

# **ROCKY MOUNTAIN NATIONAL PARK**

***Rocky's Employee Safety***



***Team Presents***

## **Employee Safety Handbook**

**GAR Model**  
**See pages 14-19 for direction**

**GAR Evaluation Scale**

SUPERVISION	
PLANNING	
CONTINGENCY RESOURCES	
COMMUNICATION	
TEAM SELECTION	
TEAM FITNESS	
ENVIRONMENT	
INCIDENT COMPLEXITY	
TOTAL	

Risk is rated 1-10 in each category. Mitigations should be considered for any category rated higher than 5 or if the total is in amber. Work stops if the total is in the red.

<b>1 – 35 Green</b>	<b>36 – 60 Amber</b>	<b>61 – 80 Red</b>
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## **SUPERINTENDENT'S SAFETY MESSAGE**

Safety is a state of mind. If we truly think safety in everything we do, we minimize and control the risks that we and others are exposed to as we go about our jobs. A Forest Service colleague said, "Our job is not done until we get home safely." That struck a chord, as it says we're not just concerned about safety in the office or at the work site, but also with how you arrive in the morning and go home in the evening.

Routine tasks may be our biggest challenge in terms of safety. When facing something that is non-routine, we often include safety as a primary concern so that it is front and center in our planning. However, as we go about our daily routine we don't as often pause to analyze risks and then mitigate them. Thinking safety in everything we do will take a cultural shift in our busy work days.

A few years ago, we adopted the following safety policy for the park—

In RMNP we believe:

- All people are important.
- There is nothing that we do that is so important or urgent to justify unsafe decisions or actions.
- Everyone is responsible for safety.
- People should go home each day without injury or illness.
- Achieving zero injuries/illnesses is the only acceptable goal.

Therefore:

- We will make safety a part of all activities.
- We all share accountability and responsibility for safety.
- Appropriate safety training and a safe work environment will be provided.
- Safe performance is required in all that we do.
- Safety problems will be addressed promptly.

Before any of us undertakes an activity, we should ask “What’s Going to Get Me Hurt?”-- Then take the time to eliminate or manage the hazards, or stop the activity until it can be done safely.

One final thought for each of you -- taking risks where your personal safety is concerned is not expected, is not encouraged, and is not an acceptable means to accomplish a task quicker or cheaper. There is nothing that we do that is so important or urgent to justify unsafe decisions or actions.

Please be safe out there.

Vaughn Baker  
Superintendent

# **SAFETY ADMINISTRATION**

## **ROCKY MOUNTAIN NATIONAL PARK SAFETY POLICY**

In Rocky Mountain National Park we believe:

- All people are important.
- There is nothing that we do that is so important or urgent to justify unsafe decisions or actions.
- Everyone is responsible for safety.
- People should go home each day without injury or illness.
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Therefore:

- We will make safety a part of all activities.
- We all share accountability and responsibility for safety:
- Appropriate safety training and a safe work environment will be provided.
- Safe performance is required in all that we do.
- Safety problems will be addressed promptly.



## **EXECUTIVE SAFETY COMMITTEE**

### **Excerpts from the Executive Safety Committee Charter:**

We believe our employees, volunteers, concessionaires and contractors have a right to safe working environments. We believe that every job can be done safely. The overall objective of the committee is to ensure that a culture of safety is central to our work and lives and is a part of all park operations and levels. We accept nothing less than continuously improving superior performance in safety and health.

The primary mission of the Executive Safety committee (ESC ) is to provide leadership and strategic direction to reduce incident rates and costs; to improve employee safety performance at all levels of the organization; and to establish goals and standards for management systems that prevent employee injuries and illness, and reduce their associated costs.

The primary functions of the ESC include:

- Develop strategic safety objectives
- Develop action plan to reach strategic objectives
- Evaluate park safety policies and procedures to drive continuous improvement
- Review all lost time/damage incidents monthly
- Review park safety program events and actions monthly
- Review safety suggestions and concerns monthly

The Executive Safety Committee consists of the following members: the Superintendent as chair, the Deputy Superintendent, the five Division Chiefs and the Safety Officer. The committee will meet on a monthly basis, insofar as possible and practical.

## EMPLOYEE SAFETY TEAM

### Excerpts from the Employee Safety Team Charter:

#### Employee Safety Team Purpose:

Improve Rocky Mountain National Park's safety culture:

- Provide an additional avenue for line employees and supervisors to bring forth safety concerns that cannot be resolved in or extend beyond their operational unit.
- Analyze and evaluate, and then make recommendations to the Executive Safety Committee for management policies, guidelines, tools, processes, and resources to resolve safety concerns.
- Review accidents/near misses that occurred in the previous month to identify and address possible trends, evaluate the cause of the accident/near miss, and identify what follow-up was taken to avoid future accident/near misses. Team members will communicate accident review findings to their Divisions and operational units.
- Assist the Executive Safety Committee in addressing and resolving specific topics.
- Develop, implement, or review safety-related programs, processes, or training.
- Contact and enlist the assistance of supervisors and the Executive Safety Team in implementing and completing projects, programs, and processes.

#### Employee Safety Team Structure and Responsibilities:

The Employee Safety Team will consist of the following members:

- **Superintendent's Office Advisor:** Deputy Superintendent
- **Management Team Representative**

- **Advisor:** Safety and Occupational Health Specialist, with the assistance of the Team Leader, will present the Employee Safety Team's progress, recommendations, and findings to the Executive Safety Committee.
- **Team Leader:** Selected by team members whose responsibilities include:
  - Preparation and distribution of a reminder meeting notice with an agenda to Team members a minimum of three working days prior to the monthly meeting.
  - Act as the facilitator for the Team meeting and related follow-up.
  - Oversee preparation of Team reports and presentations, and work closely with the Advisor.
  - Be the contact point for the Employee Safety Team.
  - Within two weeks after a meeting, the Team Leader, with assistance from the Safety and Occupational Health Specialist, will finalize and distribute to all employees the Employee Safety Team meeting minutes.
- **Secretary:** Selected by team members to take minutes during the meeting and provide an electronic draft of the minutes to the Team Leader and Advisor within one week of the Team meeting.
- **Team members** consisting of employees who represent a cross-section of the employees and Divisions in the park, subject to the Deputy Superintendent's approval. Division Chiefs and supervisors will release Team members from their employee responsibilities, as required, to participate in Employee Safety Team meetings and activities. Members can send a substitute to the meetings, when necessary. The substitute should be briefed by the member on the upcoming agenda items to prepare them to participate in discussions and recommendations.

- Members are responsible for communicating Employee Safety Team information to their Division in a timely manner. Members are encouraged to serve a minimum of one year to promote continuity or until certain pre-determined goals have been implemented. During each summer, seasonal employee(s) will be included on the Team.
- **Short-Term Sub-Teams** may be formed to assist the Team in addressing and resolving specific topics. One person in the sub-team will be selected to coordinate sub-team meetings times, present sub-team findings to the Team, and to submit a written report to the Team Leader.
- All employees, with permission from their supervisor, are welcome to attend the Employee Safety Team meetings.

## **ACCIDENT NOTIFICATION & REPORTING REQUIREMENTS**

All accidents require notification, investigation, and documentation in accordance with the Rocky Mountain National Park's Office Order #17. This document is located on the ROMO Intranet. Select Divisions/Safety & Environment, and open the Accident Investigation & Reporting site. From here you can also access the Safety Management Information System (SMIS) website, the ROMO Accident Review Board Findings template, and additional information.

Employees must report near-miss incidents to a supervisor as soon as possible, but in no case later than the end of the work shift. Reports can be oral or written and are for all job-related accidents or near-miss incidents they witness or in which they are involved. Supervisors must personally investigate all incidents and near misses of employees, volunteers, and other

Federal, state and local stakeholders working on and under NPS jurisdiction. Supervisors must identify and implement corrective actions to prevent recurrence. These requirements are in accordance with NPS Director's Order 50b: Occupational Safety and Health Program.

If you have any questions, please contact your Human Resources Compensation Specialist and/or the Safety Office.

## Employee Notification & Reporting Requirements

<b>Incident Outcome</b>	<b>Notify Supervisor Immediately</b>	<b>File CA1/CA2</b>	<b>Obtain CA16</b>
Loss of Consciousness	X	X	X
DART, Days Away	X	X	X
DART, Restriction/ Job Transfer	X	X	X
Remained @ Work, Medical Treatment Beyond First Aid	X	X	X
Needle Stick/ Cut Contaminated w/ Blood	X	X	X
First Aid w/ Cost	X	X	X
First Aid w/o Cost	X		
Medical Attention Could Be Required in Future	X	X	
Motor Vehicle Accident (MVA)	X		
Structural Fire	X		
Property Damage	X		

## Supervisor Notification & Reporting Requirements

Incident Outcome	Notify Division Chief	Notify Safety Office	Complete CA1/ CA2 ASAP	SMIS Report
Death/ Heart Attack	<b>I</b>	<b>I</b>		
Recordable Injury	48 Hrs	48 Hrs	X	6 Days
DART, Days Away	<b>I</b>	<b>I</b>	X	6 Days
DART, Remained @ Work, Restriction/ Job Transfer	<b>I</b>	<b>I</b>	X	6 Days
Remained @ Work, Medical Treatment Beyond First Aid	48 Hrs	48 Hrs	X	6 Days
Minor Incident/Accident	48 Hrs	48 Hrs		6 Days
Significant Property Damage	<b>I</b>	<b>I</b>		6 Days
Serious Accident	<b>I</b>	<b>I</b>	X	6 Days

**I** – Immediately

**Routing/Date**

Supervisor \_\_\_\_\_

Exec Safety Comm \_\_\_\_\_

Division Chief \_\_\_\_\_

Safety Officer \_\_\_\_\_

## **Rocky Mountain National Park Near Miss Reporting Form**

A near miss is an unplanned/undesirable event which could have resulted in injury, illness, or property damage, but didn't. These close calls or lucky escapes are messages of potential danger. Remember, we are our coworkers' keepers. It is important to report near-miss incidents witnessed or in which you are involved to your supervisor as soon as possible, at least by the end of your work shift. Remember, someone could benefit from learning from this event. If it was a near miss for you, it could be an injury for someone else.

***Please complete this Near Miss Form to share what you have learned with others.***

Employee Name \_\_\_\_\_

Division/Position Title \_\_\_\_\_

Date of Incident \_\_\_\_\_

Time of Incident \_\_\_\_\_

Location of Incident including details of terrain.



What happened? Describe in full, including the protocol/procedures followed (all tools, substances, equipment and machinery used and related to the incident). If helpful to clarify, sketch what happened on the back of this form.

Why did it happen? Describe all factors, including weather, conditions or practices that directly led to this incident.

What type of injury could have occurred from this incident?

How can we prevent this from happening again?

## **SAFETY ISSUE FORM**

The Safety Issue Form has been developed to allow staff to voice their concerns about a safety issue that they feel is not being addressed. This form has five questions asking more about the safety issue and what actions have been taken to address the problem. The forms can be anonymous and should be sent to the Deputy Superintendent. No partially completed forms will be accepted. Hard copies of this form are available on all Safety Bulletin Boards, and an electronic version can be found on the "Safety and Environment" Intranet site located under "Divisions".



## **OPERATIONAL LEADERSHIP**

Operational Leadership (OL) is an employee-centered approach to managing risk and achieving professional excellence at every level of the organization. Desired results of the National Park Service OL program include:

- Improve capacity to lead and make decisions in a dynamic environment
- Significantly reduce accident, injury and fatality rates.
- Improve morale, productivity, and employee wellness.
- Stimulate teamwork.

In Rocky Mountain National Park, the sixteen hour Basic OL course is required for all supervisors and work leaders and highly recommended for all employees.

## Operational Risk Management Tools

Commonly used Operational Risk Management Tools include:

$$\text{Risk} = \text{Severity} \times \text{Probability} \times \text{Exposure}$$

Values	Risk Level	Action
80-100	Very High	Discontinue, Stop
60-79	High	Immediate Correction
40-59	Substantial	Correction Required
20-39	Possible	Attention Needed
1-19	Slight	Possibly Acceptable

<b>Red (High Risk)</b>	80
<b>AMBER (Caution)</b>	60
<b>GREEN (Low Risk)</b>	35
	0

## GAR Evaluation Scale

SUPERVISION	
PLANNING	
CONTINGENCY RESOURCES	
COMMUNICATION	
TEAM SELECTION	
TEAM FITNESS	
ENVIRONMENT	
INCIDENT COMPLEXITY	
TOTAL	

### Calculating Risk

To compute the total level of risk for the eight elements, assign a risk code of 0 (For No Risk) through 10 (For Maximum Risk) to each element. This is your personal estimate of the risk. Add the risk scores to come up with a total risk score.

The mission/incident risk can be visualized using the colors of a traffic light. If the total falls in the green zone, risk is at a minimum. If the total falls in the amber zone, risk is moderate and you should consider adopting procedures to minimize risk. **IF THE TOTAL FALLS IN THE RED ZONE, YOU NEED TO IMPLEMENT MEASURES TO REDUCE THE RISK PRIOR TO STARTING THE EVENT/EVOLUTION.**

**TEAM DISCUSSION TO UNDERSTAND THE RISKS AND HOW THEY WILL BE MANAGED IS WHAT IS IMPORTANT; NOT THE ABILITY TO ASSIGN NUMERICAL VALUES OR COLORS TO RISK ELEMENTS.**

- Supervision      Supervisory Control should consider if supervision is present, how qualified the supervisor is, and is supervision taking place. Even if a team member is qualified to perform a task, supervision acts as a control to further minimize risk. The higher the risk, the more the supervisor needs to be focused on observing and checking. A supervisor who is actively involved in a task (doing something), can be easily distracted and should not be considered an effective safety observer in moderate to high risk situations.
- Planning            Planning and preparation should consider how much information you have, how clear it is, how much time you have to plan the evolution or evaluate the situation, and the presence of Standard Operating Procedures or Pre-Plans.
- Contingency  
Resources          Contingency Resources refer to readily available trained assets, and whether there is an established agreement and SOP with the cooperating agency (i.e. local law enforcement agencies, fire departments, ambulance, military units, etc.).

- Communication Communication should include physical (dispatch present, effective repeaters) communication and an assessment of personal communication among team members (assertiveness, climate that values input, high degree of accountability) and the presence of briefs and debriefs.
- Team Selection Team Selection should consider the qualifications and experience level of the individuals used for the specific event/evolution/incident. Individuals may need to be replaced during the incident. The same concerns apply to the reliefs.
- Team Fitness Team Fitness should consider the physical and mental state of the team. This is a function of the amount and quality of rest a team member has had. Quality of rest should consider potential sleep length, and any interruptions. Fatigue normally becomes a factor after 18 hours without rest; however, lack of quality sleep builds a deficit that worsens the affects of fatigue.
- Environment Environment should consider factors affecting personnel performance and factors affecting the performance of personnel and equipment. This includes, but is not limited to, time of day, temperature, humidity, precipitation, wind, terrain, and elevation.
- Event/Evolution Complexity Event/Evolution complexity should consider both the required time and the situation. The longer exposed to a hazard, the greater the

risks. The situation includes considering how long the environmental conditions will remain stable and the complexity of the work.

**The GAR model can address more general risk concerns, which involve planning operations, or reassessing risks as we reach milestones within our plans.**



# **SAFETY COMMUNICATIONS**

## **EMERGENCY NUMBERS**

**911 or EXTENSION 1203 (970-586-1203)**

**Park Dispatch (Non-emergency) 970-586-1204**

### **MEDICAL SERVICES:**

#### **Estes Park**

Estes Park Medical Center: 970-586-2317

Family Medical Clinic: 970-586-2200

Salud Family Health Center: 970-586-9230

Timberline Medical Clinic: 970-586-2343

#### **Granby**

Granby Medical Center: 970-887-2117

Timberline Family Practice/Medical Clinic: 970-887-1216

## **OTHER IMPORTANT PARK NUMBERS**

Information Office: 970-586-1206

Recorded Employee Information Line:

(bad weather, road conditions, etc.): 970-586-1247

TTY for hearing impaired: 970-586-1319

**Employees are encouraged to provide family members with immediate supervisor's name and direct telephone extension numbers, to reduce routine calls being routed through the switchboard in Park Dispatch.**

## BASIC RADIO OPERATING PROCEDURES

The Park uses a basic VHF radio repeater system. A repeater system allows radio waves to cover a larger area for long-range communications.

### **ROMO Radio List**

<b>Channel</b>	<b>Area</b>	<b>Action</b>	<b>Use</b>
<b>E1 Direct</b>	East Side	Radio to Radio Direct	1-5 Miles
<b>E2 Twin</b>	East Side	Radio to Twin Sisters	East Side Long Distance Communications
<b>E3 Tundr</b>	East & West	Radio to AVC Repeater	Trail Ridge Above Treeline
<b>W4 Direct</b>	West Side	Radio to Radio Direct	1-5 Miles
<b>W5 Red</b>	West Side	Radio to Red Mtn Repeater	West Side Long Distance Communications
<b>W6 Shdo</b>	West Side	Radio to Shadow Mtn Repeater	West Side Long Distance Communications
<b>M7 Direct</b>	East & West	Maintenance Division	Radio to Radio Direct
<b>M8 Prosp</b>	East Side	Radio to Prospect Mtn Repeater	Maintenance Division Long Distance Comm
<b>F9 Direct</b>	East & West	Radio to Radio Direct	Fire and Resource Radio to Radio Direct
<b>F10 Twin</b>	East Side	Radio to Twin Sisters Fire Repeater	Fire and Resource Long Distance Comm

<b>Channel</b>	<b>Area</b>	<b>Action</b>	<b>Use</b>
<b>Ch11 Work</b>	East & West	Radio to Radio Direct	ROMO Work Channel
<b>Ch12 Law</b>	East & West	Radio to Radio Direct <b>LE Rangers Only</b>	NPS Law Work Channel
<b>E13 Meadow</b>	Southeast	Radio to Meadow Mtn Repeater	Long Distance Comm in Wild Basin area
<b>E14 Hagues</b>	East & Northwest	Radio to Hagues Peak Repeater	Long Distance Comm in North Fork & Hagues Creek areas

**Note:** East Side or West Side personnel wanting to communicate with the other side of the park or a different work unit will need to switch to the appropriate channel. Park personnel are generally assigned radio call numbers to use instead of their last name. In some cases, a work group will use a supervisor's radio call number with their own last name when contacting Park Dispatch. Use of last names is recommended only for major incidents utilizing the Incident Command System. The call sign for Dispatch is "ROMO." To call up a station, first identify the station being called using their radio call number, and then identify yourself (your radio call number). Be sure to press the transmit button on the radio before speaking.

**Example:**

"ROMO - 231" (this is 231 calling ROMO)

"231 - ROMO" (this is ROMO answering 231)

Upon completion of radio communication, sign off with your radio call number. Base stations sign off with their assigned base station call sign.

Use "Clear Speech" language on the radio. Clear speech is common language using short, concise words and phrases to convey the proper message. Do **not** use obscene language, slang, CB jargon or 10 codes. **Plan** your message and **think** before transmitting to avoid rambling and too much detail. Long transmissions should be broken at intervals to allow any emergency radio traffic to break in. Speak clearly in a normal tone of voice. It is not necessary to yell into the microphone.

At times when Dispatch sounds an alert tone and requests "Emergency Radio Traffic Only" or "Priority Radio Traffic Only," radio communications then should be limited until the emergency is over and announced that "Emergency Radio or Priority Radio Traffic has been lifted."

Radio equipment is expensive and delicate. It should be treated with respect and care; avoid rough handling, dropping, or exposure to heat or moisture. If the radio becomes immersed in water, **do not transmit**. Bring it in to the Radio Shop immediately.

Dispatch airs a morning report daily between 0915-0930 with important announcements, road conditions, campground status, fire danger, weather forecasts, etc.

Remember that all radio and telephone communications are recorded in the Communications Center and there are many radios and scanners throughout the area and surrounding communities. Always be professional on the air.

## RADIO COMMUNICATIONS PHONETIC ALPHABET

<b>A – ALPHA</b>	<b>N – NOVEMBER</b>
<b>B – BRAVO</b>	<b>O – OSCAR</b>
<b>C – CHARLIE</b>	<b>P – PAPA</b>
<b>D – DELTA</b>	<b>Q - QUEBEC</b>
<b>E – ECHO</b>	<b>R – ROMEO</b>
<b>F – FOXTROT</b>	<b>S – SIERRA</b>
<b>G – GOLF</b>	<b>T – TANGO</b>
<b>H – HOTEL</b>	<b>U – UNIFORM</b>
<b>I – INDIA</b>	<b>V – VICTOR</b>
<b>J – JULIET</b>	<b>W – WHISKEY</b>
<b>K – KILO</b>	<b>X – X-RAY</b>
<b>L – LIMA</b>	<b>Y – YANKEE</b>
<b>M – MIKE</b>	<b>Z – ZULU</b>

### EMERGENCY INCIDENT / REPORT TAKING

As a uniformed OR non-uniformed park employee, you will undoubtedly be contacted at sometime by a visitor wishing to report an emergency or some other incident. The type of information you gather from the reporting party (RP) and the speed and efficiency with which you gather and disseminate the information to park Dispatch, could mean the difference between life and death, or whether or not law enforcement rangers are able to locate and contact park violators.

Below are some basic guidelines for obtaining information from a reporting party. **If you don't remember anything else from this list, remember and do #1:**

### 1) **Keep the Reporting Party With You**

Often the report of an emergency or incident is received by Dispatch with insufficient information about the occurrence, and the employee taking the report has allowed the reporting party (RP) to leave. By keeping the RP with you, any additional information can be obtained from the source itself. If you allow the RP to leave, you may find yourself in the embarrassing situation of having to tell Dispatch that you don't know the description of a vehicle or what type of injuries have been sustained, etc.

If the reporting party refuses to stay, try to obtain the re-contact information described below. If the reporting party refuses to stay AND refuses to provide you with re-contact information, try to note the vehicle description (license plate and state, make, model, and color) and the direction the vehicle is traveling. If no vehicle is involved (i.e. the RP is in the backcountry) get as good a physical description as you can, and their direction of travel or intended destination (backcountry site, peak or lake, etc.) Notify Dispatch immediately of this refusal so that law enforcement rangers may attempt to locate and detain the RP, if necessary.

## 2) Obtain Initial Information from Reporting Party:

- a) **WHERE (most critical piece of information)** – get as accurate a location as possible where the incident is occurring, use maps, try to get specifics on the location, direction of travel if moving, or planned route.
  
- b) **What** – is the nature of the problem, what is happening
  
- c) **Who** – is involved
  - i) number of persons involved
  - ii) age, sex, general physical description
  - iii) last known medical condition/loss of consciousness?
  - iv) mental attitude (lost or injured in backcountry)
  - v) last known direction of travel
  - vi) training, experience, equipment, trip plans
  
- d) **When** – did this occur
  
- e) **Injuries** – what are the injuries
  
- f) **Hazards** – are there any hazards for responding rangers – weapons, alcohol, drugs, fire, snow, lightning, etc.
  
- g) **Vehicle Description**
  - i) License plate (**state** and **number**)
  - ii) **Make, model, color** (Chevy, pickup, blue)
  - iii) Last known direction of travel
  
- h) **Assistance Rendered/Requested**
  - i) Is the involved party requesting assistance?
  - ii) Is someone on scene helping already?
  - iii) If so, what are they doing?

### **i) Reporting Party Re-contact Information**

- iv) (Let RP write this down while you notify Dispatch.)
- v) Name
- vi) Local address and phone number (Timber Creek Campground site number \_\_, Estes Park Holiday Inn?, Estes Park KOA?, etc.) and **how long they may be reached at this location.**
- vii) Permanent address and phone number
- viii) RP vehicle description in "g" above (in case they must be re-contacted while traveling through the park)

### **3. Notify Dispatch**

Obviously, not all of this information will be needed for every incident report, but since you can't be sure **what** information **may** be necessary for an efficient and effective response - **keep the reporting party with you until you can find out!** Don't spend a long time getting every minute detail about the incident from the reporting party before notifying Dispatch, as this could result in an unnecessarily delayed response.

Incident reports will vary depending on the type and location of the incident, the reporting party, and the employee taking the information, however, all reports require some basic facts. Just remember that the only link you have with the emergency or other incident is the person reporting it. **Keep the reporting party with you until all necessary information has been obtained!**



## **Backcountry Travel & Tracking**

### **In Memory of Those Gone Before in the Line of Duty**

This section is dedicated to the memory of Ranger Jeff Christensen, who lost his life on July 29, 2005, while patrolling the backcountry of Rocky Mountain National Park. His sacrifice will never be forgotten.



### **Jeffrey Alan Christensen 1974 – 2005**

#### **Why do we track backcountry travel?**

- By agency policy, employees and volunteers who are involved in backcountry travel and patrol operations are required to be tracked and monitored, which promotes safe work practices and procedures that will enhance employee and visitor safety in the park backcountry.

### When does backcountry tracking apply to me?

- When an employee travelling solo or a group of employees intends to travel **one mile or further up a trail or one mile beyond park developed areas.**
- Employees travelling solo are required to check in and out of the backcountry with park dispatch.
- Groups (defined as 2 or more employees) may track themselves, however, a group leader must be designated on the travel plan, and he/she is then responsible for ensuring that all members of the group are accounted for and clear of the backcountry at the end of the trip.

### Who is required to file a backcountry travel plan?

- All on-duty park employees and volunteers, when their backcountry travel takes them one mile or more from a trailhead. Off-duty employees are exempt from filing a plan, however, it's always good practice to file a personal trip plan with family or friends just the same.
- **Both** solo travelers and groups are required to file a backcountry travel plan, and they must immediately report any deviations to that plan to Park Dispatch during their travel.

### How do I file a plan?

- By completing a Backcountry Travel Plan form (ROMO-7), available on the Park Intranet, either by hand or electronically, and forwarding it to Park Dispatch **at least one day prior** to your expected travel date. Resource Stewardship Division employees are also required to obtain a supervisor's written approval prior to submitting the form.

## **When and how do I close out a plan?**

- Group leaders are responsible for closing out their plans and ensuring all members are accounted for. For those travelling solo, once you've reached your backcountry destination for the day or upon returning to the trailhead, **immediately** close out your plan with Park Dispatch, either by phone or park radio. Dispatch will continue to
- track you until you do so. Once your estimated return time has passed, they will begin attempting status checks on you, but **DO NOT** rely on them to remind you of your close-out responsibilities.

## **Personal Preparedness for the Backcountry –**

Adequate personal preparedness is highly dependent upon time of year, current and predicted weather, area and route of travel, nature of work assignments, skills and experience, and other factors that must be considered on a case by case basis. It is critical, and mandatory, that each employee/volunteer give careful consideration to planning and preparation for each backcountry trip.

Each park division has required Personal Protective Equipment (PPE) for backcountry travel, but at a minimum, you should have the following **10 essentials** with you:

Map	Sunscreen/sunglasses
Compass	First Aid kit
Flashlight/headlamp	Knife
Extra food/water	Lighter/waterproof matches
Extra clothing	Whistle and/or signal mirror

## Situational Awareness –

- A safe and successful backcountry trip is dependent upon good situational awareness and the ability to manage risk. Discretion and judgment are key elements of this process.
- When we lose situational awareness we increase the potential for human error mishaps. Pay attention to current and changing weather conditions. What's your physical and mental status? Are you properly clothed and equipped for your trip? Observe your surroundings. Watch your footing. Regularly communicate your status.

## For Additional Information –

Refer to the RMNP **BACKCOUNTRY TRACKING AND TRAVEL POLICY**, which is available electronically on the Park Intranet under “Divisions/Safety & the Environment”.



# **OSHA MANDATED PROGRAMS**

## **JOB HAZARD ANALYSIS**

Job Hazard Analysis (JHA) is a procedure used to identify hazards in each step of a job in order to develop measures to eliminate or control each identified hazard. Each work area should have JHAs and encourage their use by staff. When developing a JHA, employees and supervisors should work together.

Consider the following priorities when developing a JHA:

- Jobs with the highest injury/illness rates
- Jobs with the potential to cause severe or disabling injuries/illness
- Jobs that are new to your operation or have undergone changes in procedures and procedures
- Jobs complex enough to require written instructions

To analyze a job, follow these basic steps:

- Break the job down into successive steps
- Analyze each step to identify its potential hazards
- Develop ways to eliminate or control the identified hazards
- Document the process on a Job Hazard Analysis template located on the Safety and Environment Intranet Site
- Make the JHA a working document: each time before you begin the job, review the JHA, and change it if required.

A JHA library is located on the ROMO Intranet Safety and Environment site that is maintained by the Safety Office at: <http://www.romo.nps.gov/divisions/facmgmt/facmgmt%20vf/safety/jha%20template.doc>. When you create a JHA, provide an electronic copy to the Safety Officer for inclusion in the JHA Library.

**Rocky Mountain National Park Page of  
Job Hazard Analysis (JHA)/Certification of Hazard Assessment**

<b>1. Work Project or Activity:</b>		<b>2. Date:</b>	<input type="checkbox"/> <b>New</b>
			<input type="checkbox"/> <b>Revised</b>
<b>3. Location of Job:</b>	<b>4. Division</b>	<b>5. Branch</b>	
<b>6. Supervisor/Person Certifying Hazard Assessment Has Been Performed:</b>			
<b>7. Name of Employee(s) Involved in Analysis:</b>		<b>8. Division Chief:</b>	
<b>9. Required Personal Protective Equipment:</b>			
<b>10. Required Tools and Equipment:</b>			
<b>11. Applicable Standards:</b>			
<b>12. Training Requirements:</b>			

<b>13. Sequence of Job Steps:</b>	<b>14. Potential Hazard</b>	<b>15. Hazard Control</b>
<p style="text-align: center;"><b>Emergency Evacuation Instructions</b></p> <p>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 worksite.</p>		
<p style="text-align: center;"><b>JHA and Emergency Evacuation Procedures Acknowledgement</b></p> <p>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.</p>		
<b>Supervisor's Signature:</b>		<b>Date:</b>
<b>Employee(s) Signature:</b>		<b>Date:</b>
<b>Division Chief's Signature:</b>		<b>Date:</b>



## **HAZARD COMMUNICATION PROGRAM**

To ensure that information about the dangers of all hazardous chemicals used by Rocky Mountain National Park is known by all affected employees, a Hazard Communication Program has been established. Under this program, employees will be informed of the contents of the OSHA Hazard Communication standard, the hazardous chemicals they use in their workplace, and safe handling procedures and measures to take to protect themselves from these chemicals (**Material Safety Data Sheets-MSDS**).

The program applies to all work operations at ROMO where employees may be exposed to hazardous chemicals under normal working conditions or during an emergency situation.

### **Program Availability**

A copy of the ROMO Hazard Communication Program can be obtained by contacting the Safety Office, accessing the plan on the ROMO Intranet, or in each work area's "Right to Know" binder.

### **Hazardous Product/Chemical Lists**

The OSHA hazard communication standard requires ROMO's Hazard Communication Program include a list of hazardous chemicals known to be present in the workplace. To meet this requirement, all work areas shall maintain an inventory of hazardous and extremely hazardous chemicals that are used and stored in their work area using the Hazardous Products/Chemical List. A Hazardous Products/Chemical List template is located on the ROMO Intranet. Select Divisions, Safety & Environment,

Environmental Management, and open up the Hazardous Products-Chemical List template.

### **Employee Training and Information**

Supervisors must train employees on hazardous chemicals specific to their work areas. All employees should obtain initial training in Haz Com as soon as possible after their starting date, and attend annual training thereafter.

### **Material Safety Data Sheets (MSDS)**

Materials Safety Data Sheets are available from the manufacturer for each hazardous chemical they produce.

Supervisors shall:

- Ensure a MSDS is obtained at the time of initial purchase or shipment.
- Review the MSDS to determine if the chemical is hazardous. If hazardous the supervisor will communicate health and safety information to their employees.
- Place MSDS for hazardous chemicals in the work area's Right to Know binder. Review revised MSDS for new or significant health and safety information and ensure any new information is communicated to their employees.
- Ensure MSDS for hazardous chemicals are readily available to employees during each work shift.

## **FIRST AID/CPR**

First Aid and emergency response at RMNP is the responsibility of the Division of Resource Protection and Visitor Management. Rangers respond to over 400 Emergency Medical Services (EMS) and/or Search and Rescue (SAR) incidents annually. The majority of these occur during the busy summer months. Any employee may be first on scene and will be expected to provide a clear and concise report to dispatch. First Aid may be provided within one's scope of current training. All employees are recommended to obtain basic first aid and CPR training and it is required for most. Supervisors will provide access to required training. All backcountry travelers are required to carry, at a minimum, a basic Type I first aid kit, available from the warehouse. All EMS activities fall under the direct supervision of the park EMS Coordinator. Employees with a certification of Wilderness First Responder and above must have an issued "White Card" from the park EMS Coordinator.

The following standard first aid kit inventory reflects the minimum amount of first aid supplies to be carried in the backcountry:

- 2 prep pads/swabs: iodine/BZK/bacitracin
- 4 2x2 gauze pad dressings
- 6 band-aids
- 4 butterfly closures
- 1 rolled elastic gauze bandage (klings)
- 1 pair gloves, latex/nitrile
- 1 rescue breathing barrier mask
- 1 roll adhesive tape, 1/2" x 1 yd

- 1 sheet moleskin
- 2 aspirins
- 2 acetaminophen tablets

## **Bloodborne Pathogens**

Human blood and body fluids may transmit Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus (HIV). An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or needle stick contact with blood or body fluids. The RMNP Bloodborne Pathogen (BBP) Exposure Control Plan is located on the ROMO Intranet Safety and Environment site.

### **Supervisors are required to:**

- Classify, Category I, II, or III, employee exposure to BBP
- Ensure Category I & II employees receive BBP training prior to assignment to tasks where exposure could occur
- Offer Hepatitis B vaccinations to Category 1 employees within 10 days of initial assignment

### **To Prevent Exposure to Bloodborne Pathogens**

- Treat all body fluids as if they are contaminated.
- Wear appropriate Personal Protective Equipment (PPE) such as gloves, face masks, eye protection, gowns, & pocket masks.
- Dispose of contaminated sharp items in labeled, puncture resistant, leak-proof containers.
- Place other contaminated items in labeled biohazard bags or containers.

- Remove contaminated clothing and PPE ASAP and place in labeled container for storage, laundering, decontamination, or disposal.
- Immediately wash exposed skin with antibacterial soap after removing PPE. If no water is available, use a waterless hand-gel and then wash with water ASAP.
- Don't eat, drink, apply lip balm or handle contact lenses in areas where there is a potential for exposure.
- Clean contaminated work surfaces with an EPA approved disinfectant or chlorine bleach solution of ¼ cup bleach to 1 gallon water.

#### **Dispose of Biohazard Waste in Biohazard Tubs:**

- East Side: Utility Area Garage #5, ask ranger at ROC for access
- West Side: Utility Building 473, SAR Cache

#### **If a Suspected Exposure to Bloodborne Pathogens Occurs:**

- Thoroughly wash the exposed area with soap and water. Flush mucous membranes with water.
- Immediately notify supervisor. If supervisor is not available, report to Estes Park Medical Center or Granby Medical Center as soon ASAP for a medical evaluation.
- Identify the source person and the route of exposure (i.e. needle stick, eye splash, etc)

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

A Job Hazard Analysis or PPE Selection Certification may be used to identify required PPE. Only items that meet National Institute of Occupational Safety and Health (NIOSH), and American National Standards Institute (ANSI) standards will be procured and accepted for use.

### **Head Protection (ANSI Z89.1)**

Hard hats are required when there is a potential for objects falling from above, bumps to the head from fixed objects, or head contact with electrical hazards.

### **Eye and Face Protection (ANSI Z87.1)**

Safety glasses and a face shield are worn anytime work operations could cause foreign objects to get in the eye. Wear when exposed to any electrical hazard, including working on energized electrical systems.

### **Respiratory Protection (NIOSH approved)**

Respiratory equipment must be used as part of RMNP's Respiratory Protection Program. Before an employee is allowed in a work area or starts an activity which would expose them to hazardous concentrations of airborne contaminants that require respiratory protection, the employee must:

- Complete a medical evaluation.
  - Complete initial Respiratory Protection training.
  - Pass a respirator fit test for a NIOSH-approved respirator.
- Contact your supervisor or the Safety Officer for details to meet these requirements. Training and fit testing are required annually.

**Hearing Protection (ANSI S3.19)**

Hearing protection, earplugs and/or earmuffs, must be used as part of RMNP's Hearing Conservation Program.

Employees must receive initial training and a baseline audiogram within 6 months of their first exposure at or above the OSHA action level and annually thereafter. As a rule of thumb, if an employee must speak loud to be heard, their noise exposure is at or above the OSHA action level.

**Hand Protection**

Workers should wear the right glove for the job to prevent potential injuries such as burns, abrasions, cuts, punctures, electrical shock, chemical exposure, or exposure to blood, body fluids, or other potentially infectious materials.

**Foot Protection (ANSI Z89.1)**

Construction and maintenance workers shall wear work shoes or boots with non-slip and puncture resistant soles. Safety-toed footwear shall be worn to prevent crushed toes when working around heavy equipment or falling objects.

## TRENCHING & EXCAVATION

The park has several “competent” employees to assist in any excavation or digging work. Any excavating activities will include using the following checklist, have a competent trained employee on site, and will utilize all PPE required for the activity. The competent trained employee will also be cognizant of proper topsoil salvage, handling, storage, and redistribution techniques outlined in the document entitled “Construction Stipulations for Natural Resource Preservation Rocky Mountain National Park” issued by the Resource Stewardship Division.

### Trenching and Excavation Daily Checklist

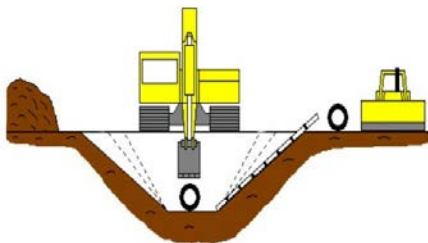
	Yes	No
<b>3 Days Prior to Opening the Excavation</b>		
The following have been contacted for utility locates:		
Public Utilities: 1-800-922-1987		
ROMO Fiber Optics: Ext. 1254		
ROMO Phone: Ext. 1266		
ROMO Water/Sewer: Ext. 1241		
ROMO Low Voltage/Propane: Ext. 1250		
<b>Prior to Opening the Excavation</b>		
All surface encumbrances that could create a hazard are removed or supported		
Utilities and other underground installations have been located, demarcated, and communicated to employees		
A <b>competent person</b> has been designated and has conducted an inspection		



<b>General Requirement During Excavation</b>		
Employees are wearing appropriate PPE such as hard hat, high-visibility safety vests, safety glasses, and safety boots		
The <b>competent person</b> performs inspections daily, prior to the start of work, as needed throughout the shift; and after every rainstorm or other hazardous occurrence		
When excavation approaches the location of underground installations, their exact location is determined by a safe means		
<b>General Requirements Prior to Employees Entering Any Excavation</b>		
Excavation is made entirely in solid rock or the <b>competent person</b> determines there is no indication of a potential cave-in		
Employees are protected from loose rock or soil that could fall from the excavation face		
Excavated soil or stored materials are kept at least 2 feet back from the edge of the trench		
If water has accumulated or is accumulating in the excavation, precautions have been taken to protect employees		
<b>Additional Requirements if Excavation 4-5 Feet Deep</b>		
All workers are within 25 feet of a means of egress		
Atmosphere has been tested if there is a possibility of oxygen deficient or hazardous atmosphere		
<b>Additional Requirements if Excavation is</b>		

<b>5-20 Feet in Depth</b>		
Excavation is protected from cave-ins by an adequate protective system: <ul style="list-style-type: none"> <li>• Designed by the <b>competent person</b> in accordance with OSHA 1926.652 (b) Slopes and benching systems or (c) Support systems, shield systems, or other protective system, or the <b>competent person</b> has determined the excavation is made entirely in solid rock; or</li> <li>• Designed by a professional engineer</li> </ul>		
<b>Additional Requirements if Excavation is More Than 20 Feet in Depth</b>		
Excavation is protected from cave-ins by an adequate protective system designed by a professional engineer		

### Trenching and Excavation Checklist (Cont'd)



Slope trench sides as indicated, or provide shoring or a trench box. Professional engineering required for trenches 20 feet +.

<b>Soil Type</b>	<b>Slope</b>
Rock	Vertical
Type A	$\frac{3}{4}$ to 1 or 53 degrees
Type B	1:1 or 45 degrees
Type C	1- $\frac{1}{2}$ to 1 or 34 degrees

Increase slope of trenches exposed to vibrations of construction equipment, construction operations, traffic, etc.

## **LADDERS AND SCAFFOLDING**

### **Ladders**

Ladders are commonly used throughout the park. This tool can be extremely useful and also very dangerous if not used properly. Follow these tips to ensure that you do not become another injury statistic when using ladders.

- Always follow all labels/markings on the ladder.
- Avoid electrical hazards- never use a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to use.
- Maintain a three-point contact on the ladder when climbing
- Follow the “belt buckle rule”- never work with your belt buckle outside of the ladder rails.
- Use ladders only on a level, stable surface.
- Extension ladders used to access an elevated surface must extend 3 feet above the point of support.

- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall.
- Do not exceed the maximum load rating of a ladder.

## **Scaffolding**

Employees who are involved with the erection, dismantling or use of scaffolding must be trained. This training can be done by a competent person and must instruct the trainee in recognizing the hazards associated with the type of scaffold being used and how to control or minimize those hazards. The following general requirements should be followed when working with scaffolding:

- A competent person must supervise the erection of all scaffolding.
- Guardrails or a personal fall arrest system must be used if the worker is exposed to a fall greater than 10 feet.
- The frames will bear on base plates and mud sills
- All work platforms will be fully decked.
- Scaffolding will be able to support four times the maximum intended load.
- Scaffolding will be erected plumb and level
- Toe boards must be used if there is a danger of items falling on workers below.
- Scaffolding must be tied off when it reaches four times its base width.
- All casters on mobile scaffolding must be locked when in use.

- Inspect all scaffolding at the beginning of each work shift.

Refer to OSHA 1926 Subpart L for the complete regulations for scaffolding use.

## **FALL PROTECTION AND SAFE WORK PRACTICES**

Falls are the leading cause of fatal injuries in the construction industry. Fall protection will be in place if an employee or volunteer is exposed to a fall hazard of more than 4 feet for general industry or 6 feet for construction. Workers who are exposed to fall hazards will be trained to identify these hazards and how to use safe work practices in order to prevent accidents. Fall Protection can include: guard rails, covers, and personal fall arrest systems. Refer to OSHA 29 CFR 1926 subpart M for more detailed information.

**Guard rails** consist of a top rail, mid rail and toe boards.

**Covers** are used to cover any hole that may present a fall hazard.

**Personal fall arrest systems** consist of an anchorage, lifeline, lanyard and full body harness.

**Falls from heights are 100% avoidable.** Notify your supervisor immediately if you become aware of a potential fall hazard.

**For answers to specific questions contact the fall protection specialist in RMNP maintenance department**

**or refer to JHA for specifications on specific information and regulations. All equipment and systems used must be OSHA certified.**

## **CHAINSAW OPERATION**

Rocky Mountain National Park (RMNP) employees perform a variety of jobs requiring the use of chain saws. Among them are firefighting, hazard fuel and tree removal, road maintenance, trail clearing, historic structure restoration and other maintenance activities. All employees must follow the guidelines in the RMNP Chainsaw Plan, found on the RMNP Intranet under Divisions → Safety. Our performance based chainsaw qualifications are based on the NWCG S-212 saw program. Training, certification, and first aid/CPR are required. Authorization for the use of chainsaws is the responsibility of an employee's Division Chief with certification approved by the ROMO Safety and Occupational Health Manager or ROMO Fire Management Officer, as appropriate. S212 will be offered to employees required to use chainsaw and provided a task book to be completed for certification of chainsaw qualification. All employees using chainsaws must be certified in house and attend an annual refresher. No solo work is permitted.

## **FIRE PREVENTION & FLAMMABLE LIQUID STORAGE**

Gasoline and similar flammable liquids will be stored in a secure "approved" container and in an area free from burning hazards. When stored indoors, flammable liquids must be kept in a flammable storage locker.

“Jerry Cans” may not be used for the storage of flammable liquids.

Storage of flammable substances on equipment or vehicles is prohibited unless such unit has an adequate storage area designed for such use.

#### Types of Fires

- a. Class A ( wood, paper and trash) – use water or foam extinguishers.
- b. Class B ( flammable liquids, gas, oil, paints, and grease – use foam, CO<sub>2</sub> or dry chemical extinguishers
- c. Class C ( electrical) - use CO<sub>2</sub> or dry chemical extinguishers
- d. Class D ( combustible metals) – use dry powder extinguishers only

#### **Fire Extinguishers**

Only use a fire extinguisher if you have been trained in its use. Call 9-1-1.

#### **Remember: PASS**

**Pull-** Pull the pin of the fire extinguisher

**Aim-** Aim the nozzle at the base of the fire

**Shoot-** Pull the trigger of the extinguisher

**Sweep-** Sweep the extinguisher side to side until fire is out

Put your personal safety first!

## **FIELD SAFETY INFORMATION**

**Mountain Weather:** A bright, sunny day can turn windy and wet within a matter of minutes with high winds and driving rain or snow. Be prepared for changing conditions.

**High Altitude:** High altitude increases the chance of dehydration, severe sunburn, mountain sickness (headaches, nausea, and dizziness) and the aggravation of preexisting medical conditions. Drink several quarts of water per day to ward off dehydration. Wear a wide-brimmed hat and sunglasses. Apply sunscreen often. If you begin to feel sick or experience any physical problems, descend to lower elevations.

**Sun Exposure:** Sunny climate, high altitude, and snow-covered ground increase the risk of overexposure to the sun's harmful rays. Wear sunscreen and lip balm with a SPF of 15 or higher. Apply sunscreen 30 minutes before going out in the sun, and reapply every 2 hours. Wear sunglasses or goggles on days of full sunlight, and on cloudy and overcast days when you are on snow, to prevent snow blindness, which is sunburn of the eyes.

**Cold Weather Injuries:** Frostnip, frostbite, and hypothermia can all occur when components of the body or the body itself is exposed to cold temperatures for an extended period of time. These injuries can be prevented:



- Selecting proper clothing for cold, wet, and windy conditions. Wool and polypropylene retain their insulation value even when wet.
- Wearing an outer layer to break the wind, repel rain or snow, and allow some ventilation, such as Gortex® or nylon.
- Wearing a hat. Up to 40% of body heat can be lost when the head is left exposed.
- Wearing insulated boots or other appropriate footwear.
- Keeping a change of dry clothing available in case work clothes become wet.
- Do not wear tight clothing. Loose clothing allows better ventilation.
- Taking frequent short breaks in warm dry shelters to allow the body to warm up.
- Avoiding exhaustion or fatigue because energy is needed to keep muscles warm.
- Using the buddy system and watching out for signs of cold stress.
- Drinking warm, sweet beverages such as sugar water and sports-type drinks. Eating warm, high-calorie foods like hot pasta dishes.

## **WILDLIFE ENCOUNTERS**

### **Bears:**

- Do not approach; stay calm; do not run but move away from animal.
- Never get between a mother and her cub.
- Drop a hat or other object, not your pack, bears are curious and will most likely stop to investigate.

- Make noise to scare the bear away.
- If possible, slowly store away any exposed food or scented items.
- If you are attacked, fight for your life and direct your defense to vulnerable areas such as eyes, throat, inner nose, and ears, ribs and abdomen.

### **Mountain Lions:**

- Do not approach, slowly move away while facing the lion; **DO NOT RUN.**
- Stay calm; talk loudly and firmly at the lion.
- Make yourself appear larger; stand upright, raise your arms and hold your jacket open wide; summon any companions to your side.
- If the lion appears aggressive throw rocks or branches, or anything handy.
- If you are attacked, fight for your life and direct your defense to vulnerable areas such as eyes, throat, inner nose, and ears, ribs and abdomen.

### **Moose, Deer, Elk:**

- Do not approach and use extreme caution during mating and birthing seasons.
- Carry and know how to use equipment such as pepper spray.
- Refer to related JHA's on RMNP Intranet.

**Streams, Lakes and Waterfalls:** Water hazards can be deceptively dangerous. Keep your distance. In winter, ice is thinner near outlets and inlets and over fast moving water. Purify drinking water to prevent giardia and other water borne diseases.

**Hazard Trees:** Over the past 10 years, mountain pine beetles have infested over 50,000 acres of lodgepole, ponderosa and limber pine within RMNP. This active epidemic of mountain pine beetles is predicted to kill 70 to 90% of the mature pines in the Park within the next 5 – 10 years and will generate a 100 fold increase in the annual number of hazard trees that require mitigation for employee and visitor safety in the frontcountry alone. Trees can fall without warning posing an ever present danger when traveling or camping in forested areas. Be particularly aware when it is windy or following a snow storm when branches are laden with snow. Look up, look around and be aware. Avoid camping or parking where trees can fall on you.

## LIGHTNING

RMNP is one of the lightning hot spots in the West, with lightning storms occurring nearly 100 days each year.

**Safest Place:** Inside a building away from windows & doors.

**Safe Place:** Inside a fully enclosed metal vehicle.

**Less Safe:** Outside.

### Plan in Advance

- Get weather report and monitor throughout day.
- Schedule outdoor work early in the morning.
- Have a plan if lightning storm forms.
- Seek safety if you see lightning or hear thunder.

### **If Indoors During a Lightning Storm**

- Get away from windows and doors.
- Don't use telephones, computers, electrical appliances, or plumbing fixtures.

### **If Outdoors During Lightning Storm**

- Get inside a large building or vehicle if possible.
- Get below tree line into a forest of even sized trees.
- Get away from metal objects, tools, wires.
- Avoid water, high points and ridges, lone tall objects, open fields, shallow caves and overhangs.
- If on horseback, get off the horse.
- In imminent lightning, crouch on heels with feet together and hands over ears.
- Spread group out to avoid multiple injuries.

### **If someone is struck by Lightning**

- Assess for breathing and pulse.
- Begin CPR.

## **SNOW/AVALANCHE/ICE HAZARDS**

Snow can happen any day of the year in RMNP. The annual average snowfall from 2000-2006 was 92" in Estes Park and 218" at Bear Lake. Winter storms tend to drop greater amounts of snow at higher elevations and on the west side of the park. Spring snowstorms in March and April can carry more moisture, and snowstorms of several feet are possible. On March 17-20, 2003, Estes Park received 34" and Bear Lake received 69" of snow. Winter driving conditions can occur anytime on Trail Ridge road. Temporary closures often

restrict travel over Trail Ridge Road. Administrative travel during a closure must be cleared through park Dispatch. Tires with good tread, a snow shovel, an ice scraper, and chains or 4-wheel drive are recommended for winter driving.

Colorado leads the nation with 59 avalanche fatalities over the past 10 years. A continental climate, relative shallow snowpack, high winds, and steep leeward slopes all contribute to an often unstable snowpack in Colorado. Best current conditions are available from RMNP's morning report. The Colorado Avalanche Information Center's website, [avalanche.state.co.us](http://avalanche.state.co.us), has daily reports and links to weather sites including hourly observations from the Bear Lake Snotel site. Highest winter avalanche hazard exists on wind loaded slopes and gullies, N-E aspects, slope greater than 30 degrees, during or within 24 hours of a storm. Warm spring days can lead to wet slides on all aspects greater than 30 degrees. Many popular winter trails such as Ouzel Falls, Mills Lake, Nymph Lake, Bierstadt Lake, and Prospect Canyon do not cross slopes of 30 degrees and are relatively safe from avalanche hazards.

Ice is present year-round in the park. Frozen falls attract winter ice climbers and high alpine glaciers attract skiers, hikers, and climbers year-round. Warm sunny days can release ice down gullies. Climbers often start and finish climbs prior to midday warming to avoid hazards. RMNP has over a dozen glaciers and hundreds of snowfields which can last through summer. Glacier surfaces quickly change from soft snow to hard ice as the previous season's snow melts. A hike such as Andrew's Glacier may be fine with just good boots one day and require crampons the next. Summer

glissading or skiing on snowfields can lead to uncontrolled slides on frozen surfaces.

Proper decision making and good traction are vital to safe travel on snow and ice. Traction equipment ranges from a good lug sole boot, trekking poles, traction devices to crampons, ice axes, and ropes.

**Poisonous Plants:** There are many different kinds of poisonous plants and mushrooms in the park. Do not eat anything unless you are absolutely sure it is not poisonous. Experts even have difficulty identifying many types of mushrooms and differentiating edible and non-edible species. Some plants are skin irritants. Skin irritations can last for minutes or weeks depending upon a person's allergens.

**Poisonous Insects:** Poisonous insects often reside in enclosed areas such as cabins and storage units. Black widow spiders, brown recluse spiders, wasps and bees can cause life threatening allergic reactions.

**Rocky Mountain Spotted Fever (RMSF):** Ticks are common in dry south facing areas of brush and grasses. Ticks can carry Lyme disease or RMSF. Apply insect repellent containing DEET, especially on neck, legs, and ankles. Perform periodic tick checks when working or traveling in the backcountry. RMSF gets its name from the trademark rash it causes - small red spots and blotches that begin on the wrists, ankles, palms, and soles. In addition to the rash, the infection can cause fever, chills, muscle aches, vomiting, and nausea. If suspected, see your doctor immediately.

**West Nile Virus:** Since 1999, West Nile Virus has been present in the United States. Mosquitoes are the primary vectors of West Nile Virus to humans. West Nile Virus does not usually occur above 7,500' and the majority of positive cases in the surrounding area have been recorded at lower elevations in all counties that encompass the park. To take precautions apply insect repellent containing DEET to exposed skin when outdoors. Treating clothing with DEET will give extra protection. Do not apply DEET on the skin under your clothing.

**Hantavirus:** Mammals can carry many diseases, such as rabies, tularaemia, plague and a variety of other diseases; avoid direct contact with any wildlife. Mice are known to carry Hantavirus, which can be airborne in confined spaces, so do not enter buildings that have been closed for long periods of time without taking the proper precautions. Hantavirus kits are readily available and must be used when cleaning areas with mice feces. Refer to related JHA's on RMNP Intranet

## **ERGONOMICS & MATERIALS HANDLING**

### **Ergonomics**

Workers who must often lift, stoop, kneel, twist, grip, stretch, reach overhead, or assume other awkward positions to do the job are at risk of developing work-related musculoskeletal disorder which can result in back strains, muscle pulls, carpal tunnel syndrome, tendonitis, rotator cuff tears, sprains, or strains.

### **Administrative Improvements for Injury Prevention**

- Organize work so that the physical demands and work pace increase gradually
- Adjust work schedules, work pace, or work practices
- Rotate workers through jobs that use different muscles, body parts, or positions
- Alternate heavy tasks with light tasks
- Provide recovery time, such as short rest breaks
- Modify work practices so that workers perform work within their power zone (above the knees, below the shoulders, and close to the body)

### **Safe Lifting/ Material Handling**

In 2007, employee injuries at RMNP related to material handling resulted in 59% of the total restricted duty days. When employees use smart lifting practices and work in their “**power zones**”, they are less likely to suffer from back sprains, muscle pulls, wrist injuries, elbow injuries, spinal injuries, and other injuries caused by lifting heavy objects.

### **In order to reduce these hazards, consider the following:**

- Before lifting, always test the load for stability and weight.
- Avoid carrying large or bulky loads that limit or obstruct your vision. Make sure you have a clear view of the path.
- For loads that are unstable and/or heavy:
  - Use mechanical devices or equipment to lift the load
  - Ask for help to lift the load
  - Reduce the weight of the load
  - Repack the load to increase stability



- Plan the lift
  - Wear appropriate shoes to avoid **slips, trips, or falls**
  - Check the intended route and point of placement before moving the load
  - Lift only as much as you can safely handle by yourself
  - Keep the lift in your power zone, above the knees, below the shoulders, and close to the body, if possible
- When lifting
  - Stand close to the load with feet apart
  - Bend knees, keeping back as straight as possible and lift with legs and not with back
  - Get a secure grip
  - Use both hands whenever possible
  - Avoid jerking by using smooth, even motions
  - Keep the load as close to the body as possible
  - Use your legs to push up and lift the load, not the upper body or back
  - Move slowly and avoid sudden twisting motions
  - Alternate heavy lifting with less physically demanding tasks
  - Take breaks
  - Use gloves when appropriate

## **SLIPS / TRIPS / FALLS**

In 1999, over one million people suffered a slip, trip, or falling injury, and over 17,000 Americans died as a result.

All employees and volunteers working on or around smooth/slick surfaces should mitigate hazards by following these recommendations:

- Wear footwear that is appropriate for conditions inside and outside. Improper fit can compromise balance and performance
- Wear appropriate traction devices (Yaktrax, STABILicers, Get-A-Grip, snowshoes, crampons)
- Avoid wearing high heels
- Wear slip resistant soles
- Hiking poles may be useful for challenging conditions to help keep your balance
- Note areas that drain poorly, retain snow, or are habitually slippery, and initiate permanent changes (engineer out) to eliminate hazards
- Remove snow and ice and apply salt or sand in high traffic areas
- Walk, don't run on smooth/slick surfaces
- Scan the area ahead and plan your travel path
- Alter your stride to take shorter, slower steps
- Always carry tools on the downhill side
- Carry a light source at night and in unfamiliar areas
- Know how to fall. Try to land in the least obstructed spot. Protect your head and back. Roll with the fall
- If the weather is particularly bad, consider putting the job off until conditions improve
- Refer to related JHA Library on RMNP Intranet.

## **FLAGGING & TRAFFIC CONTROL**

Flagging operations in Rocky Mountain National Park will follow the standards set forth by the Colorado Department of Transportation (CDOT) and the Manual on Uniform Traffic Control Devices.

All employees performing traffic control on park roads will have proper training and be equipped with approved personal protective equipment (PPE).

Required PPE for park staff (employees & volunteers) will be at a minimum:

- Reflective Traffic Vest (visible at 1,000 feet/ performance class 2 or 3)
- Orange Hard Hat
- Park Radio
- Approved Stop/Slow Sign Paddles

Before work commences along a roadway a traffic control plan will be written. Proper planning is essential to the placement of warning signs along the roadways. Refer to the CDOT requirements for distances of flagger stations in advance of the work zones.

### **NOTE:**

For *emergency* traffic control situations, such as a motor vehicle accident or HazMat spill, some PPE may not be readily available. However, all employees should at least wear a reflective traffic vest and have radio communications available.

## STOCK USE

Stock use by employees of RMNP is defined in the park's Livestock Management Plan, maintained by Trails. All stock use is to be authorized by the District Trail Crew supervisor and lead Animal Packer. The plan gives guidance and outlines responsibilities of all stock users, establishes minimum requirements for use of stock including training required, and provides standard operating procedures (SOP) for the use of horses and mules and related facilities. The plan includes sections on Job Hazard Analysis (JHAs), horse rider training (including proper use, care and certification level), packing training, truck and livestock trailer use and training, the procurement, annual upkeep of, and disposition of animals, and procedures and maintenance in and around the barns and corrals.



## **SITUATIONAL AWARENESS & PERSONAL SAFETY**

“Situational awareness” is being mindful of potential dangers in your situation and surroundings at all times, including realizing the potential for an encounter with a stranger or a colleague to go bad. This awareness, combined with “expecting the unexpected”, can make the difference in the outcome, for example, working alone or at night can help you to plan for the unexpected encounter.

Situational awareness is applicable equally to both men and women, especially when your job places you in contact with the public, but it also applies in interacting with peers.

### **General Precautions –**

- Trust your instincts. If something doesn't look or feel right, it probably isn't. Advise others of your suspicions.
- If you are working or hiking alone, notify someone of your plan. If you are on duty hiking in the backcountry, then you must file a Travel Plan with Dispatch.
- When going into the field, ALWAYS take a park radio. Test it prior to leaving; ALWAYS carry a spare battery.
- Vary your daily routine; don't be a “creature of habit”.
- Anyone working late should ALWAYS check out with the last person on duty or Park Dispatch.
- If working at night, always carry a flashlight and park in a well-lit location near your work station, if possible.
- Take advantage of available self-defense and other personal safety training; learn how to recognize potential warning signs of a potential encounter or attack.

- Maintain a level of physical and mental fitness that will enable you to defend yourself or escape an attack.
- NEVER tell someone that you're alone. Always act as if there is someone else with you.
- NEVER get in a vehicle with or leave an area alone with someone you don't know, regardless of how legitimate their claim may appear. Always report the incident to Park Dispatch PRIOR to responding. Attackers often lure their victims to an isolated location with a false report of an accident or injury.
- Keep windows and doors in your duty station, quarters, and personal and government vehicles locked at all times.
- Inspect your work area and residence for potentially unsafe conditions, such as blind corners, poor lighting, broken door and window locks, etc.
- Know all alarm, park radio, and telephone locations, and clearly post emergency contact numbers for access.
- Be proactive by running different scenarios and your responses through your mind to prepare yourself for an encounter; i.e., applying "when / then" thinking.

**If a visitor or co-worker contact becomes an encounter –**

- Politely and firmly ask the party to leave
- End the conversation and walk away, but watch them until you reach a safe area.
- Call someone to relieve you, even if the call is a ruse. Acting like someone is coming may be enough to end an unwelcome encounter.
- Shout for help or use your radio or phone to get help.

- Don't enter into a verbal altercation, which can often escalate into a physical attack.
- Make noise to attract help, and FIGHT BACK, if attacked.



## WELLNESS

RMNP employees should be encouraged to engage in activities that promote positive physical and mental health. While RMNP has no formal “Wellness Program”, law enforcement park rangers and wildland firefighters are permitted by policy to use 3 hours of duty time per week to participate in physical fitness activities.

Other employees should be encouraged to participate in a personal physical fitness program, such as scheduling backcountry hiking days to stay fit, as well as gaining familiarity with the park, or simply taking a 15-minute daily walk.

### **Park Facilities / Local Fitness Centers -**

- 1) East Side Employee Fitness Center/Weight Room -

- Located in bottom level of Alpine Hotshot Dorm
  - Initial orientation required with Fire Program Clerk before the room can be used.
  - Weight Room winter hours: 7 days a week, 10AM – 7:30 PM; **however, hours are subject to change after arrival of Hotshots to RMNP each spring.**
- 2) West Side Employee Fitness Center  
Located in Building #888, Kawuneeche Housing Area
  - 3) **MedX**, located in Estes Park
  - 4) **Rocky Mountain Health Club**, located in Estes Park
  - 5) **Curves**, located in Frasier
  - 6) **Winter Park Athletic Club**





## **MOTOR VEHICLE SAFETY**

Safely operating and properly maintaining government vehicles is a responsibility many of us share during the course of our duties here at Rocky Mountain National Park. All employees and volunteers should know and carry out the following driving safety practices before they operate government vehicles:

### **Pre-Inspection and Preventive Maintenance Activities –**

- Walk around the vehicle to check for unreported damage, hazards, or obstructions.
- Tires: Check for nails, adequate tread and tire pressure
- Check fluid levels: Fuel, oil, power steering fluid, brake fluid, coolant, and wiper fluid (& blades)
- Check windshield sticker to check for next servicing date
- Windshield clean and clear of obstructions
- Familiarize yourself with all vehicle functions and controls prior to moving the vehicle; adjust seat and mirrors
- Wipers, lights, horn, and turn signals all in working order
- Check Emergency Equipment: Fire extinguisher, first aid kit, flashlight, window scraper and brush, tire changing equipment, warning signs, reflectors or flares.
- Secure all objects inside the vehicle and in cargo areas.

## Driving Safely and Defensively –

- **Operation of a government vehicle requires a valid state operator's license**
- Wear seat belts at ALL TIMES when vehicle is in motion.
- Obey all posted speed limits and motor vehicle laws, and never drive faster than road conditions allow.
- While the vehicle is in motion, refrain from distracting conversations or activities, eating or drinking, using hand held cellular telephones, reading maps or other materials.
- Do not operate a vehicle while under the influence of alcohol, drugs, or while sick or suffering from undue fatigue or emotional stress.
- Stay alert to traffic conditions and situations developing far ahead of your vehicle.
- Be on the lookout for other drivers short cutting corners, speeding, tailgating, illegal passing, and sightseeing.
- Use engine compression and gearing to slow down vehicle on steep downhill grades. Riding your brakes can cause them to overheat and fail.
- Always yield the right of way to pedestrians and wildlife.
- When parking on hills, set parking brake, chock wheels, and point front wheels toward curb or away from traffic.
- **Emergency Stopping:** Move vehicle to the shoulder of the road away from traffic, set parking brake, activate flashers, watch passing traffic, raise hood if your vehicle is disabled, display emergency reflectors, signs and or flares.
- When parking, back vehicle into the space, especially if you are operating an emergency vehicle. While backing, use a spotter if possible to guide you.

- **If involved in a motor vehicle accident, notify Park Dispatch after ensuring your safety, and notify your supervisor for further instructions.**

### **Adverse Weather Conditions & Road Hazards –**

Allow more time to prepare the vehicle for departure and to reach your destination. If the trip can be delayed, avoid driving altogether. *In addition to usual pre-inspection procedures, you should -*

1. Walk around the vehicle and clear snow and ice from all windows, mirrors, and lights
  2. Double-check windshield wipers and fluid level
  3. In addition to emergency equipment, include extra clothing or a blanket or sleeping bag, snow shovel, and tire chains, if required.
- **Winter Driving:** If you must drive in snowy conditions, follow these tips:
    - Determine conditions in the area to be traveled and choose the appropriate vehicle and route
    - Turn on your lights to increase your visibility to other motorists
    - **Slow down** and increase the following distance between your vehicle and vehicles in front of you.
    - Do not accelerate, brake, or turn too quickly. Reduce speed or accelerate gradually.

- Do not use the cruise control when roads are slick. Cruise Control can apply power at the wrong time and initiate a skid or make a small skid worse.
- Drive in the center of your lane and be alert for park snow plowing activities. Plowing often widens a lane beyond the road edge and/or centerline, so give way.
- If your vehicle begins to slide:
  1. Ease off the gas and do not touch the brake.
  2. Steer in the direction of the skid. Point the wheels in the direction the vehicle is sliding.
  3. When you feel the vehicle straighten out, turn the wheels straight and keep moving.
- **Rock Fall:** Rocks can fall at any time, especially through highway rock cuts. Watch for gravel/small rocks falling onto the roadway as a pre-indicator to larger rock fall.
- **Wildlife:** A common highway hazard at RMNP. Anticipate that wildlife will run out in front of you, especially at night.
- **Congested Areas:** Use extra caution around trailheads, bridges, pullouts, parking lots, and any areas where traffic is backed up or stopped, especially due to wildlife.
- **Sightseers:** Anticipate visitors in the middle of the road at view areas, blind curves, and when wildlife are present adjacent to the road.
- **Bicyclists:** Bicyclists share the road. Be especially vigilant on days when visibility is poor, especially above treeline.

## **Special Equipment Considerations –**

- If your vehicle uses alternative fuels, familiarize yourself with refueling procedures.
- Forklift (additional training required)
- Snowmobiles (additional training required)
- Trailers (additional training required, esp. horse trailers)



## **SAFETY INFORMATION SOURCES**

Contact your supervisor, your Division's Safety Team representative, your Division Chief (Executive Safety Committee member), or the Park Safety Officer.

Other sources of information available include:

### **Safety and Environment Intranet Site**

Check out the RMNP Safety and Environment site located on the RMNP Intranet. Select Divisions and then select Safety and Environment for the following information:

- Written Safety Programs including:
  - Accident Investigation and Reporting
  - Bloodborne Pathogen Exposure Control
  - Chainsaw & Crosscut Saw Training & Certification
  - Confined Space
  - Hazard Communication
  - Hearing Conservation
  - Pandemic (Avian) Influenza
  - Personal Protective Equipment
  - Respiratory Protection Program
- Annual RMNP Safety Plan
- Employee Safety Team's charter and meeting notes
- Employee Injury/Illness and Motor Vehicle Accident Statistics
- Environmental Management
- Executive Safety Committee's charter and meeting notes
- Job Hazard Analysis Library
- Management Walkaround Documentation Form

- Safety Lessons Learned
- Safety Training Resources
- Work Area Hazardous Product/Chemical Lists

### **Safety Training Resources**

Safety training resources, including videos, DVDs, and brochures are available from the Safety Office library located on the second floor of Building 828, Maintenance Headquarters, or the Colorado District (CRD) library. A list of available resources is located on the Safety & Environment intranet site. You may contact the Safety Officer by Email or at extension 1270 to have resources sent to you.

### **Safety Bulletin Boards**

Safety bulletin boards have been installed at the locations below. The boards have three sections that will be consistent at all locations throughout the park. These sections will cover Wellness, Safety Tips, and Executive Safety Committee and Employee Safety Team meeting notes. The Safety Accomplishments and Work Unit Information may vary depending on the location of the bulletin board. You can find the Safety Bulletin Boards in the following locations:

- Auto Shop
- Beaver Meadows Entrance Office
- Beaver Meadows Visitor Center/Headquarters, rear door
- Building 828, Maintenance Headquarters:
  - Buildings / Custodial / Roads / Utilities
- Building 473 Colorado River District Utility Building:
  - Facility Management / Trails
- Fire Management Office (FMO)

- Fire Operations Center
- Kawuneeche Visitor Center, office hallway
- McLaren Hall, break room
- Project Administration
- Ranger Operations Center (ROC), inside main work room
- Resource Office Lower Level (ROLL)
- Roads
- Trails Shop, Eastside
- Warehouse



Produced by the RMNP Employee Safety Team

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## Notes

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