

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

1. WORK PROJECT OR ACTIVITY: Backcountry Travel (Footwear Specific)	2. DATE:	<input checked="" type="checkbox"/> NEW <input type="checkbox"/> REVISED
3. LOCATION OF JOB: Backcountry Areas: To include all areas within the park and all areas that an employee could be detailed to or assigned to work within	4. DIVISION: Visitor Protection	5. BRANCH:
6. NAME OF EMPLOYEE(S) INVOLVED IN ANALYSIS: Chris Bellino and Mark Daniel	7. SUPERVISOR:	8. DIVISION CHIEF:

9. REQUIRED PERSONAL PROTECTIVE EQUIPMENT:

Footwear:

The National Park Service, through its contracted uniform supplier, offers several types and models of footwear intended for working in the backcountry, or while riding or packing stock. This footwear is generic in nature. The hiking boot(s) with lug soles are suitable for general trail hiking and some off trail travel. Because footwear is very specific to individual needs and fit, what is available through the uniform supplier does not always accommodate the needs or fit of every employee. Further, there are specific, specialized types of footwear that are necessary to safely perform the broad range of duties and tasks that are required of employees working in the backcountry of Rocky Mountain National Park and elsewhere.

See the suggested footwear options for each terrain/travel category below. These options do not restrict employees to specific footwear. They are suggestions as to what might perform best in a defined terrain/travel category.

Employee Discretion and Employer Responsibilities:

In compliance with OSHA standard 1910.132(a) and 1026.28(a), the park will strive to provide necessary items of personal protective equipment (PPE) considered necessary for safe work performance. It is recognized, however, that the use of personally owned equipment is necessary. This is particularly true in the area of footwear as boots and shoes are very personal in nature. Such items generally cannot be reissued from one employee to another. Accordingly, per OSHA standard 1910.132(b), the employer (ROMO supervisors) shall be responsible for ensuring the adequacy and proper maintenance of PPE not provided by the government. This requirement is met, in part, through employee notification of pre-use approval for personal equipment, ROMO Form 21.344. Such equipment shall comply with general industry standards and be of adequate condition. Through periodic equipment inspection and assessment, ongoing serviceability will be monitored. Dependent upon individual employee skills and work expectations, needs will vary. It is important that discussions occur among supervisors and employees regarding work and tasks that are expected and assigned, and the realistic expectations for specific footwear needs and requirements. Ultimately, it is up to the employee to apply sound judgment and discretion when selecting the appropriate footwear for the job. When making these choices, employees must consider their skills, abilities, expected route of travel, forecasted weather conditions, potential hazards along the route and, most importantly, their own comfort level with the chosen footwear. Supervisors will monitor footwear selection and use and will maintain an open and pro-active dialogue with employees. Employees should be able to articulate the reasons for their footwear choices.

Footwear Replacement: Replacement of footwear should not be determined solely by tread wear or the condition of the upper. An important consideration for replacement is the individuals comfort level and known performance capabilities of the footwear. Many types of footwear perform better when they are broken in and/or well worn. For example, smooth tread on the sole of a boot will likely perform better on rock slab.

Cost: An Estimated cost for each type of footwear is included as an addendum to this JHA.

10. REQUIRED TOOLS AND EQUIPMENT:

See Ranger Division Operations Procedures for the minimum required equipment for backcountry travel.

11. APPLICABLE STANDARDS:

No applicable standards

12. TRAINING REQUIREMENTS:

Supervisors will discuss footwear needs with each employee and will address the range of duties and tasks that are expected to be performed, along with typical terrain and the often-extreme environmental conditions in which work is assigned and accomplished. For most field employees who engage in backcountry patrol work and emergency search and rescue in ROMO, the following footwear needs must be considered:

- Trail travel and general backpacking
- Off trail travel in rugged, mountainous terrain
- Winter travel (hiking, snowmobile, snowshoe)
- Winter mountaineering & ice climbing
- Winter ski mountaineering
- Stock use (i.e. riding horseback)
- General mountaineering during early season snow conditions
- General mountaineering and scrambling associated with 4th and low 5th class terrain
- Technical rock climbing
- Technical wall climbing
- Wildland fire
- PPE requirements associated with aviation regulations

Supervisors will review and discuss with employees the different types of terrain and travel requirements and the environmental conditions categories that they might encounter and should stress that employees use good judgment in making footwear choices. Footwear selection is at the discretion of the employee but the

13. SEQUENCE OF JOB STEPS	14. POTENTIAL HAZARD	15. HAZARD CONTROL
Trail Hiking/Backpacking	-Rolled Ankles -Slips/Falls -Wet/Muddy Trails -Trench Foot	Suggested footwear options to include: -Approach/Trail Shoes -Synthetic/Leather Hiking Boots
Cross Country Hiking/Backpacking	-Rolled Ankles -Slips/Falls -Wet/Muddy Surfaces -Trench Foot	Suggested footwear options to include: -Approach/Trail Shoes -Synthetic/Leather Hiking Boots

13. SEQUENCE OF JOB STEPS	14. POTENTIAL HAZARD	15. HAZARD CONTROL
Dead and Down Trees	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Rolling/Falling Logs -Wet/Mossy Surfaces -Trench Foot 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Approach/Trail Shoes -Synthetic/Leather Hiking Boots -Wildland Fire Boots
Scree and Talus	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Rolling/Falling/Shifting Material -Wet Surfaces -Loose Footing 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Approach/Trail Shoes -Synthetic/Leather Hiking Boots -Wildland Fire Boots
General Winter Travel (Both on and off trail, in snow, to exclude 3 rd and 4 th class travel)	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Snow Packed/Icy Trails -Unconsolidated Snow (Post Holing) -Frostbite 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Hiking Boots -Wildland Fire Boots -Pac Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters -Snowshoes -Ice Grippers
3 rd and 4 th Class Snow and Ice	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Icy Surfaces -Unconsolidated Snow (Post Holing) -Frostbite -Sharp Crampon Points -Balled Up Crampons -Falling Materials 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Hiking Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters -Crampons

13. SEQUENCE OF JOB STEPS	14. POTENTIAL HAZARD	15. HAZARD CONTROL
Technical Snow and Ice Climbing	<ul style="list-style-type: none"> -Slips/Falls -Icy Surfaces -Unconsolidated Snow (Post Holing) -Frostbite -Sharp Crampon Points -Falling Materials -Balled Up Crampons 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Mountaineering Boots -Double Plastic Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters -Crampons
3 rd and 4 th Class Rock Scrambling	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Loose Footing -Wet Surfaces -Rolling/Falling/Shifting Material 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Approach/Trail Shoes -Synthetic/Leather Hiking Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots
Technical Rock Climbing	<ul style="list-style-type: none"> -Slips/Falls -Loose Footing -Wet Surfaces -Shifting/Falling Materials 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Rock Climbing Shoes -Approach/Trail Shoes -Synthetic/Leather Hiking Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots
Mixed Snow, Ice, and Rock Climbing	<ul style="list-style-type: none"> -Slips/Falls -Icy Surfaces -Wet Surfaces -Unconsolidated Snow (Post Holing) -Frostbite -Sharp Crampon Points -Rolling/Falling/Shifting Materials -Loose Footing -Balled Up Crampons 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Mountaineering Boots -Double Plastic Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters -Crampons

13. SEQUENCE OF JOB STEPS	14. POTENTIAL HAZARD	15. HAZARD CONTROL
Backcountry Skiing	<ul style="list-style-type: none"> -Skin Slippage -Falls -Collisions -Frostbite -Binding Release Capabilities -Buried Obstacles -Unconsolidated Snow 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Leather Telemark Ski Boots -Plastic Telemark Ski Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots -Plastic Alpine Touring Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters
Horseback Riding/Packing	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Falls From Horse -Loose Footing -Wet Surfaces -Horse Stepping on Feet -Falling Objects 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Hiking Boots -Leather Fire Boots -Horseback Riding/Packing Boots
Aviation Operations (Cross Reference Applicable OAS Regulations)	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Loose Footing -Rolling/Falling/Shifting Materials -High Heat -Contact with Flames -Wet/Muddy Surfaces -Icy Surfaces 	<p>8 Inch Leather Boots are Required Unless an Environmental Waiver is Obtained:</p> <ul style="list-style-type: none"> -Leather Hiking Boots -Leather Mountaineering Boots -Wildland Fire Boots
Snowmobiling	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Collisions -Icy Surfaces -Unconsolidated Snow (Post Holing) -Snowmobile Accidents 	<p>Suggested footwear options to include:</p> <ul style="list-style-type: none"> -Synthetic/Leather Hiking Boots -Synthetic/Leather Mountaineering Boots -Double Plastic Boots -Pac Boots <p>Suggested accessory options include:</p> <ul style="list-style-type: none"> -Gaiters -Ice Grippers

13. SEQUENCE OF JOB STEPS	14. POTENTIAL HAZARD	15. HAZARD CONTROL
Wildland Fire Fighting (Cross Reference Applicable Wildland Fire Fighting Regulations)	<ul style="list-style-type: none"> -Rolled Ankles -Slips/Falls -Loose Footing -Rolling/Falling/Shifting Materials -High Heat -Contact with Flames -Wet/Muddy Surfaces -Icy Surfaces 	8 Inch Leather Boots are Required: <ul style="list-style-type: none"> -Leather Hiking Boots -Leather Mountaineering Boots -Wildland Fire Boots

Emergency Evacuation Instructions	
Reference the ROMO SAR Plan and ROMO Employee Backcountry Rescue Plan	
JHA and Emergency Evacuation Procedures Acknowledgement	
We, the undersigned Supervisor and employees, acknowledge participation in the development of this JHA and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of each of these documents.	
SUPERVISOR'S SIGNATURE	DATE:
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
EMPLOYEE SIGNATURE	EMPLOYEE SIGNATURE
DIVISION CHIEF'S SIGNATURE	DATE: