

**ROCKY MOUNTAIN NATIONAL PARK
JOB HAZARD ANALYSIS (JHA)**

JOB TITLE: Moving and Handling Materials	DATE:	<input type="checkbox"/> NEW <input type="checkbox"/> REVISED
TITLE OF WORKER(S): Maintenance Worker Leader, Maintenance Workers, Laborers	NAME OF ORGANIZATION: Rocky Mountain National Park	ANALYSIS BY:
LOCATION: All RNMP Trails	DEPARTMENT: Maintenance--Trails	SUPERVISOR:
REVIEWD BY:	APPROVED BY: Dave Larsen	

REQUIRED AND/OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:	Hard hat, eye protection, ear protection, respirator, long sleeves, gloves, long pants, nomex flight suit, radio, etc.
---	--

SEQUENCE OF JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
Preparing to move materials.	Unidentified and/or unmitigated hazards, or unsafe conditions.	<ul style="list-style-type: none"> -If at any point, a job is deemed unsafe, workers should feel entitled to stop until the appropriate PPE or equipment is available, or the right conditions exists to make the job safe. -Consider all potential hazards: weather, wet or slippery conditions, overhead hazards, proximity to trails and/or visitor traffic patterns/volume, slope, loose footing, elevation, fatigue, hazardous insects or plants, etc. -Mitigate hazards by any of the following: scheduling, logistics, additional personnel, trail closures, signage, reroutes, temporary trails/detours, flaggers, guards, lookouts, communications, relays, and signals/hand signs. -Fill holes, build temporary structures, and explore options to maximize safety and efficiency in moving materials, especially on steep or loose slopes. -Clear the route of hazards and debris before moving materials.
	Injuries/health concerns resulting from the material itself (CCA treated logs).	<ul style="list-style-type: none"> -Crew leaders and supervisors are responsible for providing crewmembers with adequate PPE and related training. Refer to block 11. -Personnel should review the MSDS for any product they are unfamiliar with.

SEQUENCE OF JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
Moving materials.	Muscle strains, pulls and repetitive motion injuries.	<p>-Each employee should be provided training on the safe and proper use of the most important, primary tool—their bodies (Strong, Alert, Focused, Energetic, or SAFE training). Proper techniques of stretching, lifting, bending, moving, rolling rocks, securing good footing, the importance of good nutrition and hydration, etc., should be address.</p> <p>-Each employee will be given time on the job to properly stretch and warm-up before and during physical activity for a period of time deemed appropriate by the crew leader, or on-site supervisor.</p> <p>-Employees will be encouraged to switch hands often and vary the types of activities performed to limit exposure to repetitive motion injuries.</p> <p>-The appropriate number of workers should be used to move materials. This decision may vary between individuals.</p>
	Injuries resulting from lack of communication, or miscommunication.	<p>-Crew leaders will conduct, whenever appropriate, tailgate safety talks to provide orientation, discuss project, safety concerns, assign work, etc.</p> <p>-Good communication between crewmembers should reinforce individual awareness of real and potential hazards.</p>
		<p>-Communication methods or jargon should be discussed and agreed upon prior to moving materials.</p> <p>-The plan of attack should be discussed before attempting to move materials.</p> <p>-Instructions should come from one person when working in teams of two or more.</p>
Moving materials by hand and/or with rock bars.	Foot or leg injuries.	<p>-Workers need to maintain constant awareness of their feet in relation to objects being moved and avoid placing them under materials.</p>
	Finger or hand injuries.	<p>-It is recommended that workers use either rock bars or hand lifting techniques to minimize the potential for injuries to hands.</p> <p>-If hands are absolutely necessary in the presence of rock bars, extreme caution and 100% communication with other workers should follow.</p>

SEQUENCE OF JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
	Injuries from rock bars.	<ul style="list-style-type: none"> -Workers should never sit, stand, or straddle rock bars. -Exercise caution when criss-crossing rock bars. -Be prepared for sudden or unexpected loss of bite or slippage—use chocks. -Experience shows that as the angle between the ground and the rock bar approach's 90 degrees, the less secure becomes the bite.
Moving large objects such as beams	Loss of control of material, crushing injuries, pinch's, unexpected movements, etc.	<ul style="list-style-type: none"> -Refer to concepts above as applicable. -Crewmembers should to work as a team, following the direction of the crew or project leader. -When moving beams or applying leverage, workers need to remain aware of potential hazards, and position themselves in such a way to minimize their exposure. -Refer to JHA—GripHoist and Highline Use and Maintenance.
Moving materials with machinery.	Vehicle or machinery damage, operator injury, or injury to others working around machinery.	-Refer to JHA—Equipment Use and Maintenance.
Moving materials with helicopters	Injury or death caused by dropped, shifting, or swinging loads: rotor wash, helicopter blades.	-Refer to JHA—Helicopter Use.

JSA Instructions

The JSA shall identify the location of the work project or activity, the name of employee(s) writing the JSA, the date(s) of development, and the name of the appropriate line officer approving it. The supervisor acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.

Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory

Block 7: Identify all tasks and procedures associated with the work project or activity that have potential to cause injury or illness to personnel and damage to property or material. Include emergency evacuation procedures (EEP).

Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:

- a. Research past accidents/incidents.
- b. Research the Health and Safety Code or other appropriate literature.
- c. Discuss the work project/activity with participants
- d. Observe the work project/activity
- e. A combination of the above

Block 9: Identify appropriate actions to reduce or eliminate the hazards identified in block 8. Abatement measures listed below are in the order of the preferred abatement method:

- a. Engineering Controls (the most desirable method of abatement). For example, ergonomically designed tools, equipment and furniture.
- b. Substitution. For example, switching to high flash point, non-toxic solvents.
- c. Administrative Controls. For example, limiting exposure by reducing the work schedule.
- d. PPE (least desirable method of abatement). For example, using hearing protection when working with or close to portable machines (chain saws, rock drills, portable water pumps)
- e. A combination of the above.

Block 10: The JSA must be reviewed and approved by a supervisor.

Block 11: List all recommended and required PPE relevant for job/activity.

Emergency Evacuation Instructions

Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures (EEP) and alternatives in the event a person(s) becomes seriously ill or injured at the work site.

Be prepared to provide the following information:

- a. Nature of the accident or injury (avoid using victim's name).
- b. Type of assistance needed, if any (ground, air or water evacuation).
- c. Location of accident or injury, best access route into the work site (road name/number), identifiable ground/air landmarks.
- d. Radio frequency(s).
- e. Contact person.
- f. Local hazards to ground vehicles or aviation.
- g. Weather conditions (wind speed & direction, visibility, temp).
- h. Topography.
- i. Number of person(s) to be transported
- j. Estimated weight of passengers for air/water evacuation.

The items listed above serve only as guidelines for the development of emergency evacuation procedures.

JSA and Emergency Evacuation Procedures Acknowledgement

As supervisor I acknowledge that the following employees have participated in the development of this JSA, accompanying evacuation procedures and have also been briefed on the provisions thereof:

Supervisor's Signature:
