

# Introduction

## Purpose

Monarch Cat Skiing (MCS) offers a professional tour that is structured to safeguard as reasonably as possible while creating an enjoyable skiing experience. Excellent customer service is essential as MCS represents Monarch Mountain. Seasonal objectives include, but are not be limited to; snowcat access development and maintenance; avalanche forecasting and mitigation; tour organization; accident prevention; first aid care for injuries; public relations. We will coordinate with the appropriate Monarch Mountain personnel regarding customer service, public relations and business strategies. Each of these objectives are explained in detail in later sections of this manual.

## U.S. Forest Service

We operate on both San Isabel and Gunnison National Forest Service Lands under an Outfitter/Guide (O/G) Special Use Permit (SUP). The San Isabel Forest Service, Salida Ranger District governs the MCS Operating Plan (OP) and permit area. Local USFS personnel that we might see will be:

Jim Pitts – District Ranger

Ben Lara – Recreation and Lands

Thomas Skaja – Special Uses Administrator

Alex Rudney- Silviculturalist

The USFS is not responsible for avalanche safety regarding the cat skiing program.

## Service Strategy

MCS's objective is to service and develop the expanding desire for snowcat skiing. MCS offers a professional package for advanced and expert skiers, and has remained unsurpassed in client satisfaction since its inception. Maintaining a competitive price and consistent daily tours will yield this program the greatest return. MCS has as a strong base of returning clients, and our goal is to maintain and grow this base. MCS will conduct research and development into terrain expansion to service new and returning clients, and to facilitate any terrain growth for Monarch Mountain.

# General Policies

- This manual is designed to refresh returning employees and inform new employees about the MCS service. It is to be used as a continuum of the Monarch Mountain Employee Handbook. The following additional documents will serve as addendum: Snow Safety Manual, Explosives Manual, Slope Maintenance Manual, and the MSP 1<sup>st</sup> Aid Protocols. The MCS manual is open to corrections and changes, and will be reviewed and updated annually as necessary. Policies and procedures laid out in all documents must be adhered to. Please use them as a reference when needed.
- All MCS employment positions are snow dependent, and our season starts when there is enough accumulation for the establishment of our roads and Mirkwood can be worked. Early season (before tours start) Guides and Drivers will report at 8:00 and clock out around 5:00. Drivers will use due diligence to have work cats on top of Breezeway before the lift opens.
- Be punctual especially once tours begin. Gather weather data by 7:15 a.m. and be ready to greet guests by 8:30 a.m. Drivers must have the Tour Cat up the hill before the lifts open, unless mechanical difficulties prohibit. The MCS manager must approve write-ins or early check-ins.
- Be polite, outgoing, friendly and helpful to all guests and employees.
- MCS personnel are held to a higher standard and must conduct themselves in a professional manner and be as diplomatic as possible, even if they are threatened with verbal abuse or physical violence. On the rare occasion that a guest becomes uncooperative, it is critical that the reactions be tactful. If a guest is creating a hazard for them selves or any one else it is important that they be removed from the tour quickly and with compassion. Any abuse of authority or privileges may be cause for termination. An MCS guide is a position of responsibility not power.
- Ski equipment necessary to perform the job is to be purchased by the individual. A gear allowance for guides of \$300/season is provided for full-time guides and \$50/season for drivers. Monarch will provide uniforms, radios, guide packs and medical supplies. Drivers will be allotted \$50.00. Seasonal company sponsorships may offer limited equipment to guides/drivers.
- All ski equipment should be as new as possible and operating correctly. This holds true for telemark, alpine, and alpine touring set-ups. It is the individual's responsibility to have adequate and properly operating equipment to do the job safely and effectively.
- If skiing on your day off, you will follow all rules and regulations, as they would apply to the general public.

# Safety

Although accidents happen, Monarch Mountain considers accident prevention to be of extreme importance. As part of MCS you are expected to perform and maintain the highest possible safety standards. Monarch Mountain has a Safety Committee that is made up of front line employees as well as management. They meet weekly to explore ways to minimize potential hazards in the work place. Employee suggestions are encouraged and may be submitted to the committee at any time. MCS has an excellent safety record; with few injuries and it is our responsibility to keep it that way! Here's a few tips to remember.

- Safety of our guests, fellow employees and yourself is the #1 priority.
- Know your tools and equipment and how to use them
- Perform with maximum awareness in all aspects of your duties.
- Keep your work areas clean and clutter free.
- Ignoring safety procedures will not be tolerated
- Helmets are expected to be worn for all skiing and snowmobile duties while working. Monarch Mountain highly encourages the use of appropriate helmets while skiing or riding, whether an individual is working or utilizing the resort for personal recreation. We encourage our employees to educate themselves regarding the benefits and limitations of helmets and no helmet can prevent all injuries. It is critical to note that Skiing/Snowboarding safely and sensibly is the key to overall slope safety. Be aware ski/ride with care.

## A Few More Safety Reminders

- **Winter travel on Monarch Pass can be extremely challenging.** The combination of snow, ice, poor visibility and slow moving makes driving hazardous and frustrating. Remember your defensive driving techniques!
- Early season conditions and terrain features that become buried during the season as well as hard melt freeze cycles can make backcountry skiing and cat roads especially treacherous. Use caution and remind guests of the same.
- Outdoor Protection – Don't forget the sunscreen! You are expected to wear a sun block with 15 SPF or higher. Additionally, you are expected to dress for the conditions.
- Disease Protection – Protective gloves and masks must be worn when dealing with a patient who is bleeding or vomiting. In the field, use goggles or glasses if necessary. Soiled clothing or uniforms should be placed in a red biohazard bag, labeled and disposed of or cleaned in the appropriate manner.
- Always lift properly. Bend at the knees and keep your back straight.

## Boundary Policy

The ski area boundary is marked and maintained in accordance with the Colorado Skier Safety Act. Orange flagged rope is placed around the entire perimeter, with the exception of the

Mirkwood access road to Frog Rock at the Snowcat Tours Gate. This section is marked with boundary signage attached to bamboo and is rope less.

Any person leaving or entering the ski area boundary must do so at specific designated access points. Access for the public to the San Isabel National Forest and the Gunnison National Forest is provided at three designated access points along the Monarch Mountain boundary. One is located along the upper Roundabout ski trail, one near the top of the Panorama Lift, and the other is located on the lower portion of the Elation boundary in the Mirkwood Basin area. These gates are signed informing guests that they are leaving the ski area and that the area is not patrolled. Additionally, information about Avalanche Danger exists at these gates.

Guides and drivers will make a reasonable effort to inform guests of the danger associated with out-of-bounds skiing whenever possible, especially during periods of high avalanche hazard.

Whenever guests intend to leave the area boundary, guides and drivers will use the following standardized verbiage:

**“The area beyond our boundary is hazardous and much of it is extremely dangerous avalanche terrain. We do not recommend travel beyond the ski area boundary. These areas are not patrolled. Be prepared for self rescue.”**

Specific ski area programs such as MCS, require authorized personnel to engage in activities outside the ski area boundary. Signs will be placed at appropriate exit points stating that these exit points are for official ski area activities and that skiing in closed areas is against Colorado State Law, Section 33-44-109, punishable by a maximum \$1000.00 fine.

Access to MCS terrain can be gained outside the ski area boundary from public land, and backcountry skiers and snowshoers are free to use MCS terrain and access roads. Special consideration should be taken when traveling in terrain being used by the general public.

- Explosives – Use every means to insure that there is no public present near any blast site.
- Avalanche Danger – If the general public is present during times of moderate or higher hazard, attempt to communicate to them the danger of skiing the same terrain. If they are not open to communication, avoid simultaneous use of slopes that they are skiing.

# First Aid

Luckily we don't have the need to provide 1<sup>st</sup> Aid very often, however when the need does arise it is critical that you are able to deliver quality first aid to the standards dictated by your level of training and in accordance with **MSP Medical Protocols**. These protocols are outlined by our Physician Advisor and are available for your review at MSP dispatch. It is most important not to panic, to think clearly and to act to the best of your ability. Be familiar with all first aid equipment and its use. If you need help do not hesitate to ask.

We have a legal responsibility to take patient complaints at face value, even if the extent of the injury may appear minor, only a medical doctor can legally make that determination. In all situations treat the accident seriously. No assumption about the severity of the injury should change the standard of care set forth by the guidelines of O.E.C. Failure to provide appropriate treatment to an individual creates exposure to liability.

Recommend to all injured people that they see the nearest physician available in Salida, since complications may occur on a longer trip. When medical advice is refused, fill out the appropriate A.M.A. form.

## Accident Investigation

Accident Investigation (A.I.) will be necessary in the event of an accident involving: skier collision; collision with a man-made object; Lift or Ski School: any other possible litigious situation. In the event of an A.I.T. incident in MCS terrain, we must be available to assist Ski Patrol with all documentation. It is critical to preserve as much physical evidence, of the incident as possible, although this should not interfere with our other duties such as 1st Aid and evacuation. If a guest is injured while on Monarch rental skis, tag skis Left and Right if possible and list date, injury, and incident number from Monarch Ski Patrol Incident Form.

## Communication with the Public Regarding Emergencies

- Limit your comments at the scene to those necessary for your duties.
- Report to your immediate supervisor only.
- Report accurate facts only.
- The Manager only will report to the VP of Mountain Operations or the GM.
- Only the VP of Marketing or their designee will provide information to the press and other public entities.
- **DO NOT** communicate with or voice your opinion to members of the press or to the public. This is for your protection as well as Monarch's. You may be called upon to repeat any statements you have made in court.
- Refer those who question you to the VP of Mountain Operations or the GM.
- **NEVER** state that you, Monarch, or other Monarch personnel are at fault.
- When reporting in writing, include facts which you know to be accurate, your understanding of what happened, and witnesses' names and addresses.

# Monarch Mountain Equipment

**Remember that Monarch Mountain Equipment helps to pay your wages, so take care of it!** Negligent or unsafe operation of equipment will not be tolerated and will be grounds for termination.

## Radios

Monarch's radio system operates on 6 UHF frequencies.

- Channel 1 – repeater channel and is used for mountain operations.
- Channel 2 – secondary communication to channel 1
- Channel 3 – Base Area Services
- Channel 4 – Ski School
- Channel 6 – Property Maintenance, Network Administrator, and Food and Beverage
- Channel 7 – Emergency channel
- Channel 8 – Lift evacuation channel
- Channel 10 – repeater channel used by MCS

Communications in MCS terrain utilizes a repeater located at the top of Mirkwood on channel 10. Communication with PHQ is generally very good from the cat skiing terrain on this channel. Channel 1 can be used as a back-up to reach PHQ but may have areas that are not as effective.

When keying the microphone, depress the button and wait two seconds before speaking. Say the name of the person you are calling first and then say your name. When responding to a call, answer with your location. First Aid.

Channel 1 hits our repeater and can be heard by people in Salida and beyond. Do not give delicate information such as a patients' full name on the radio or use inappropriate language.

## Radio Terms

Affirmative	Repeat	Location	Negative Contact
Negative	Disregard	Emergency	Loud and Clear
Stand By	Understood	Copy	Out of Service
Unreadable	Advise	Radio Check	

## Ski Patrol Accident Codes

CODE 1	No assistance needed. I have a rig and all necessary equipment.
CODE2	Additional assistance requested. ALL personnel stand by until situation is covered.
CODE 3	Trauma. Back-up responds with a backboard, trauma pack, etc.
CODE 8	(A.I.T.) Accident Investigation Team situation.

## Snowmobiles

The use of over the snow machines including snowmobiles will be necessary to accomplish certain Company goals. To that end; all Monarch staff driving snowmobiles in the performance of their duty must be qualify for snowmobile operation, use and be familiar with their maintenance. Being alert and the use of good common sense can control most hazards. All drivers must wear a helmet.

### Policy

An employee who is authorized by job description to drive snowmobiles must have read the Monarch's Policy; the Snowmobiles Owner's Manual, the Snowmobilers Safety Handbook and watch the NSAA snowmobile operator's video. They must have passed the written proficiency test, the State Parks and Recreation test and one time driver test.

### Prior to Starting

- Visually Inspect:
  - Under hood:
    - Drive belt & belt guard, plug wire connections, cables, brake pads
  - Head & Tail Light
  - Flag
  - Steering skis & Steering skis chains
  - Shock & Suspension
  - Track
  - Shroud latches
  - Windshield
  - Bumpers
  - Hitch pin, ski racks, tow rope & rear flap
- Check the oil mix and gas levels, fill as needed
- Check the brake and throttle handle for free movement of the hand levers
- Engage the engine stop switch and reset
- Insure track is broken free from the snow, bounce and pull backward to rotate
- Attach the tether cord.
- Engine cold start and stopping:

- Open the starter jet level to full (choke switch)
- Slowly pull the rope until engaged, and then pull briskly
- After the engine is started, push the start jet to halfway
- After the machine is moving, turn off the starter jet
- Allow engine to idle down for 30 seconds prior to turning the ignition off
- Pull tether cord off machine when unattended

## Operating Procedures

- When choosing a route consider the following:
  - highest hazards are on uphill travel routes
  - drive right of center line uphill and downhill when open
  - do not drive near tree lines when possible
  - slow down in skier congestion or traffic areas
  - snow condition
  - visibility from above near cat walk roads, break over or bench areas
  - blind corners
  - steepness and width of trail
- Use snowmobiles on Easiest trails and following More Difficult trails:
- Service roads, Doc's, Little Mo, Ramble On on Breezeway lift
- Snowburn, Great Divide, Run out zones on Panorama lift
- North Forty, Romp and Run out zones on Garfield lift
- Mirkwood service and egress roads. Do not drive up the egress road while Mirkwood is open to the public.
- Never Summer Terrain Park, Freeway Race Courses
  - When driving within the Park or Race course, travel shall be from top down unless park is closed or race course is on hold
- Do not operate on other More or Most Difficult runs without the approval of Patrol Director or Dispatch (chains recommended for down hill travel)
- Do not operate machine without:
  - One lighted headlight and lighted red taillight
  - Fluorescent Flag of at least 40 square inch mounted 6 feet above tracks
  - Brake system maintained in operable condition
- Maximum driving speed should be appropriate based on the skiing/riding public, terrain, and conditions.
- You shall slow and **Yield** to Skier or foot traffic
- Slow down in congested areas and approach trail intersections cautiously
- Do not run at extremely slow speeds, this can cause the clutch to slip
- Drive slower when towing a toboggan, sleds or hauling equipment.
- Do not overload the machine, designed for moderate load only
- Transport a maximum of 2 people sitting and up to 2 staff members towing.
- Drive slower when cornering, in moguls or on side hills.
- Apply brakes gently to avoid locking them.
- Braking downhill, a light pumping action will be much more effective

- Use steering chains on More difficult and steeper sections of Easiest trails
- Parking on steeper slope, place machine across fall line and engage brake lock
- Use only bumpers to move manually, never use the skies to lift or slide
- When towing a toboggan downhill, use the toboggan chain
- Pull a patroller attached to a toboggan in level areas only, not downhill
- Maintenance adjustments are to be done by Vehicle Maintenance personnel only
- Report any damage to your supervisor and Vehicle Maintenance
- If the snowmobile is rolled or turned over, DO NOT try to restart the machine
- Call Patrol Dispatch immediately for help or to assign courtesy rides

As stated in the annual USFS Winter Operating Plan; Only company snowmobile use is allowed within the SUP.

## Safety Data Sheets and Job Hazard Assessment

Safety Data Sheets are located digitally at [msdsonline](#), and hard copies are located at Monarch Ski Patrol above the Ski Patrol Director's desk and in the arming room. These should be reviewed annually by all employees that maybe handling chemicals and explosives. Job Hazard Assessment information is stored on the S: Drive under Management Team: JHA: 62 Cat Skiing. These should also be reviewed annually.

## MCS Department Structure

### MCS Snow Cat Driver

*(Refer to MCS Snow Cat Driver Manual)*

**Purpose:** As an MCS Driver, you will have proven your ability to assist in conducting commercial tours in a variety of conditions and situations. You will represent the excellence of Monarch and MCS with absolute respect of the risks and responsibilities that driving in hazardous conditions can present. You will be required to build and maintain MCS roads to the best of your ability and to ensure that all roads are in good working condition and safe for public tours to be conducted on. You will be responsible for the safe operation and daily maintenance checks of all Monarch machinery that you are using. You will be required assist guides and guests as needed. While performing the tasks stated above, you will maintain the Monarch standard by presenting a Friendly and Helpful nature to all Guests and Employees.

### MCS Guide

**Purpose:** As an MCS Guide, you will have proven your ability to assist in conducting commercial tours in a variety of conditions and situations. You will represent the excellence of Monarch and MCS with absolute respect of the risks and responsibilities that guiding in hazardous conditions can present. You will be required to recognize critical data concerning snow pack structure, weather and avalanche activity, and assist the Lead Guide in making

decisions for safe avalanche control and public tour routes. While performing the tasks stated above, you will maintain the Monarch standard by presenting a Friendly and Helpful nature to all Guests and Employees.

## **MCS Lead Guide**

**Purpose:** As an MCS Lead Guide, you will be expected to perform at an optimum level of Professionalism. You will represent the excellence of Monarch and MCS with absolute respect of the risks and responsibilities that guiding in hazardous conditions can present. You will be required to recognize and document critical data concerning snow pack structure, weather and avalanche activity, and based on your findings, be prepared to make precise decisions for safe avalanche control and public tour routes. You will be required to assist in the training of lower level Guides and MSP in all aspects of the job including but not limited to: Explosives and other mitigation techniques; MCS specific terrain including all named areas, their starting and run out zones as well as spotting and safe zones. While performing the tasks stated above, you will maintain the Monarch standard by presenting a Friendly and Helpful nature to all Guests and Employees.

## **MCS Supervisor**

**Purpose:** As an MCS Supervisor, you will be expected to perform at an optimum level of Professionalism. You will represent the excellence of Monarch and MCS with absolute respect of the risks and responsibilities that guiding in hazardous conditions can present. You will be required to recognize and document critical data concerning snow pack structure, weather and avalanche activity, and based on your findings, be prepared to make precise decisions for safe avalanche control and public tour routes. You will be required to assist in the training of lower level Guides and MSP in all aspects of the job including but not limited to: Explosives and other mitigation techniques; MCS specific terrain including all named areas, their starting and run out zones as well as spotting and safe zones. You will be expected to coordinate with other departments as needed; including but not limited to Vehicle Maintenance, Slope Maintenance, Food and Beverage, Ticket Sales and Reservations, and Marketing via the Ski Patrol Director. You will be expected to perform all duties and responsibilities of the MCS Manager in the case of their absence. While performing the tasks stated above, you will maintain the Monarch standard by presenting a Friendly and Helpful nature to all Guests and Employees.

## **MCS Manager**

**Purpose:** As an MCS Manager, you will be expected to perform at an optimum level of Professionalism. You will represent the excellence of Monarch in all aspects of your daily duties including hiring and firing of employees, daily scheduling, and managing employees effectively to ensure a smooth operating department. The MCS Manager will act as liaison between MCS and other departments including daily reporting of operations to the MCS/MSP Director. The MCS Manager reports directly to the VP of Mountain Operations. The MCS Manager will operate the department and manage employees with an absolute respect of the risks and responsibilities that guiding in hazardous conditions can present. You will be required to

recognize, document, and organize critical data concerning snow pack structure, weather and avalanche activity, and based on your findings, be prepared to make precise decisions for safe avalanche control and public tour routes. You will be required to assist in the training of lower level Guides and Ski Patrol in all aspects of the job including but not limited to: Explosives and other mitigation techniques; MCS specific terrain including all named areas, their starting and run out zones as well as spotting and safe zones. The MCS Manager will be expected to coordinate with other departments as needed; including but not limited to Vehicle Maintenance, Slope Maintenance, Food and Beverage, Ticket Sales and Reservations, and Marketing. While performing the tasks stated above, you will maintain the Monarch standard by presenting a Friendly and Helpful nature to all Guests and Employees.

## **MCS Daily Operations**

### **Reservations**

Reservation Department is taking all information and reservations. Deposits are refundable if the tour is canceled due to unforeseen circumstances which may include but not limited to:

- Snowcat Failure: Mechanical
- Snowcat Travel: White out / Accesses impassable
- Snow Conditions: If conditions are dangerous, then the guide can make the call to cancel
- Avalanche Hazard: High or Extreme

### **Formula for Refund**

Refund will be pro-rated according to time spent skiing, based on 5 hours and amount paid. For example:

- Cat breaks down at 1:00pm and is unable to complete the tour.
- Clients paid \$3750 and skied for 4 hours.
- $\$3750 / 5 = \$750$  per hour
- $\$750 \times 4 = \$3000$
- $\$3750 - \$3000 = \$750$
- \$750 refunded by check or credit card

### **Weak Skier**

The guest is responsible for knowing their abilities and a refund will NOT be given if they cannot ski/ride the terrain or conditions. MCS is expert only backcountry terrain and all skiers and riders must be able to navigate such terrain.

### **Notice**

All of the guests are committed to show up for their tour and on time. There is no way for MCS to predict the conditions for that day which can vary significantly. We express to the clients that it is our goal is to provide the best possible day of skiing in this “expert only backcountry terrain experience.”

## Early Season Preparation

### Snowcat Access Roads

MCS utilizes compacted snow and is dependent on reliable cat accesses. Driving onto established routes as soon as a sufficient snow has fallen gives the accesses a firm base. Most important to establish early are the west facing aspects of Mirkwood and No Name assess' and the ridgeline from Mirkwood to Dog Heaven. These areas are especially susceptible to erosion from wind and sun. Mountain Crew personnel have been co-operative by establishing this base layer. Future road development will benefit from this practice. MCS snowcat drivers continue access development and the processes have become more efficient with the availability of improved equipment. Drivers are especially diligent at this time to protect equipment from environmental hazards. If a driver is inexperienced, early season provides time for training.

### Explosives

MCS and MSP evaluate the need for explosives testing on all routes before personnel are allowed on hazardous terrain. Explosives handling techniques are reviewed and permits renewed or issued each season as necessary. **Explosives regulations and guidelines for handling and documentation are outlined in the Explosives Manual.**

### Ski Cutting

After a slope has been determined reasonably safe by qualified avalanche mitigation personnel, ski cutting is used for isolated slabs or pockets of instability that will unlikely involve a high amount of risk for the skier and relieves localized stresses. **Snow Safety protocols must be followed and are outlined in the Snow Safety Manual.**

### Ski/Boot Packing Crews

When snow permits MCS and MSP utilize volunteer ski packers and lead them into Mirkwood Basin and MCS terrain. Guides must be able to direct volunteers in an organized and safe manner. Volunteers are required to provide their own beacon, shovel, and probe.

- Volunteers will sign release forms. They will be instructed on conduct expected and necessary for safety in avalanche terrain. Safe travel i.e. eyes on, one at a time, and safe zones must be stressed.

- At least one Guide will accompany crews of up to 10 trained individuals. If avalanche hazard is rated above low by a qualified snow safety personnel, two qualified snow safety members will be present at all times and one may be a SSRM.
- For effective ski/boot packing it is essential to penetrate as many contiguous layers in as many places as possible.
- Ski packing can prove strenuous, and volunteers must be advanced skiers in good physical health. Packers must be able to perform a strong kick turn and maintain appropriate balance in varying conditions. They will be required to ski cut and side step steep terrain with rocks, stumps and deadfall.
- “Rock” skis are recommended.
- Extensive ski packing and explosive testing will continue for MCS personnel until tours begin.

## **Snow fence**

Snow fence is a valuable tool for snow roads. When possible metal posts will be anchored upright to prevent contact with the snowcat. Care will be taken when placing and removing fences as they are easily broken.

## **Disruption Roller**

The use of the compaction roller early season is preferable as it reduces avalanche hazard for MCS guides and volunteers and is an effective tool in avalanche hazard mitigation. The roller should be utilized as soon as possible when roads are established to begin to mitigate avalanche hazards. The roller is to be used in conjunction with a Monarch Winch Cat and is to be controlled by a qualified operator. At least two people are required to safely and effectively operate the compaction roller; a qualified winch cat operator and qualified roller operator. The roller is to be operated under the guidelines outlined in the Roller Training Manual which can be found in the Cat Skiing department manual folder on the S: Drive or in the Cat Skiing Office. It is the goal of the roller to help mitigate avalanche hazard and reduce the amount of explosives, skier compaction, and travel in avalanche hazard by MCS Guides and Volunteers. However, the roller is not a replacement for explosives and hands on work in avalanche terrain; it is merely another tool to be used.

## **Tour Season**

Daily personnel will typically consist of a snowcat driver and a minimum of two guides that will each perform the duties of lead and tail guide(s). The group will work as a team to conduct a safe and enjoyable tour, and be responsible for:

- Daily analysis of avalanche hazard using all measures of data.
- Avalanche control work as necessary and appropriate.
- Understand the necessary maintenance of vehicles for proper running and driving of guests.

- Snowcat road maintenance.
- Greeting guests, distributing and checking beacons and Backcountry Access (BCA) Float Packs, signing release forms, conducting safety speech, and conducting the tour appropriately according to avalanche hazard and skill level of the group
- All paperwork associated with proper daily documentation.

## **Orientation of Guests**

### **Meeting in the Cat Yurt**

#### **Preparation**

- Coordinate with ticket office about reservations and tickets. Coordinate with F&B for lunch count.
- Check beacon operation before issuing (battery life and transmission. Replace if below 35%) and check air pressure in the BCA Float Packs (all gauges should be in the Green)
- Ensure that guests sign digital release forms, and distribute tickets.
- Let the clients know about weather, sunscreen, water, lunch, and space for additional gear.
- Coordinate with food services on number of lunch's and any special food needs.

#### **Release Forms and Orientation Video**

- Ensure all the information is filled out completely, signed and dated.
- Check for medical problems and note any that may conflict with tour conditions.
- Ensure that Orientation Video is played and that all guests have seen the entire program. Answer any questions they may have.

#### **Avalanche Beacon**

- Demonstrate the on/off switch
- Explain that the beacons are to remain in the ON position and worn all day with the strap system provided. The beacon is not to be placed in a pack or pocket.
- Instruct in the procedures to follow if someone is buried
- If client has his/her own beacon, test for function and note on release form
- Ensure that beacon number is written on waiver

#### **BCA Float Packs**

- Explain the purpose of the packs
- Demonstrate how packs fit and how the retention strap system works
- Explain how to initiate airbag if need arises using trigger
- Explain BCA Float Pack protocol; triggers are to be placed in zipper while riding on lifts and in the cat and then deployed as guests are skiing

- Ensure that pack number is written on their check-out form.
- If guests chooses not to use the MCS provided BCA Float Pack; have them initial on their check-out form

### **Lift Protocol and Meeting At Top of Breezeway**

- Direct the guests to the Breezeway lift and to meet on top with the snowcat
- If the maze is full, use the ski school line and state that they are with MCS
  - Guides will do their best to learn and use guests first name

### **Snowcat Instructions**

- Driver meets the guests at the top of Breezeway lift
- Instruct about the door, steps, tracks, ski racks, and movement of the machine until the stairs are down
- Stay clear of machine and roads while snowcat is running
- No smoking inside the snowcat

## **Unusual Circumstances**

### **Lost Skier Search Procedure**

After it has been determined that a skier or skiers have been lost.

- Initiate by calling Dispatch (Location and number)
- Depending on location, one guide will stay at the snowcat pick up One guide will either:
  - Track back from the bottom for the flanks that have been crossed.
  - Go to the top of run and look for the last seen tracks.
- Clients will stay with the cat until the person is found unless they are able to assist with the search and otherwise, the tour is on hold until person is found.

### **Evacuation of an Injured Skier**

When an injury occurs, do a complete assessment of the patient and notify MSP as soon as possible. With the assistance of the MSP, prompt medical treatment and evacuation is staged. A toboggan, snow mobile or snowcat will transport the injured to the Ski Patrol Clinic. When reporting an injury to dispatch, use channel 10 and be very specific about your location and the nature of the injury.

### **Uncooperative Guest**

Clients must listen and follow all MCS protocols and guide instructions to ensure individual and group safety. MCS guides have the discretion to evict anyone who jeopardizes safety. NO

refunds will be given. As stated in the general procedures, you must remain professional in all aspects of this situation if it was to arise. Use of drugs or alcohol is prohibited during the tour.

## **Avalanche Rescue**

If avalanche rescue is necessary within the Monarch boundary MCS will respond and assist Ski Patrol. If rescue is necessary within MCS permit area, MCS will initiate rescue and MSP will respond to assist. If an avalanche occurs within the MCS permit area, notify Ski Patrol Dispatch immediately before initiating rescue. Rescue outside of the Monarch boundary is the responsibility of Chaffee County and/or Gunnison County Search and Rescue. However, Monarch personnel may be asked to respond.

Incident commander and avalanche rescue plans are located in the snowcat, at all top shacks and as PHQ. It is your job to be familiar with them. **The MSP Avalanche Rescue Plan is located at the dispatch desk, at all patrol top shacks, and in the Snow Safety Manual.**

## **Specific Guide Duties Daily**

**Weather Data and Avalanche Forecasting – Collection of data will basically follow the Colorado Avalanche Information Center (CAIC) Observers Guide and SWAG Guidelines.**

### **Daily Weather**

A qualified MCS or MSP person will collect weather data at the midway snow study off Short & Sweet by 7:00 am. Information collected will be:

- Total snow depth (HS)
- New snow (HN)
- Water equivalency (HW)
- 20 cm temperature
- Current air temperature
- Note any pertinent formations such as surface hoar . . .

Data will be recorded on Daily Weather sheet and entered on to the 4 reporting websites. Other data will be collected electronically from the Mirkwood Weather Station and will include:

1. Wind Direction and Speed
2. Relative Humidity
3. Barometric Pressure
4. Ridge Top Temperature
5. CAIC Weather and Avalanche Forecast

Using weather and avalanche history and field data the Weather Crew will create a personal avalanche forecast for Monarch terrain and Monarch Pass and provide details to back up their prediction. All data should be reported to CAIC electronically.

## **Field Analysis**

MCS Guides will make route selection decisions based on a number of variables, and will use intuition and information gathered from experience, training, and available resources such as Weather Stations and Avalanche Forecasts regarding the following:

- Weather Data; Morning weather
  - Snowfall Data (New snow amount and water content)
  - Wind Data (Wind speed, gusts, direction)
  - Temperatures (Min/Max/Current)
- Terrain Analysis
  - Slope angle and aspect
  - Location of known avalanche starting zones, paths and run out zones.
- Snow Stratigraphy
  - Snow pits
  - Hasty pits
  - Seasonal records
- Field Observations
  - Avalanche occurrence
  - Collapsing
  - Cornice development
- Field Analysis
  - Explosive use
  - Ski cutting/ ski compaction/roller disruption

## **Documentation**

- Daily Weather and Avalanche Observations
- CAIC Weather Forecast
- Guide Daily Log/Driver Log
- Explosives Reports and Shot Placement Records
- Wall Log
- Accident Report

## **Seasonal Training and Equipment**

### **Training**

- O.E.C. and C.P.R.
- Blood borne Pathogen Protection

- Hazard Communication
- Lockout-Tag out
- Firefighting and emergency exits
- Avalanche Mitigation/Snow Safety
- Blasting and Explosive Training with Certificate
- Snowmobile Training
- Snowcat operation
- Avalanche Transceivers and Float Packs
- Snow Science/CSAW
- Avalanche Courses, Videos, Books, and Literature.

## **Personal First Aid Equipment**

The following is a list of the minimum equipment you must have in your first aid pack:

- Leatherman or similar tool
- SAM Splint
- Triangular bandages
- Artificial airways #1, #3
- Tongue depressors
- Incident Report Form
- Refusal Report Form
- Pen or pencil
- Adequate dressing for major bleeding
- Band aids, butterfly closures and steri-strips
- 1" tape (adhesive)
- Roller gauze
- Multi-trauma dressing
- Safety pins (various sizes)
- Rubber gloves and mask
- Empty bags for ice
- Pocket mask
- Scissors
- Notebook
- Space Blanket
- Watch

A trauma pack located in the snowcat will contain the following:

- Oxygen
- O2 Delivery Supplies
- Bleeding kit
- Suction
- Bag Valve Mask
- Glucose
- Extra Gloves

- Celox Blood Stopper
- Tourniquet
- Blanket
- Hot Packs
- Trama Shears
- AED

## Documentation

- [Daily Weather Sheet](#)
- [MCS Tours Daily Log](#)
- [MCS Terrain Road Map with Landing Zones](#)

## Know the Code!

### Skier Responsibility Code

1. Always stay in control and be able to stop or avoid other people or objects.
2. People ahead of you have the right of way. It is your responsibility to avoid them.
3. You must not stop where you obstruct a trail or are not visible from above.
4. Whenever starting downhill or merging into a trail, look uphill and yield to others.
5. Always use devices to help prevent runaway equipment.
6. Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
7. Prior to using any lift, you must have the knowledge and ability to load, ride and unload safely.
8. Snow maintenance vehicles or snowmobiles may be encountered on any trail at any time

### Colorado Skier Safety Act

Under Colorado law, any person using any of the facilities of the ski area is considered a skier. Colorado has amended its Ski Safety Act to include a section on inherent risks and dangers in the sport.

#### **Warning:**

Under Colorado law, a skier and snowboarder assumes the risk of any injury to person or property resulting from any of the inherent dangers and risks of the sport and may not recover from any area operator for any injury resulting from any of the inherent dangers and risks of skiing and snowboarding, including changing weather conditions; existing and changing snow conditions; bare spots; rocks; stumps; trees; collisions with natural objects, man-made objects or other people; variations in terrain; and the failure to ski or snowboard within the limits of their own ability. Each skier or snowboarder solely has the responsibility for knowing the range of his own ability to negotiate any slope or trail and to ski or snowboard within the limits of such ability. Each skier or snowboarder has the duty to maintain control of his speed and course at all

times when skiing or snowboarding and to maintain a proper lookout so as to be able to avoid other people and objects. However, the primary duty shall be on the person skiing downhill to avoid collision with any person or objects below him. No skier or snowboarder involved in a collision with another skier or snowboarder in which an injury results shall leave the vicinity before giving his name and address to an employee of the ski and snowboard area.