factors influence how complex rescue may be. The table below lists factors to consider when planning for rescue.

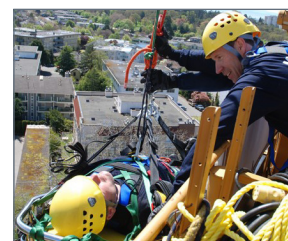
FACTOR	THINGS TO CONSIDER
<b>OVERHEAD HAZARDS</b>	Powerlines, trees, structure or other objects that interfere with the ability of rescuers to reach a suspended worker.
<b>GROUND CONDITIONS</b>	Rocky terrain, unstable soil, materials and other items on the ground that prevent aerial work platforms or other pieces of equipment from reaching the work area.
<b>AVAILABILITY OF EQUIPMENT</b>	Are ladders, aerial work platforms, DEP boxes or other pieces of rescue equipment available? Is the equipment accessible and ready to be used on short notice?
<b>TRAINING</b>	Do workers have the necessary training to fulfill their rescue roles? More complex rescue options require more advanced training.
<b>HEIGHT</b>	How high is the work area? Greater heights eliminate some rescue options such as ladders, scaffolds or aerial work platforms.
<b>CHANGING CONDITIONS</b>	As the worksite changes, rescue plans will need to be revisited and revised. E.g. if a delivery of materials obstructs rescue.

### Self-extraction

Self-extraction is when a worker attempts to rescue themselves in an emergency. Although it can be useful, self-extraction has limitations. Workers may be injured, disoriented, or lack the required equipment and training to perform a safe rescue. Therefore, self-extraction should never be the only plan for retrieving a worker who has fallen from a harness. A comprehensive rescue plan that includes trained personnel, specialized equipment, and clear procedures is necessary to ensure worker safety in case of a fall. This type of plan can minimize risks and ensure that workers are rescued quickly and safely.

### Calling 911

While calling 911 is important in an emergency, it is not a sufficient rescue plan for workers at risk of falls or suspension trauma. Emergency services take time to arrive and may not have immediate access to equipment to perform a safe and timely rescue. A comprehensive rescue plan that includes trained personnel and specialized equipment is essential for ensuring worker safety in such situations. [The Technical High Angle Rope Rescue Program \(THARRP\)](#) has been developed to prepare emergency services for complex workplace rescues.



THARRP prepares fire department personnel in technical rope & tower crane rescue procedures for workers in distress working at heights). It was established in 1991 by the Greater Vancouver Regional District Fire Chiefs, in response to stated needs of industry. Contact your fire department to see if they participate or check [here](#) for a list of THARRP-participating fire departments.

### Self-extraction

Rescue teams consist of trained personnel equipped to provide rescue on a worksite. Employers may train a group of employees to provide rescue services or hire an external rescue provider. Regardless of the type of rescue team, employers must ensure the team is adequately trained and equipped to provide rescue and that they are conducting rescue practice drills to maintain their proficiency.

### Using this Guide

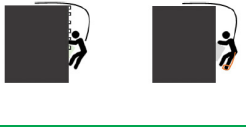



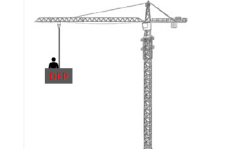

**Page 2** provides information on requirements for different rescue techniques that might be appropriate for your workplace.

**Pages 3-4** contain a **Rescue Planning Process**. Follow the steps to:


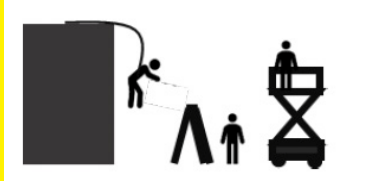
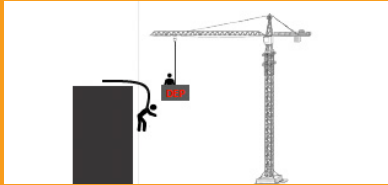

- Evaluate the complexity of your rescue scenario
- Record any training and equipment required
- Describe or illustrate your rescue procedure

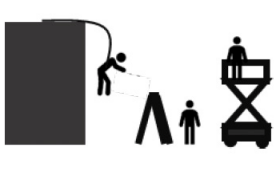
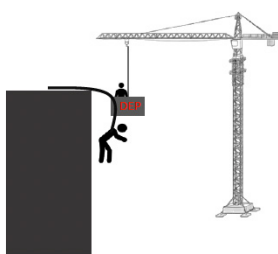

**Page 5** contains a **Project Rescue Record**. It may be used to track rescue plans and resources across your project.

## WHAT'S REQUIRED FOR MY RESCUE PLAN?

RESCUE TYPES	HAZARDS TO CONSIDER	TRAINING/SKILLS	RESCUE PERSONS	EQUIPMENT
<b>OVERHEAD HAZARDS &gt;&gt;&gt;</b> 	<input type="checkbox"/> Physical hazards impeding self rescue <input type="checkbox"/> Physical abilities of the worker(s)	<input type="checkbox"/> Two prusik loops to climb lifeline <input type="checkbox"/> Standing loop knot in lifeline <input type="checkbox"/> Mechanical ascenders	<input type="checkbox"/> Suspended worker <input type="checkbox"/> First aid attendant	<input type="checkbox"/> Prusik loops <input type="checkbox"/> Trauma straps
<b>LADDER OR SCAFFOLD &gt;&gt;&gt;</b> 	<input type="checkbox"/> Barriers to rescue <input type="checkbox"/> Ground conditions <input type="checkbox"/> Ladder/scaffold reach	<input type="checkbox"/> Verify that ladder or scaffold will reach suspended worker	<input type="checkbox"/> Suspended worker <input type="checkbox"/> Additional worker <input type="checkbox"/> First aid attendant	<input type="checkbox"/> Ladders <input type="checkbox"/> Scaffold <input type="checkbox"/> Fall protection equipment for rescuers
<b>MOBILE EQUIPMENT &gt;&gt;&gt;</b> 	<input type="checkbox"/> Availability of mobile equipment <input type="checkbox"/> Mobile equipment size, weight capacity and reach <input type="checkbox"/> Overhead hazards <input type="checkbox"/> Ground conditions	<input type="checkbox"/> Mobile equipment operator certification <input type="checkbox"/> Practical rescue drill <input type="checkbox"/> Develop written procedures	<input type="checkbox"/> Mobile equipment operator <input type="checkbox"/> First aid attendant <input type="checkbox"/> Rescue Lead <input type="checkbox"/> Assistant	<input type="checkbox"/> Aerial lift <input type="checkbox"/> Communication device(s) <input type="checkbox"/> Written agreement (if using another contractor's equipment)
<b>MECHANICAL DEVICE &gt;&gt;&gt;</b> 	<input type="checkbox"/> Sufficient anchorages <input type="checkbox"/> Adequate equipment for the height <input type="checkbox"/> Overhead hazards	<input type="checkbox"/> Fall protection rescue training <input type="checkbox"/> Training on specific mechanical equipment <input type="checkbox"/> Practical rescue drill <input type="checkbox"/> Develop written procedures	<input type="checkbox"/> First aid attendant <input type="checkbox"/> Trained rescue lead <input type="checkbox"/> Trained rescue assistant	<input type="checkbox"/> Overhead anchors <input type="checkbox"/> Equipment (Davit arm, SRL rescue system, 4:1 pulley, Rollgliss, Telescoping pole & Carabiner quick clip) <input type="checkbox"/> Other _____
<b>CRANE &amp; DEP &gt;&gt;&gt;</b> 	<input type="checkbox"/> Overhead hazards <input type="checkbox"/> Adjacent structures <input type="checkbox"/> Adjacent work activities or contractors	<input type="checkbox"/> Certified crane operator <input type="checkbox"/> Use of a DEP <input type="checkbox"/> Rigging DEP <input type="checkbox"/> Radio use <input type="checkbox"/> Develop written procedures	<input type="checkbox"/> Crane operator <input type="checkbox"/> Rigger <input type="checkbox"/> First aid attendant <input type="checkbox"/> Rescue lead	<input type="checkbox"/> Crane <input type="checkbox"/> DEP box <input type="checkbox"/> Fall protection equipment for rescuers
<b>HIGH ANGLE &gt;&gt;&gt;</b> 	<input type="checkbox"/> Overhead hazards <input type="checkbox"/> Adjacent structures <input type="checkbox"/> Adjacent work activities or contractors	<input type="checkbox"/> High angle rescue certification (SPRAT, IRATA) <input type="checkbox"/> NFPA rescue standards	<input type="checkbox"/> Rescue team (Fire rescue, THARRP) <input type="checkbox"/> Rescue personnel: _____ _____ _____	<input type="checkbox"/> Rescue equipment: _____ _____ _____

# RESCUE PLANNING PROCESS

<p><b>STEP 1</b></p> <p>Assess self-extraction options</p>		<p>If applicable, include self-extraction and/or the use of trauma straps in all plans.</p> <p><b>Note:</b> Self-extraction is not a substitute for a rescue plan.</p>
<p><b>STEP 2</b></p> <p>Evaluate how complex a rescue scenario may be. Start by considering the most simple rescue options and proceed with more complex plans only if simpler rescue plans are impracticable.</p> <p><b>Note:</b> It is important to consider how an unconscious worker will be rescued. A ladder may not be a viable rescue option for an unconscious worker.</p>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">SIMPLE</div> <div style="background-color: #ffff00; padding: 10px; width: 100%;"> <p>Worker can be rescued using readily available equipment. E.g. Elevated work platform, ladders</p>  </div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">COMPLEX</div> <div style="background-color: #ff8c00; padding: 10px; width: 100%;"> <p>Equipment and more advanced training are required. E.g. Mechanical device assisted rescue, DEP box and crane</p>  </div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="background-color: #d62728; padding: 10px; width: 100%;"> <p>Specialized rescue equipment and training are required. E.g. THARRP, Fire department, rescue team</p>  </div> </div>	<div style="background-color: #ffff00; padding: 10px; margin-bottom: 10px;"> <p>Proceed with <b>SIMPLE</b> rescue plan if:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Worker will be reachable using available ladders or work platforms</li> </ul> </div> <div style="background-color: #ff8c00; padding: 10px; margin-bottom: 10px;"> <p>Proceed with <b>ADVANCED</b> rescue plan if:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Worker will be reachable using available crane or rescue equipment</li> <li><input type="checkbox"/> Anchor points are available for mechanical devices</li> <li><input type="checkbox"/> Trained rescue workers and/or crane operators are available</li> </ul> </div> <div style="background-color: #d62728; padding: 10px;"> <p>Proceed with <b>COMPLEX</b> rescue plan if:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Trained rescue personnel are available or a written agreement is in place with a capable fire department or rescue team</li> <li><input type="checkbox"/> Rescue team has necessary equipment &amp; training to effect rescue from work area</li> </ul> </div>

<p><b>STEP 3</b></p> <p>Document rescue procedure</p>	<p>Document key information about your rescue plan in the sections provided below. Use STEP 4 to describe your rescue plan in detail. Write the description so that others reviewing this document can understand key requirements of the rescue plan and their role in its success.</p> <p>Review page 3 for detailed information regarding rescue equipment and rescue training requirements.</p>	
<p><b>RESCUE PLAN TYPE</b></p>		
<p><input type="checkbox"/> <b>SIMPLE</b></p> 	<p><b>Equipment required (ladders, scaffold or platforms, etc.):</b></p>	
	<p><b>Training:</b></p>	
	<p><b>How to summon rescue:</b></p>	
<p><input type="checkbox"/> <b>ADVANCED</b></p> 	<p><b>Equipment required (crane, DEP box, mechanical device, etc.):</b></p>	
	<p><b>Training:</b></p>	
	<p><b>How to summon rescue:</b></p>	
<p><input type="checkbox"/> <b>COMPLEX</b></p> 	<p><b>Equipment required (Fire Dept., rescue team, contracted rescue team):</b></p>	
	<p><b>Training:</b></p>	
	<p><b>How to summon rescue:</b></p>	

**STEP 4**

Describe the rescue procedure (including procedure for self-rescue in detail. Use words and diagrams.

**RESCUE PROCEDURE**



## PROJECT RESCUE RECORD (OPTIONAL)

Use this table to maintain a record of the rescue resources, agreements with fire departments, trained personnel on site, and locations where your company has developed rescue plans. This document can be used to show, at a glance, where on your project crews are working under a rescue plan. Update this record as conditions or personnel change.

<b>PROJECT NAME</b>		<b>PROJECT ADDRESS</b>	
<b>FIRE DEPT. PROVIDING RESCUE</b>		<b>WRITTEN THARRP AGREEMENT IN PLACE?</b>	<input type="checkbox"/> YES <input type="checkbox"/> NO

### IDENTIFY RESCUE TRAINED PERSONNEL

NAME	TITLE	TRAINING	PRIME CONTRACTOR	CONTRACTOR
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

<b>RESCUE LEAD</b>		<b>ALTERNATE LEAD</b>		<b>OFAA</b>	
<b>CONTACT #</b>		<b>CONTACT #</b>		<b>CONTACT #</b>	

### RESCUE EVALUATION

LOCATION	RESCUE OPTIONS	MAX. HEIGHT	# OF WORKERS	DRILL COMPLETED?	NOTES
	<input type="checkbox"/> Ladder/scaffold rescue <input type="checkbox"/> Mobile equipment rescue <input type="checkbox"/> DEP box rescue <input type="checkbox"/> Mechanical device rescue <input type="checkbox"/> High angle rescue				
	<input type="checkbox"/> Ladder/scaffold rescue <input type="checkbox"/> Mobile equipment rescue <input type="checkbox"/> DEP box rescue <input type="checkbox"/> Mechanical device rescue <input type="checkbox"/> High angle rescue				
	<input type="checkbox"/> Ladder/scaffold rescue <input type="checkbox"/> Mobile equipment rescue <input type="checkbox"/> DEP box rescue <input type="checkbox"/> Mechanical device rescue <input type="checkbox"/> High angle rescue				
	<input type="checkbox"/> Ladder/scaffold rescue <input type="checkbox"/> Mobile equipment rescue <input type="checkbox"/> DEP box rescue <input type="checkbox"/> Mechanical device rescue <input type="checkbox"/> High angle rescue				
<b>COMPLETED BY</b>				<b>DATE</b>	