

ROCKY MOUNTAIN NATIONAL PARK

2011 BACKCOUNTRY TRAVEL AND TRACKING POLICY



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Date April 23, 2011

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Date May 9, 2011

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Date 5/9/11

DEDICATION

This document is dedicated to the memory of Park Ranger and friend, Jeff Christensen, who succumbed to injuries received in the line of duty on July 29, 2005, while patrolling the backcountry of Rocky Mountain National Park. His sacrifice will never be forgotten.



“If I ever die while at work in the mountains, do not cry for me because you will know that I died doing what I love”

**Jeffrey Alan Christensen
1974 – 2005**

TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
I. PURPOSE	5
II. POLICY	5
III. BACKCOUNTRY DEFINED	6
IV. PURPOSE OF BACKCOUNTRY TRAVEL	6
V. SAFETY	7-12
A. Rocky Mountain National Park Safety Philosophy	
B. Situational Awareness & Risk Management	
1. <i>Situational Awareness</i>	
2. <i>Risk Management</i>	
3. <i>Applying SPE & GAR Models</i>	
C. Accident/Injury Reporting	
VI. TRACKING AND ACCOUNTABILITY OF EMPLOYEES	13-19
A. Employee Tracking	
B. Backcountry Travel Plan	
C. Reporting In and Out of Service	
D. Communications Equipment	
E. Deviation from Travel Plan	
F. Status Checks	
G. Use of Backcountry Cabins and Ranger Camps	
VII. EQUIPMENT REQUIREMENTS & EXPECTATIONS	20-24
A. Mandatory Equipment Requirements	
B. Helmets	
C. Footwear	
D. Equipment Considerations for Specific Operations	
VIII. REQUIRED AND RECOMMENDED TRAINING	25
IX. REFERENCES	26

APPENDICES

APPENDIX A – ROMO-7: BACKCOUNTRY TRAVEL PLAN FORM

APPENDIX B– ONE MILE BUFFER FROM RMNP DEVELOPED AREAS

APPENDIX C – ROCKY MOUNTAIN NATIONAL PARK RADIO COVERAGE MAP

APPENDIX D - SPE MODEL WORKSHEET

APPENDIX E - GAR MODEL WORKSHEET

Rocky Mountain National Park Backcountry Travel and Tracking Policy

I. PURPOSE

To establish policy and procedures for Rocky Mountain National Park (ROMO) employees who are involved in wilderness/backcountry travel. **As referred to in this plan, an employee includes volunteers who work under the authority of the Volunteers-In-Parks program.** (See [Director's Order #7: Volunteers in Parks](#)).

This policy is intended to promote safe work practices and procedures that will enhance employee and visitor safety in the backcountry. It provides an outline of employee duties and responsibilities when working in the backcountry and procedures for utilizing the Park Communications Center (Park Dispatch) for tracking employees engaged in backcountry travel.

NOTE: While this policy serves as a general training guide and performance management tool for job requirements and expectations, individual divisions may require more specific or stringent training requirements.

Park cooperators, researchers, other agency staff, and non-ROMO NPS employees fall outside this definition and will not be tracked. These entities are encouraged to develop safety plans within their organizations and utilize a self-tracking system.

II. POLICY

On July 10, 2006, the Director of the National Park Service issued a memorandum/policy statement that requires the implementation of Service-wide Backcountry Travel Procedures. These Travel Procedures outline specific requirements in which all NPS units must comply.

In accordance with these requirements, Rocky Mountain National Park will ensure that all employees performing duties in the backcountry are adequately trained, equipped, and accounted for while engaged in work. This will enhance the opportunity for early rescue and/or early medical intervention, if needed. Trip reporting and employee tracking will be accomplished through Park Dispatch, as identified in the following procedures.

This policy applies to ALL employees and volunteers who are traveling in the backcountry. While each Division may have specific training requirements, expectations, and procedures that are specific to work unit needs, the following policy and procedures outlined in this document will be adhered to by everyone.

III. BACKCOUNTRY DEFINED

For the purpose of this policy, backcountry refers to park lands that are essentially undeveloped or natural in character and are at least one mile beyond a designated trailhead, and one mile from established roadways and developed areas. (**Refer to Appendix B – One Mile Buffer from RMNP Developed Areas**)

Travel and/or work outside of developed areas but less than one mile from backcountry: Supervisors must be aware of employee activities when travelling or working outside of developed areas and provide direction regarding the need for a travel plan and/or status checks. A variety of hazards and risks may warrant the need for a backcountry travel plan and/or status checks even though the travel or work is still within one mile of developed areas. Skiing in steep terrain and/or in areas where a fall could result in injury, working near fast moving water, or the presence of hazard trees are just a few examples that could warrant travel plans and possible status checks. Supervisors with employees who engage in potentially hazardous work or travel in areas that present risk and the potential for accident/injury are required to discuss these situations with employees and assist in determining what safety, tracking and status checks may be required.

It is understood that employees frequently travel short distances on trails and conduct walks that are considered “frontcountry” in nature. While no travel plan is required for these short distance excursions, it is still the employee’s responsibility to communicate their plan or intentions to a supervisor or Park Dispatch, regardless of the distance or level of risk.

IV. PURPOSE OF BACKCOUNTRY TRAVEL

Employees who travel in the backcountry do so for a variety of reasons –

- General patrol of trails, cross-country zones, and mountain peaks
- Visitor contact for enforcement of laws and regulations, search and rescue, and emergency medical services purposes.
- Park interpretation and visitor education with focus on Leave No Trace ethics, safety and accident prevention
- Resource stewardship activities, such as research and condition monitoring, wildlife management, and fire management.
- Maintenance and reconstruction of trails, signs, backcountry cabins, toilets and utilities and other facilities.
- Livery support of various maintenance projects and other division’s needs, to include all activities previously mentioned.

In the interest of employee safety, it is critical that specialized backcountry skills, including safe travel techniques in a variety of conditions, are trained for and maintained. It is also important that employees maintain a high level of fitness and acclimation to higher altitudes. Backcountry conditions constantly change and must be continuously monitored.

V. SAFETY

A. Rocky Mountain National Park Safety Philosophy

- **Employee and public safety is our primary concern.**
- All programs and employee activities must reflect this commitment.
- The commitment to and accountability for safety is a shared responsibility of all employees, supervisors, managers, and administrators.
- Backcountry travel in a mountain environment is inherently risky. At all times, personnel shall strive to maximize their margin of safety and will practice the concepts of situational awareness and risk management.
- Supervisors and employees are responsible for following safe work practices and procedures, as well as identifying and reporting unsafe conditions.
- It shall be the responsibility, and right, of each employee to speak out when safety concerns are observed and identified. If an employee does not feel that he/she can perform a task safely, this concern should be communicated to a supervisor immediately. In such circumstances, the task in question should not be performed until the concern is addressed.
- **There is nothing we do that is so important or urgent to justify unsafe decisions or actions.**

B. Situational Awareness & Risk Management

An important element of work in a backcountry setting is self-reliance and personal preparedness. Accordingly, park personnel are expected to assume a high degree of responsibility for their own safety, commensurate with the nature of activities they undertake. While safe practices and procedures will be emphasized in all aspects of the backcountry/ wilderness program, employees are ultimately responsible for their own safety.

A safe and successful backcountry trip is dependent upon good situational awareness and the ability to anticipate, detect and act upon problems encountered (risk management). Discretion and judgment are key elements of this process.

Refer to your ROMO Employee Safety Handbook.

1. *Situational Awareness*

Situational Awareness is the ability to identify, process, and comprehend the critical elements of information about what is happening around you. It is dependent upon the accuracy of one's perception of the current environment. When situational awareness is lost, the potential for human error increases.

Perception vs. Reality

- View of the situation
- Incoming information
- Expectations & biases
- Incoming information vs. expectations

The loss of situational awareness usually occurs over a period of time and will leave a trail of clues. Factors that reduce situational awareness include the following:

- Complacency
- Confusion or gut feeling (listen to your inner voice!)
- Lack of attention to surroundings
- Departure from established policy or procedure
- Failure to meet objectives or follow plans
- Ambiguity
- Fixation or preoccupation
- Insufficient communication
- Fatigue or stress
- Task overload
- Task underload
- Group mindset
- “Press on regardless” philosophy
- Degrading conditions, such as weather

Pay attention to current and changing conditions. What is your physical and mental status? Are you properly clothed and equipped for your trip? Observe your surroundings. Watch your footing. Evaluate current and changing weather. Regularly communicate your status.

Good situational awareness requires constant attention and processing of all the objective and subjective information that surrounds you. Situational awareness is an essential element to managing risk.

Common Backcountry Hazards

Environmental-

Weather:

- Cold/heat/sun
- Rapidly changing weather in the mountains
- Clouds and visibility; white-out conditions
- Wind
- Lightning; hiking above tree line with an approaching thunderstorm
- Refer to ROMO Intranet for JHA on [Backcountry Travel](#)

Terrain:

- Tripping hazards
- Brush
- Exposure and cliffs
- Encountering class 4 or 5 technical terrain
- Stream crossings
- Refer to ROMO Intranet for JHAs on [Footwear](#), and [Climbing/Mountaineering](#)

Snow travel:

- Slopes (slipping and sliding)
- Avalanche risk
- Tools (ice axe, crampons)
- Snow bridges
- Daily and hourly changes in snow pack
- Refer to ROMO Intranet JHA on [Footwear](#) for traveling on snow

Wildlife Encounters-

- Bears/Mountain Lions
- Raptors (i.e. goshawk)
- Ticks
- Rodents (plague and hanta virus)
- Refer to ROMO Intranet JHA on [Bear/Lion Encounters](#), park publications, and “ROMO Wildlife Procedures”, version 2002

Hazard Trees-

- Increased risk in wind and/or snow
- Refer to the [Hazardous Tree](#) JHA section in [Employee Safety Handbook](#) and ROMO Intranet
- Hazardous Tree Management section of the ROMO [Backcountry Wilderness Management Plan](#)
- Refer to “Safety Guidelines for Employees Working in Hazard Tree Environments” handbook.

Use of Tools-

- Refer to ROMO [Chainsaw Plan](#) & [Crosscut Saw Training](#) JHA on ROMO Intranet and in the Employee Safety Handbook.
- Refer to ROMO Intranet JHA on [Backcountry Travel](#) & ROMO Intranet JHAs on [Trail Maintenance & Clearing](#).

Violator Contacts-

- **NPS Policy:** All non-commissioned employees should be trained and encouraged to observe, recognize and record illegal activities. Their observations should then be brought to the attention of commissioned employees for appropriate action.
- Refer to NPS Management Policies under “Law Enforcement”, Section 8.3.3 [\[Inside Front Cover\]](#).

2. *Risk Management*

Risk management is a process that begins with effective situational awareness. Risk management helps ensure that critical factors and risks associated with backcountry travel and activities are identified and considered during the decision making process. This proactive process must precede action.

Risk management should include the following steps:

- 1) Define the Mission/Task – Review current and planned operations for your task at hand. Break down the operation in to “bite-size” pieces.
- 2) Identify Hazards - weather, terrain, personal fitness level, altitude, exposure
- 3) Assess Risks - current and forecasted weather, poor snow conditions, terrain appropriate for skill and ability, appropriate footwear for task, required equipment/gear necessary and available
- 4) Identify the Options to Minimize Risk – benefits of planned actions weighed against the costs of those actions; ex: direct route vs. an alternate but safer route; continuing trip or work vs. stopping early and returning to a safer work area; using your “gut feeling”.
- 5) Evaluate Risk vs. Gain – determine if the benefits of your plan now exceed the levels of risk that you are taking.

- 6) Implement Controls – JHA in place and followed for work performed, safety equipment in use and good working order, adequate communications, status checks done for hazard zones, safe zones identified, use of trigger points.
- 7) Execute Decision – Move forward with your plan, but assess available resources and ensure that risk controls are known and are followed.
- 8) Monitor the Situation – Constantly re-evaluate and re-assess conditions and decisions, change the plan if needed.

3. *Applying SPE & GAR Models in Determining Risk*

SPE Risk Management Model -

Risk for a specific hazard can be assessed using the SPE Model, computed as:

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

Severity describes the potential loss or consequences of a mishap. Should something go wrong, the results are likely to be found in the following areas:

- Injury, occupational illness or death
- Equipment damage
- Mission degradation
- Reduced morale
- Adverse publicity
- Administrative and/or disciplinary actions

Severity is calculated on the SPE Model by scoring from 1 (none or slight) to 5 (Catastrophic). It can be mitigated by protective devices, engineering controls, and personal protective equipment.

Probability is the likelihood that given exposure, the projected consequences will occur, and it is also calculated by scoring from 1 (Impossible or remote under any conditions) to 5 (Very likely to happen). Probability can be mitigated by training, awareness, attitude change, physical fitness levels, etc.

Exposure is the amount of time, number of cycles, number of people involved, and/or amount of equipment involved. Exposure is calculated by scoring from 1 (None or below average) to 4 (Great). Exposure can be mitigated by reducing the number of people involved, the number of events, cycles, evolutions, etc.

Calculating Risk Using the SPE Model

By using the $R = S \times P \times E$, those risks that are substantial to very high need to be controlled. After computing the risk levels for each hazard identified, those hazards can be rank ordered from the highest to the lowest risk. This allows you to focus on the areas of most concern first under conditions of limited resources.

REFER TO APPENDIX D for examples of the SPE Value and Risk charts to calculate the risk for your specific backcountry mission/task, or click on hyperlink to retrieve these documents from the ROMO Public Drive - [Q:\OL Tools](#) .

GAR Risk Management Model –

More general risk concerns that involve operational planning or reassessing risks can be addressed using the GAR Model. According to a study of NPS accidents, the following 8 elements have been identified as affecting risk in operations:

- Supervision
- Planning
- Team Selection
- Team Fitness
- Communication
- Contingency Resources
- Environment
- Event or Evolution Complexity

These elements are incorporated into the **GAR (Green, Amber, Red) Risk Assessment Model**. This model provides a work team with another way of assessing risk and may be used as an alternative to the **SPE Model**.

REFER TO APPENDIX E for an example of a GAR Model worksheet to calculate the risk for your specific backcountry mission/task, or click on hyperlink to retrieve this document from the ROMO Public Drive - [Q:\OL Tools](#) .

C. Accident/Injury Reporting

All ROMO employees are required to immediately report to their supervisor every job-related accident, near-miss, or incident. This should be emphasized in training sessions. In the backcountry setting, this may require an initial brief report via radio with an in-depth follow-up at a later time. Supervisors shall ensure that an appropriate level of investigation and follow-up is conducted for each incident, as mandated by the ROMO Safety Program. See [ROMO Intranet](#) or Employee Safety Handbook for guidelines on accident and injury reporting.

VI. TRACKING & ACCOUNTABILITY OF EMPLOYEES

A. Employee Tracking

- **All employees traveling or performing work in the backcountry will be tracked as outlined in the following procedures.** The purpose of tracking and accountability procedures is to ensure that employees traveling and working in the backcountry return safely. The goal, in the case of an unplanned event, is for early medical intervention and rescue without unnecessary delay.
- **Employee Photo-Documentation / Emergency Contact Information -** In the past, search efforts and investigations for overdue/lost park employees have been hampered as a result of not having current employee photographs and/or identification information on file.

Supervisors **are required to** ask employees and volunteers for emergency contact information, and they should have digital photographs taken of all employees and volunteers before entry into the backcountry. This information will be maintained by supervisors and available to Park Dispatch in the event of an emergency. The supervisor **will also** conduct spot checks to ensure all employees and volunteers in the field have photographs on file.

B. Backcountry Travel Plan

Before beginning a backcountry trip, all park employees must submit a ROMO-7, "Backcountry Travel Plan" to Park Dispatch (see **Appendix A**) **at least one day in advance of the trip, whenever possible. An electronic version of the Travel Plan is available to all employees and must be completed and** saved in the Public Drive [Q:\BC TRAVEL PLANS](#) under the appropriate month and day. For those employees without computer access, a copy of the plan must be FAX'ed to Dispatch at Extension 1310. If no FAX is available, deliver in person.

The submission of a travel plan with Park Dispatch is required for any employee who travels in the park backcountry.

If traveling or working in a group of two or more, only one travel plan is required for the group and will be submitted by the **group leader**. However, if persons within the group split up, any deviation to the travel plan must be immediately reported to Dispatch.

If the travel plan involves a complicated route, and/or if it involves any off-trail travel, employees must fully discuss the intended route with your supervisor and leave a detailed map of your planned trip.

If the Incident Command System has been activated for an emergency response into the backcountry, or if a pre-planned event such as a prescribed fire has accounted for the tracking of employees involved in the event, the filing of a travel plan is not necessary. However, affirmative and accurate communications with Dispatch by the Incident Commander is required to ensure that tracking has been initiated and is being accomplished as part of incident or event operations.

C. Deviation from Travel Plan

Employees are empowered to change their travel plan when deemed necessary. For example, the practice of situational awareness may identify an approaching thunderstorm. Good risk management might prompt a decision to deviate from a planned route and seek an immediate route that takes them to safer and less exposed terrain. **However, all deviations to travel plans must be immediately reported to Park Dispatch prior to the deviation being initiated.**

D. Communications Equipment

Effective communications are a life-link. At a minimum, employees traveling and working in the backcountry are required to carry a park radio with fully charged battery, **and** either a spare fully charged battery or a clamshell battery case with batteries that are in good working condition. Extended trip travelers should plan for additional spare batteries if needed.

While each group must have at least one radio, all persons are strongly encouraged to carry their own radio, if possible. An unplanned event may force the group to split up. Anyone traveling solo is required to carry a park radio at a minimum. In addition to a radio, other electronic communication devices, such as cell phones or satellite phones are also highly recommended. If sufficient communications are not available, staff should not travel alone.

If a group splits up for any reason, each component of that former group must carry a park radio. If this cannot be achieved, then the trip must end until this can be corrected.

As part of trip planning, employees should be aware of radio coverage in the area they will be traveling. Radio reception is often affected by location and can be enhanced or diminished by changing location, i.e., “dead zones”. The park **Radio Coverage Map** (See **Appendix C**) must be referred to as a part of trip planning.

Note: If entering a known, small area of marginal or absent radio coverage, contact Park Dispatch and advise that you are entering a poor radio coverage area and request a status check within a reasonable amount of time. In other words, advise them that you should be back within radio contact in thirty minutes.

Dispatch will monitor your status and attempt re-contact if you have not called in again. This procedure is in lieu of carrying a satellite phone and is only permissible when passing through known, small areas of poor radio coverage. These areas must be discussed in advance with a supervisor.

In areas where radio coverage is marginal or absent, use of a secondary mode of communication is required. This typically means a satellite phone, which is available through a supervisor. Before satellite phones are carried into the backcountry it's advisable to test their function to ensure working condition. Satellite phones may also not work in some areas of the park, such as steep canyon bottoms or heavily forested areas.

Satellite phone users should consider a spare battery on extended trips (more than one night), or if the phone will be utilized for more than emergency use.

While cell phones can be useful, they should not be considered reliable. Cell coverage in ROMO is highly influenced by the carrier, terrain, etc.

E. Reporting In and Out of Service

SOLO TRAVELERS - In addition to filing a Backcountry Travel Plan, when entering and leaving the backcountry, or at the beginning and end of each work day if remaining overnight in the backcountry, it is essential that all park employees who are **travelling solo**, notify Park Dispatch to initiate and close out their daily travel plans. If you fail to do so, a time intensive and costly search may ensue, perhaps placing other employees at risk. If you are unable to reach Dispatch, you should safely move to a better location and make every effort to contact them as soon as possible.

GROUPS - For groups (i.e., two or more employees), filing a Backcountry Travel Plan with Dispatch is also required, however, the group itself will be responsible for tracking all members while in the field through the conclusion of the project or trip. A group leader must be designated and named on the travel plan, and at the conclusion of the project or trip, the group leader is responsible for ensuring that all members of the group are accounted for and clear of the backcountry.

F. Status Checks

1. Trailed Areas:

Unless specifically requested (or under Winter Conditions – See No. 5), Park Dispatch will not conduct periodic status checks on employees who are traveling or working alone on a designated backcountry trail.

However, it is the responsibility of employees to **accurately estimate the ending time on their BC Travel Plans and to** proactively report their status during the course of a patrol or trip. For example, employees should contact Dispatch and report their arrival at a primary or overnight destination, when halfway through a loop hike, and when returning to a trailhead.

2. Off-Trail – Group:

A group is defined as two or more employees. When traveling off trail in a group, Dispatch will not initiate status checks unless requested to do so.

It is still **required** for groups to call in status checks to Dispatch when **travelling through elevated** risk areas or when initiating **elevated** risk activities (See #4 below). Again, it is the group leader's responsibility to initiate and to terminate the need for status checks with Dispatch.

3. Off-Trail – Solo:

When an employee intends to travel off trail solo, Dispatch will initiate a tracking schedule that will include two hour status checks by radio. These status checks should begin when the employee *leaves* a designated trail or developed area and ends when the employee *returns* to a designated trail or developed area. It is important to remember that employees must initiate the status checks with Dispatch prior to off-trail travel. It is still useful for employees to *initiate* periodic status checks with Dispatch, which will ease their workload.

4. **Elevated** Risk Areas & Activities:

Any time employees travelling solo or in groups suspect that they are entering **an elevated** risk area (i.e., a suspected avalanche slope or swift water area) or may be engaging in **elevated** risk activity (i.e., removing hazard trees or windfalls), they must apply the tools of Operational Leadership (SPE or GAR models) and determine if they can successfully mitigate their risk and continue on with their activity safely. If this can be accomplished, then at a minimum, it is then the employee's or group leader's responsibility to initiate status checks with Dispatch to advise them of the hazard or activity. The employee must provide information specific to the activity or hazard, and determine the frequency of status checks requested.

5. Winter Travel Conditions:
“Winter travel conditions” are based more on the ability or inability to follow and/or navigate a known, designated trail than they are on the time of year or presence of snow. A good rule of thumb to follow if a mishap occurs: Will a search party be able to follow the summer trail and *locate you with ease*, even if your tracks are obscured by fresh or blowing snow? If the answer is no or questionable, then **winter travel conditions** prevail and you should request two-hour status checks, consistent with the procedures for *off-trail solo* travel. Remember, status checks are done for the benefit of those who may come looking for you if you get into trouble.

For solo travelers, when winter travel conditions prevail on-trail, i.e., the designated summer trail is no longer easy to follow due to snow depth and/or terrain features, *or* when limited visibility interferes with easy navigation along a designated summer trail, then the travel procedures outlined above in Number 3, “*off trail – solo*” will be followed. For persons travelling in a group under winter conditions, status checks are not required, but are highly recommended.

6. Loss of Contact with Employee(s):
If an employee travelling solo fails to answer or initiate a status check, or fails to close out their plan, Park Dispatch will make three more attempts at ten to fifteen minute intervals to make contact. If employees travelling as a group also fail to respond to status checks once they initiate the process, the same rule will apply. ALL backcountry travelers, whether they are travelling solo or in a group, are expected to have a park radio turned on and to monitor radio traffic at all times while on duty.

If no contact is made, Dispatch will attempt to contact the employee’s supervisor, who will in turn be responsible for gathering all available information regarding the employee, their described route, plan, or any other information that will assist in determining an appropriate reaction or response (i.e. search urgency).

Dispatch will also notify the shift supervisor, Sub-District Ranger, District Ranger, and Chief Ranger, in that order, until notification has been made. Supervisory Ranger staff will be responsible for initiating appropriate action that is intended to locate and ensure the safety of any unaccounted for employee.

Efforts to contact the employee will continue. Keep in mind that the inability to contact an employee does not necessarily prompt an immediate or even delayed response. This procedure shifts such decisions from a dispatcher to a supervisory park ranger.

NOTE: If an employee fails to respond to status checks or fails to call out of service due to their own negligence or indifference to proper procedures, any overtime costs that are associated with SAR operations will be charged to that employee's division's benefitting account.

It must be recognized that actions will vary dependent upon totality of circumstances. What may be a reasonable course of action/response in one situation may differ in another. Good judgment, experience, and available information will guide decisions. This approach is consistent with the manner in which all backcountry overdue persons or parties are addressed in the Park.

The appropriate Division Chief will ensure that all such incidents are reviewed.

7. Communications Equipment Failure:

In the event of known communications equipment failure while in the backcountry, all employees, whether travelling solo or in a group, understanding that search efforts may ensue, **MUST** leave the backcountry by either back-tracking on their completed route of travel as soon as possible, or if a midway point has already been reached, stay on their intended route of travel.

If the employee can reasonably locate another unit along their planned route with good communications equipment (trail crew, etc.), they should immediately reestablish contact with Park Dispatch to update their status. However, exiting the backcountry is preferred unless the exact location of the other unit is known and can be reached in a timely manner.

8. Supervisory Notification and Follow-up:

The employee's supervisor and Division Chief will be notified each time efforts are initiated to follow up on employees who fail to respond to status checks, fail to close out travel plans, or fail in any way to comply with travel and tracking requirements. In such events, Park Dispatch is required to notify the supervisor and Division Chief.

G. Use of Backcountry Cabins and Ranger Camps

[Office Order No. 23](#), outlines criteria for use of Backcountry Administrative Facilities (cabins and camps; does NOT include backcountry campsites). These policies and procedures apply to *on-duty* employees who are using these facilities as part of their assigned work schedule.

Off-duty employees who are authorized to utilize Backcountry Administrative Facilities under the criteria outlined in Office Order 23 are exempt from the requirements to file a travel plan and comply with status checks when traveling to and from these facilities. These employees are in non-work status. However, employees are still required to notify dispatch upon arrival and departure from an administrative facility. While occupying the facility there is an expectation to provide service to park visitors. Accordingly, dispatch must be notified when the facility is occupied.

Employees in work group settings staying in backcountry facilities or spike camps have the responsibility to let the group leader or designee know of their activities and general intentions *after work hours* (e.g. fishing, hiking, or recreational climbing) as an extension of the base backcountry travel policy.

VII. EQUIPMENT REQUIREMENTS & EXPECTATIONS

For backcountry travel and work, supervisors will ensure that a job hazard analysis (JHA) has been completed and reviewed with employees, and personal protective equipment (PPE) needs have been identified and addressed. OSHA standards 1910.132(a) and 1926.28(a) address the responsibility to provide employees with PPE, to the extent possible. Where PPE is not issued to an employee, it may be made available through centralized caches.

It must be noted that not all specialized equipment can be provided by the park. For example, rock climbing shoes are a specialized personal item that is provided by the employee. Employees who utilize their own specialized equipment or PPE must receive supervisory approval beforehand. This complies with OSHA standard 1910.132(b) that requires an employer to ensure the adequacy and proper maintenance of PPE not provided. Such equipment must comply with general industry standards.

The supervisor is required to review equipment items, follow the park's Personal Protective Equipment Program guidelines (see [ROMO Intranet](#)) determine suitability for work, and then monitor equipment to ensure ongoing serviceability. This review and pre-use approval of personal equipment shall be documented and maintained by the supervisor in the employee's file. For Volunteers, refer to [Director's Order #7: Volunteers in Parks](#), Section 8.3.

Each Division is required to have an accountability system in place to assure employee compliance with equipment requirements. Periodic audits, pack checks, and walk-arounds are some evaluation methods, and they will be conducted and documented by supervisors and work leaders. Equipment should be sufficient to travel and work safely in the backcountry, which in some cases may require a sudden change in plans, being redirected to a different location, or spending an unexpected night out.

The ability to travel quickly and efficiently, when necessary, often equates to safety in the mountains, such as a rapidly approaching thunderstorm that has been hidden from view behind the peaks. Your ability to assess a hazard and move to safer terrain is highly dependent upon changing gears and traveling fast. The amount you carry (weight and bulk) will impact your ability to safely do so. Experience is your best guide to striking this balance. Rely upon supervisors and more experienced co-workers to help develop what is right for you.

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

A guiding philosophy to employee personal preparedness is this: *When on duty and traveling in the backcountry you must be prepared to ensure your personal safety and survival for up to twenty four hours beyond the length of your planned trip. You may not always be comfortable but you will survive.* You may be redirected from a planned trip and asked to participate in emergency operations. This may require that you assist in caring not only for yourself, but for someone else (an injured or ill person).

What you plan for and carry during an outing on personal time is different than what may be expected of you when on duty. As an employee you can be asked to assist with emergency services and public safety.

The most important essential of personal preparedness is *common sense!* Having the right equipment is one thing, knowing how and when to use it is quite another. Most often, it's not a person's equipment that saves them; it's experience, know-how, and good judgment.

A. Mandatory Equipment Requirements for All Employees

The following requirements apply to all backcountry travel:

1. A *minimum* of one portable park radio per group with fully charged battery. The radio must be left on in order to monitor park channels in the event of an emergency.
2. A *minimum* of one spare radio battery per group, fully charged, or clamshell with fresh batteries.
3. If traveling into an area with known radio dead spots (refer to radio coverage map) an alternative form of communication such as a satellite phone should be carried. However, sat or cell phones are to *supplement*, *NOT replace*, a portable park radio.

4. Adequate clothing to provide protection from current and predicted weather (obtain a reliable forecast.) Consider the combined influence of temperature, wind, precipitation, sun, terrain, snow pack, altitude, etc.

Equipment should include a protective outer layer such as a Gore-tex® parka and pants, and layered clothing adequate for heat or cold. This may require a hat for sun protection or a stocking cap and balaclava for cold temperatures. Gloves and wicking socks should be considered appropriate any time of year.

An item of **high visibility clothing**, such as a bright orange or yellow vest, must also be carried, and it must be worn when traveling off-trail, except during specific operations, such as a tactical law enforcement situation.

5. Food/snacks sufficient to sustain energy for twenty four hours beyond the length of your trip (energy bars, nuts, etc.)
6. Water and/or other liquid for hydration. Consider the need for water purifying capability (iodine tablets, pump, etc.).
7. Navigation. Depending upon area familiarity, trip route and weather, consider map and compass and/or GPS.
8. Signaling device such as a whistle, signal mirror, smoke, space blanket, etc., in the event of a communication device failure.
9. Ability to kindle a fire (lighter or matches, fire starter.)
10. Headlamp with spare batteries
11. First aid kit - OSHA Standard 29 CFR 1910.151 requires that first aid supplies be readily available for injured employees. The requirement for a basic first aid kit is met with the Individual First Aid Kit designed by the US Forest Service for firefighters and is available through GSA contract. This is the minimum standard personal first aid kit available to all employees going into the park backcountry. (See [Q:\Emergency Medical Services Program](#) for a copy of the BC first aid kit list.
12. Cutting device (scissors or knife)
13. Protection from the elements (sunglasses or goggles, sunscreen, insect repellent, etc.)
14. Depending upon trip route and weather, consider the need for bivouac gear (space blanket, tarp, bivy bag, etc.) to survive an unexpected night out.

B. Helmets

Depending on activity, each work unit has requirements on head protection. Employees should use good judgment in determining whether the objective hazards within the areas in which they are traveling or working warrant the use of PPE for head protection.

- **Refer to your Division's requirements and to the [ROMO Intranet](#) for the JHA on Climbing/Mountaineering for further information.**

C. Footwear

Backcountry travel will require different footwear according to the type of patrol and terrain to be traveled. **Refer to [ROMO Intranet](#) JHA on footwear for equipment requirements.**

D. Equipment considerations for specific operations

1. Ski and/or Snowshoe

In addition to the above mentioned mandatory equipment requirements, the following items should be considered when your work assignment involves backcountry skiing:

- Backcountry skis or snowshoes, boots, poles
- Ski skins
- Helmet (optional for backcountry ski trips)
- Avalanche beacon (mandatory when traveling in avalanche terrain)
- Avalanche shovel (mandatory when traveling in avalanche terrain)
- Probe poles (mandatory when traveling in avalanche terrain)
- Ski or snowshoe repair kit

2. Technical Climbing

In addition to the above mentioned mandatory equipment requirements, several items should be considered when conducting duties that require climbing. **Refer to [ROMO Intranet](#) for JHA on Climbing/Mountaineering.**

3. Horse Operations

In addition to the above mentioned mandatory equipment requirements, employees must be trained and qualified to conduct horse operations.

- **Refer to the ROMO Livestock Mgt. Plan for further information on training and PPE requirements.**

4. Snowmobile Operations

In addition to the above mentioned mandatory equipment requirements, in order to conduct snowmobile operations all employees must first participate in the Colorado River District mandatory snowmobile operations training and attend annual refreshers to maintain currency.

5. Multi-day Operations

In addition to the above mentioned mandatory equipment requirements, the following items should be considered when conducting multi-day overnight trips:

- Sleeping bag, pad, bivy sack
- Tent or tarp
- Lightweight backpacking stove and fuel
- Extra food
- Extra clothing layers
- Personal hygiene items, toiletries, medications

Depending on type and season of wilderness travel, a variety of other equipment will be required. Check JHAs for specifics.

VIII. REQUIRED AND RECOMMENDED TRAINING

REQUIRED TRAINING

Employees and volunteers who perform duties in the backcountry are required to complete initial training in Backcountry Travel procedures and annual refresher training to address changes and updates in the procedures. A standardized “Backcountry Travel” PowerPoint program has been developed and will be available on the ROMO Intranet to all park work groups as a training aid, and it will be updated on an annual basis to reflect changes in the procedures.

The following standardized training objectives identify those topics that should be addressed by all ROMO divisions. **Upon completion of this training, all park staff who utilizes the backcountry will:**

- Understand and comply with this Park Backcountry Travel and Tracking Policy while traveling or working in the backcountry.
- Understand the common hazards associated with work in the backcountry.
- Understand the philosophy and principles of situational awareness. Be able to apply situational awareness to hazard assessment and risk management.
- Understand and comply with expectations and safety procedures during backcountry travel and in backcountry work and camps. This includes personal preparedness, equipment requirements, travel requirements, and communications.
- Have an understanding and working knowledge of land navigation and the use of map and compass and GPS.

Supervisors will ensure that all backcountry travelers are trained in all of the aforementioned subjects prior to their initiating any backcountry travel.

Due to an OSHA requirement that medical aid must be readily available to employees (within 5 minutes, as defined by OSHA), Basic 1st Aid is required for at least one member of a group or for the solo traveler in a backcountry environment. If a significant percentage of an employee’s work day will be spent in the backcountry, then Wilderness First Aid and CPR training is also recommended.

RECOMMENDED TRAINING

Leave No Trace Ethics and Principles

Public education is one of the primary duties of a National Park Service employee. Everyone should be knowledgeable in *Leave No Trace* ethics and principles, and be able to discuss these principles with the general public. Refer to **Appendix G** of the [Backcountry Wilderness Management Plan](#) for a complete listing of the seven principles of *Leave No Trace*.

IX. REFERENCES

- [Director's Order #7: Volunteers in Parks](#)

- Job Hazard Analyses (JHA) for:
 - Backcountry Travel ([ROMO Intranet](#))
 - Footwear ([ROMO Intranet](#))
 - Technical Climbing ([ROMO Intranet](#))
 - Trail Maintenance & Clearing ([ROMO Intranet](#))
 - Chainsaw Program [ROMO Intranet](#)
 - Bear/Lion Encounters ([ROMO Intranet](#))

- Mountain Rescue Association Handbooks on Situational Awareness & General Backcountry Safety, available through the MRA website

- NPS Occupational Safety & Health Program, RM-50B

- NPS Safety & Health for Field Operations Handbook

- OFFICE ORDER No. 23, “Use of Backcountry Administrative Facilities” [ROMO Intranet](#)

- Ranger Operational Procedure # A(1)(b), Employee Training & Orientation Checklist

- [ROMO Backcountry Wilderness Management Plan](#)

- ROMO Emergency Medical Services Plan

- ROMO Employee Safety Handbook

- ROMO Livestock Management Plan

- Wilderness Ranger Field Guide, a publication by the Arthur Carhart National Wilderness Training Center



Backcountry Travel Plan

Start Date/Time:		End Date/Time:		Group: <input type="checkbox"/> Solo: <input type="checkbox"/>
Entry Point:		Exit Point:		

	Name	Radio#	Clothing Description	Pack Color
Trip Leader				
2nd				
3rd				
4th				

ITINERARY						
Date:	Starting Point:		Ending Point:		Route:	Mode:
		→		via		by
		→		via		by
		→		via		by
		→		via		by
		→		via		by
		→		via		by
		→		via		by

RISK MANAGEMENT - <i>request status checks as needed</i>
Considerations: (poor radio coverage/dead spots - check radio coverage maps; sat. phone recommended for areas of white or gray. River crossings, weather forecasts, snow/ice, other-specify.)
Known or potential off-trail travel route description

EMERGENCY CONTACTS (i.e Not yourself)			
Emergency Contact:		Phone #:	
Supervisor's name:		Phone #:	
		Radio call sign:	
		Radio call sign:	

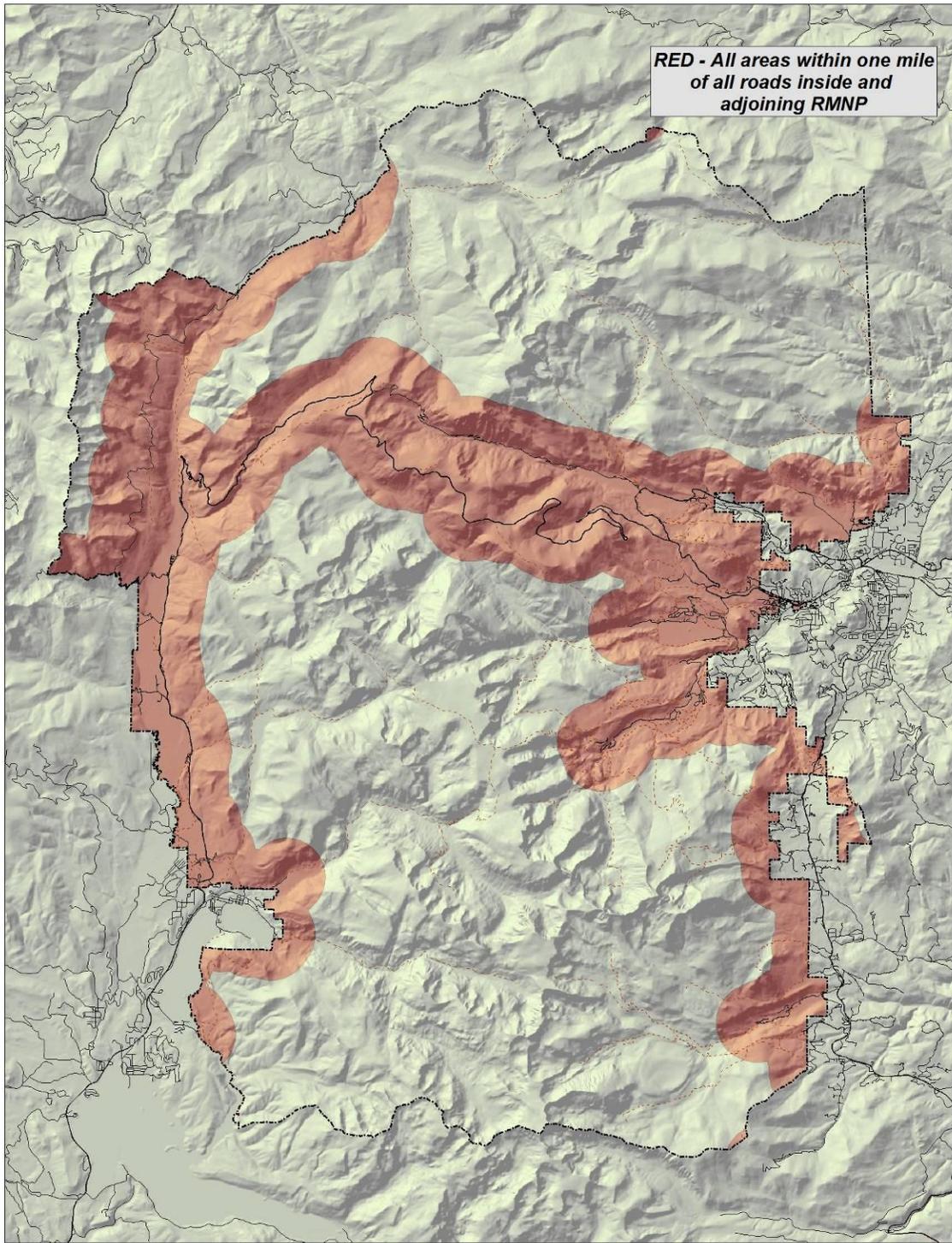
VEHICLE				
License Plate/State	Make	Model	Color	Parked at

EQUIPMENT				
<input type="checkbox"/> Beacon	<input type="checkbox"/> GPS	<input type="checkbox"/> Radio/Batteries	Cell phone #	
<input type="checkbox"/> Bivy gear	<input type="checkbox"/> Head lamp	<input type="checkbox"/> Rope	Satellite phone #	
<input type="checkbox"/> Compass	<input type="checkbox"/> Helmet	<input type="checkbox"/> Shovel	Tent color	
<input type="checkbox"/> First aid kit	<input type="checkbox"/> Ice ax	<input type="checkbox"/> Signal mirror	Tent fly color	
<input type="checkbox"/> Flagging	<input type="checkbox"/> Map	<input type="checkbox"/> Space blanket	Weapon	
<input type="checkbox"/> Flare	<input type="checkbox"/> Matches	<input type="checkbox"/> Tent	How many days worth of food	
<input type="checkbox"/> Flashlight	<input type="checkbox"/> Probe pole	<input type="checkbox"/> Whistle	Other	

NOTES

Email to ROMO_Dispatch@nps.gov OR Fax to 586-1310	Received: (date/time/initials)		
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APPENDIX A – ROMO-7



APPENDIX B - One Mile Buffer from RMNP Developed Areas



APPENDIX C - RADIO COVERAGE MAP

SPE Values

<u>Severity</u>		<u>Probability</u>		<u>Exposure</u>	
1	None or slight	1	Impossible or remote under any conditions	1	None or below average
2	Minimal	2	Unlikely under normal conditions	2	Average
3	Significant	3	About 50-50	3	Above average
4	Major	4	Greater than 50%	4	Great
5	Catastrophic	5	Very likely to happen		

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

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

APPENDIX D – SPE MODEL WORKSHEET

