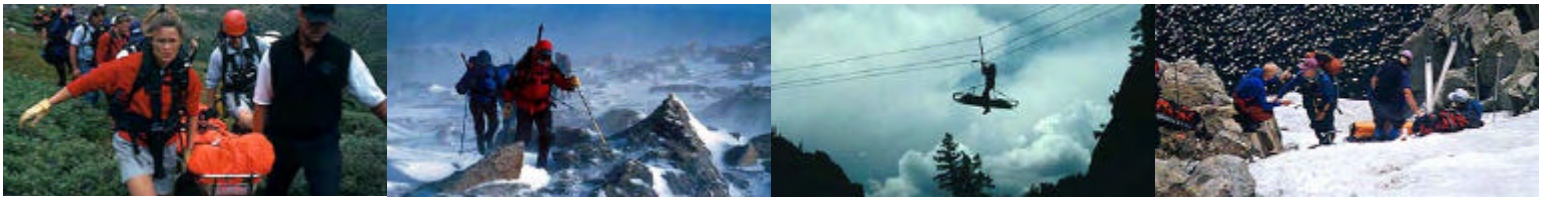
Alpine Rescue Team

Blue Book



Acknowledgement

This book could not have been produced without the efforts of many contributors. However, there is one individual whose tireless efforts and outstanding commitment truly made this book possible.

He is the author of many sections and the editor and advisor on the rest. His work has brought together a collection of knowledge and procedures that will help ensure the continued effectiveness and strength of Mountain Rescue and Alpine Rescue Team.

For his extraordinary efforts on this book, the Board of Directors of Alpine Rescue Team gratefully acknowledges:

Paul "Woody" Woodward

Alpine Rescue Team
Blue Book

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Alpine Rescue Team

Blue Book

Part 1 – History and Team Structure

Forward

The Alpine Rescue Team has an extensive continual training program for both prospective and active members. The Blue Book helps to fill the need for a source of written material on topics specifically applicable to Alpine. Part I contains the Team's History and Structure. Part II includes the Team By-Laws and Appendices. Part III lists the current Administrative Policies adopted by the Board of Directors. Part IV includes the Field Procedures as established by the Field Director. Part V is intended as a reference for techniques and skills that are specific for Alpine and may not be covered in other technical reference books. A list of these other technical reference books can be found in Part V, Section 20 of the Blue Book. Part VI is the Appendix that contains other current team information as well as Regional Mountain Rescue Association (MRA) information.

This manual is not a complete instructional manual for mountain search and rescue or emergency medicine. Reading this manual will in no way replace actual practice, but will familiarize and reacquaint the member with the material to be covered. The authors, and the Alpine Rescue Team take no responsibility for use of this manual, its diagrams or any information contained herein.

The first edition of the Blue Book was written in 1975 by team members Mike Paul, Sue Paul, Harry Ledyard and Chuck Burdick and revised in 1994 under the direction of John Peleaux. The original training manual was bound in a blue cover and over the years inherited the name “Blue Book”.

Listed below are those members that contributed in the writing of this second edition of the team Blue Book. The quality of this manual is in direct proportion to the experience and dedication of this group of elite mountain rescuers.

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Introduction

The Alpine Rescue Team of Evergreen, Colorado is a mountain search and rescue unit dedicated to saving lives through search, rescue, and mountain safety education. The Team is composed totally of volunteers and is available upon request to help in mountain search and rescue problems anywhere, under the authority of local jurisdiction agencies. Membership usually ranges from 40 to 60 persons. The Team is also available to provide information and lectures on mountain safety to interested individuals and groups.

The Alpine Rescue Team prides itself on its many years of humanitarian effort, and its reputation of capability and safety. In addition to training extensively in mountaineering skills, search, and rescue techniques, members work diligently to improve their emergency medical capabilities. Most members have emergency care training, and many of the members are Emergency Medical Technicians (EMT).

The Team usually participates in 70 to 100 field missions per year; these are generally divided about equally between rescues and searches. The Team averages 6,000 volunteer-hours per year in field missions, and at least three times that figure in volunteer-hours spent in training and outreach education programs.

The headquarters of the Team is located near the Evergreen Parkway exit on I-70 just West of Denver. It houses equipment and serves as a command center for missions as well as training and meeting site. A call for help is relayed quickly by pagers, radio, and telephone. Members respond from home or work from all over the greater Denver area as well as Evergreen and vicinity. While most of our search and rescue activity is in the Front Range west of Denver, the Team has worked in virtually every part of mountainous Colorado, and in the western U.S., as well.

Over the years, the Team has built its skills and accumulated the necessary equipment to become a totally self-supporting field unit capable of providing all of its needs to maintain a field operation lasting several days. The Team's inventory of mountaineering equipment, medical gear and radios is extensive and was procured over a long period of time and hard work. There is no regular source of funding; the Team is dependent upon contributions from individuals, groups, firms and agencies interested in supporting its work. Constant fund raising efforts are necessary in order to maintain equipment and purchase new gear.

The work is totally volunteer - the members donate their time, money, and transportation and have to purchase their own personal equipment that may

exceed $2000 - $3,000 per year. Time spent away from work is often money out of their own pockets.

Our reward? That rare and fulfilling experience of being able to provide direct and much-needed help to someone in trouble in the mountains. The members of the Alpine Rescue Team love the mountains; we want others to enjoy them the way we do -- safely.

The Alpine Rescue Team has been a regular member unit of the Mountain Rescue Association (MRA) since 1962. The function of the national association is to provide coordination, education and standardization to member units to promote maximum safety and effectiveness in mountain search and rescue. The association provides member units with information on testing and research of rescue equipment and techniques. It also provides extensive compilation, study and statistical analyses of lost persons and mountain search operations from units throughout the country.

The Team is also an active member of two general rescue organizations. The Colorado Search and Rescue Board (CSRB), is an organization composed of many rescue units of differing disciplines throughout the state. The National Association for Search and Rescue (NASAR) is an organization, which serves as a forum within which search and rescue teams exchange ideas on a national level. Any team or group involved with search and rescue, emergency situations, medical disasters, etc. can be a member of NASAR.

Orientation

WE welcome you to the Alpine Rescue Team. Your application for membership and your presence here indicates that you wish to make a commitment to the objectives in which we all share. Regardless of your age, education, status or social background, we assume that you are willing to share in this commitment to the best of your abilities and resources. In order to help you understand the Team, its objectives and a little of its history, we ask you to read the following background material.

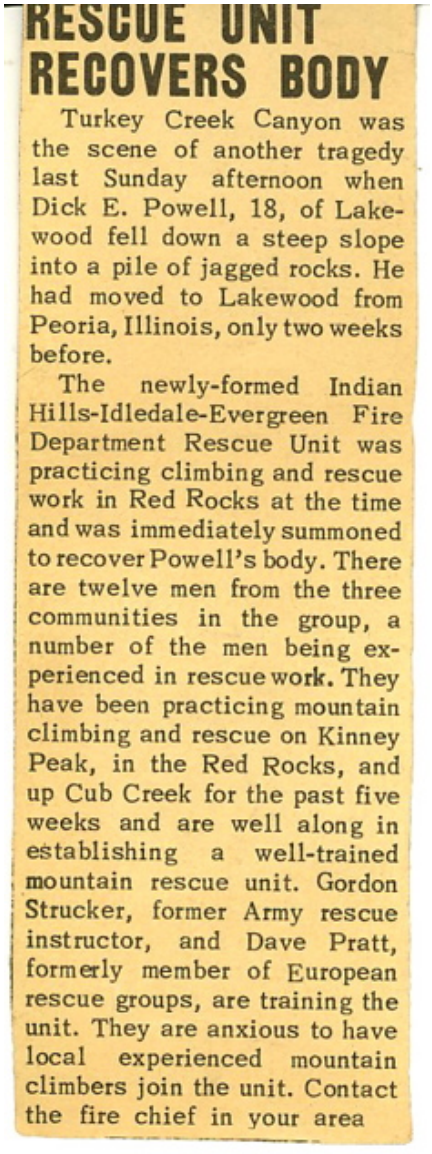
I. BACKGROUND

The start of what has become the Alpine Rescue Team, like many other organizations, grew from a specific event. On June 27, 1959 a climbing accident occurred in Turkey Creek Canyon involving four climbers at Lovers Leap, a 400-foot tall crag. After successfully completing the technical climb the group started a series of rappels. On the second rappel while the second climber descended, a single piton used as the anchor worked loose resulting in the rope dropping to the ground and the climber plunging to his death. Since the climbing team only had one rope, the other two climbers had to be rescued. The rescue of these two individuals and the recovery of the one deceased climber involved the combined efforts of the Idledale, Evergreen and Indian Hills Fire Departments along with some recreational climbers. Because of this incident, the surrounding community fire departments and ambulance personnel were forced to recognize that they were ill trained and not equipped to perform high angle rock rescues and evacuations in the Clear Creek, Bear Creek and Turkey Creek canyons.

Dick Perkins, then Fire Chief of Indian Hills found the dislodged and bent piton. Today it is displayed at the Team's headquarters where it serves as a reminder about the seriousness and importance of the Team's efforts. This reminder is represented by an annual award – The Bent Piton Award – given to a member or members for outstanding performance while participating on a Mission.

This mission, the increased local need for a technical mountain rescue capability and the active encouragement of the Rocky Mountain Rescue Group in Boulder were all essential factors in the formation of the Alpine Rescue Team. In its formative stages, before incorporation, the Team was sponsored by the volunteer fire departments of Evergreen, Indian Hills and Idledale. After all three departments requested volunteers to join this special rescue unit; the first ever meeting was held in the summer of 1959 with six members in attendance, two members from each of the three mountain fire departments.

Early on, the team realized that they had to learn to climb and protect each other before they could even consider helping anyone else. It was not until "Rozzie" Clark Jr., then the Fire Chief of the Evergreen Fire Department, convinced Gordon Stucker and Dave Pratt to get involved, did the team find leaders to train the team in Mountain Rescue. Gordon had provided mountaineering training for soldiers at Fort Carson, and Dave was a former member of a European rescue team. Excited by the opportunity Gordon and Dave stuck around and ultimately took over the team's training. As stated by Charter member, Gene Lines, "Rozzie Clark Jr. kept us alive financially and Gordon and Dave kept us alive physically."



RESCUE UNIT RECOVERS BODY

Turkey Creek Canyon was the scene of another tragedy last Sunday afternoon when Dick E. Powell, 18, of Lakewood fell down a steep slope into a pile of jagged rocks. He had moved to Lakewood from Peoria, Illinois, only two weeks before.

The newly-formed Indian Hills-Idledale-Evergreen Fire Department Rescue Unit was practicing climbing and rescue work in Red Rocks at the time and was immediately summoned to recover Powell's body. There are twelve men from the three communities in the group, a number of the men being experienced in rescue work. They have been practicing mountain climbing and rescue on Kinney Peak, in the Red Rocks, and up Cub Creek for the past five weeks and are well along in establishing a well-trained mountain rescue unit. Gordon Strucker, former Army rescue instructor, and Dave Pratt, formerly member of European rescue groups, are training the unit. They are anxious to have local experienced mountain climbers join the unit. Contact the fire chief in your area

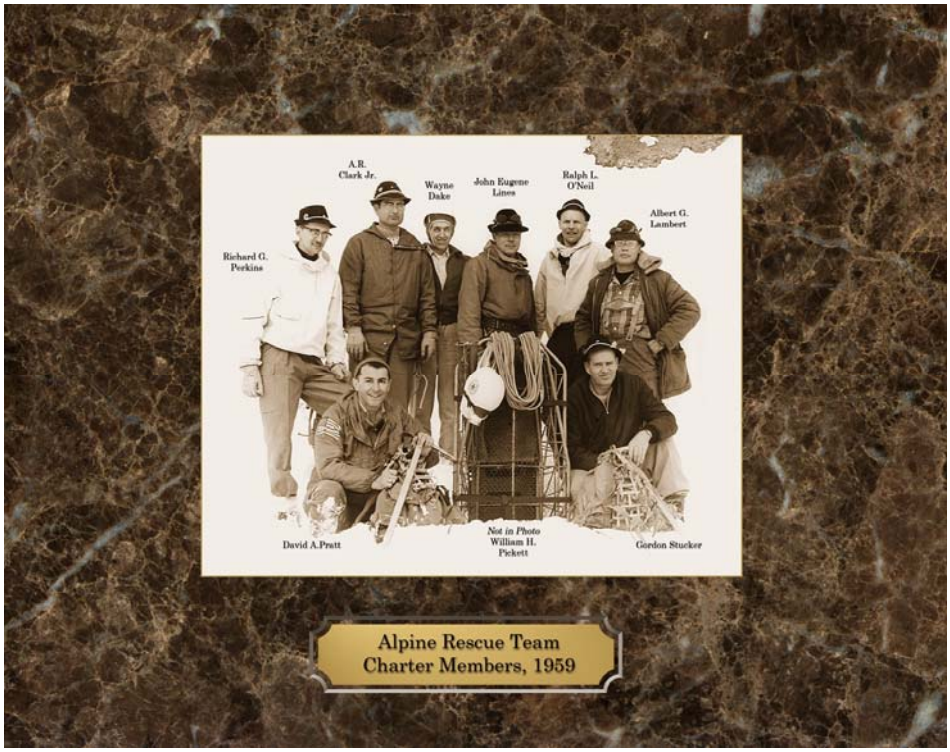
Newspaper report of the newly formed Indian Hills-Ideldale-Evergreen Fire Rescue Unit's first mission, September 20, 1959.

As the team's mountain search and rescue expertise increased, it was time to separate from the Fire Districts and become an independent organization. In February of 1960, the nine Charter Members listed below, wrote the original Team By-laws. Two months later on April 20th, 1960 the organization was incorporated with the name, **Alpine Rescue Team.** The principal office of the corporation was located in Kittredge. Seven of the nine charter members served as the first Board of Directors.

Alpine Rescue Team's nine (9) Charter Members as listed on the original Article of Incorporation include:

David A. Pratt	Board Member
A.R. Clark Jr.	Board Member
Albert G. Lambert	Board Member
William H. Pickett	
Richard G Perkins	Board Member
Ralph L. O'Neal	Board Member
John Eugene Lines	Board Member
Wayne Dake	
Gordon Stucker	Board Member

Albert "Al" Lambert served as the Team's first President and Gordon Stucker served as the Team's first Team Captain (Field Director).



On August 1, 1960 members of the Alpine Rescue Team became part of Colorado's mountaineering history with their support of the first ever ascent of the Diamond on Long's Peak. In the summer of 1960, National Park Service guidelines for big wall climbs where changed to allow climbers to make these technical climbs provided that they could demonstrate that they were competent climbers and could also provide their own support team that would perform a rescue if necessary. California climbers Dave Rearick and Bob Kamps made the first ever ascent of the 900-foot tall Diamond. Members of the Alpine Rescue Team served as their support team.

As the Team's proficiency increased, members' interests extended beyond the Inter-canyon area. In 1960 Team members became active in the creation of the Colorado Rescue Association, now incorporated as the Colorado Search and Rescue Board. The Team would no longer think in terms of geographical limits. Since 1960, the Alpine Rescue Team has operated throughout the Rocky Mountain region and across the U.S.

Two years later, in 1962, the team became the second Colorado Mountain Rescue Team to be a fully accredited member of the Mountain Rescue Association. Only six of the original nine charter members were still members of the team at this time. Below are the eighteen members of the Team as submitted on the May 29, 1962 application to the MRA.

Rescue Members
John Biewener (President)
Rossie Clark, Jr (Coordinator)
Cal Estap
Lou Jansen (Secretary)
Al Lambert
Gene Lines
Dick Perkins
Bill Sims (Rescue Team Captain)
Gordon Stucker
Fred Coyle
Don McNair
Dave Pratt

Support Members
Art Julian
Butch Clark
Ed Haynes
Kirk Brown
Jim Tiernay

Team Doctor
Dr. Robert Collier

In 1963, Alpine adopted the following Articles of Amendment to its Articles of Incorporation. The original six objectives stated in 1960 where revised to the five team objectives listed below. These five objectives were rewritten in 1975 and again in 2002. As part of our current By-laws, the objectives guide the team.

a. To maintain a ready capability to carry out humanitarian search, rescue and recovery operations in mountainous terrain, under all climatic conditions, and in any other situation compatible with Team capabilities.

b. To encourage and actively assist team members in acquiring mountaineering and mountain rescue skills, knowledge and experience.

c. To teach individuals and groups safe mountaineering practices and safety in the mountains.

d. To cooperate with other mountain search and rescue organizations and with other rescue disciplines through formal association, compacts and mutual agreements at the local, regional, national and international levels.

e. To maintain and foster the independent character of the mountain rescue discipline through formal association with other mountain rescue groups and to encourage and assist groups that make a similar commitment.

In 1965, the initial "Standards of Proficiency" were written by Al Lambert and Gordon Stucker. These were then rewritten in 1975 and 1994 and amended a number of times from 2000 to 2010 as what we now refer to as, the "Guidelines of Proficiency."

High standards, quality training, and serious search and rescue operations improved the Team's prowess. That reputation, combined with Gordon and Joann Stucker's personal friendship with Roy and Alice Holubar along with Charter Member, Gene Lines working for the Holubars, allowed the Alpine Rescue Team to acquire specially designed mountaineering equipment. Alice Holubar designed and made mountaineering clothing, packs and sleeping bags in her basement home in Boulder. Holubar became the first American Mountaineering mail order supply house. Alice Holubar was to the mountaineering equipment business what the 10th mountain Division was to the American ski industry. She worked with the American Red Cross to locate and procure special equipment for the Team including surplus climbing equipment, stokes litters and medical supplies. Alice's original designs are still copied today by the outdoor industry. Her designs have not only stood the test of time, but her products have also withstood time. The Team is proud to have many of the original custom made sleeping bags and down suits that were designed and made for members by Alice Holubar.

In 1963 the Team sponsored an Explorer Scout Program. That first year, twelve young men participated in the Evergreen "Explorers Post 95". The Explorer Program continued for a number of years before it dissolved. In the late 1960's, Team member, Lindon "Woody" Wood began a new training program for young men and women ages 13 and older. At the time these teenagers performed their work in the same amounts and at the same level of quality expected of every adult member. These young men and women conducted trainings and lead searches and rescues. Unfortunately, as Evergreen transitioned from a rural to a suburban community, societal norms pressed the Team to raise the minimum age. In the early 80's the age requirement was raised to 16. It was not until the late 80's that the Team adopted the current age requirement of 18 for all Team members.

Lindon "Woody" Wood training young members in 1971–72.

In 1973 Sue Paul and Edith Head became the first two women to join Alpine. Sue Paul also served as the first women President of Alpine in 1981.

2. STRUCTURE

The team emblem, designed by Dave Pratt, refers to the original association of the three local fire departments. Each side of the blue triangle represents one of the aforementioned communities. The Red Cross symbolized the commitment to aid those in need of our services and the significant assistance of the Jefferson County Chapter of the American Red Cross. The climbing rope and ice axe refer to the specialty in which we were to engage and to the environment – the mountain.

Draft design for the first Team logo, 1959.

Current Team logo.

The Alpine Rescue Team name was intended to convey the nature of our work and how we would go about it. "**Alpine**" was chosen to signify the environment. "**Rescue**" was selected to indicate that we were not to become another group of part-time policemen. "**Team**" was chosen to remind us that we were not to become a social club, or some loose affiliation of people vaguely interested in mountain search and rescue.

Control of the Team is vested in the Support, Rescue and Qualified Rescue members, through the elected officers and their appointees. While significant changes have been made in structure since 1960, the principle of dual leadership established in 1974 remains unchanged. Team leadership is expressed through the offices of the President and the Field Director, (originally called the Team Captain). Broadly speaking, administrative matters are the responsibility of the President while operational functions are the concern of the Field Director.

Please see the by-laws (revised 1963, 1975, 1988, 1994, 2002, and 2009) for a detailed view of Team structure.

3. CODE OF ETHICS

Over the years, certain principles and traditions have become identified with mountain search and rescue in general and with the Alpine Rescue Team in particular. These were included in certain policy decisions of the Team. In 1968, these principles and others were brought together in a single declaration that forms an appendix to the by-laws. These principles where amended in 2008 and are now referred to as the Code of Ethics.

4. TRAINING AND PROFICIENCY

To join the Team one must complete the Prospective Member training. No prior mountain rescue experience is required, just determination to complete the course. Basic mountain rescue skills are covered in this course. Resulting from the Team's emphasis over the years on safety, we have adopted the "Guidelines of Proficiency," a list of skills, knowledge, and the equipment that a member must possess. Please refer to the Guidelines of Proficiency section.

The training program of the Team is founded upon these guidelines and is directed towards the goal of bringing each member up to the level required by its provisions. An ongoing system of training, teaching, practice and evaluation is conducted. Each member is expected to participate in this training program regardless of the level of skills they believe they possess or their reputation as a mountaineer. Only persons demonstrating proficiency in the skills deemed necessary for support members shall be considered for election onto the Team. These required skills are listed in the Guidelines of Proficiency.

Promotional considerations are based on actual field performance as viewed by the Training and Field Directors. Skills should be demonstrated and improved upon during trainings and not on missions. Therefore, only proficient, well-known members shall remain on the active call list. Minimum attendance requirements will be determined by the Field Director. Members failing to meet these requirements may be placed on probation or may be asked to resign their membership to the Team. If time limitations or other problems prevent or severely limit your involvement, chances are the Team is not for you. Very active members devote most of their "free" time and energy to the Team, but in doing so reap far greater satisfaction for their efforts than do less active members.

The Shack

Early meeting places for the team were in the old Evergreen Library, and the Elk's lodge. While in the Elk's lodge it was called The Shack. The first Alpine owned building was located on Independence Mountain above the town of Evergreen. It was built in 1973-4 by Team members and community supporters. The property was donated by lifetime Board Member Byron Angevine. Though the new building was hardly a shack, the name stuck. The new Shack was divided between the Team's meeting/storage facility and a two-bedroom apartment that was rented to pay for the mortgage. The first renters were team members Brian Gunnerson and John Peleaux. The single meeting room had a corner designated as the dispatch area. Downstairs, the two-door garage housed the Team's rescue and search trailers, and a locked equipment room.

When Alpine purchased their first vehicle (originally called 602 and then changed to Rescue 2 in 1997) in 1985, it was too large to fit into the garage bay. An agreement was made with Evergreen Ambulance to use one of their garage bays temporarily at their new "barn" on Hwy. 74 just South of Evergreen. Response time to the I-70 corridor was slow due to the location of the Shack. Another factor for considering a new Shack location was that the membership was shifting from a local Evergreen to a Denver membership base. The main factor was to improve our response time to our primary area, the I-70 corridor.

In 1988, the Team's Board of Directors approved the construction of a new building located just south of I-70 at the Evergreen Parkway exit. For the next two years, team members undertook a major fund raising effort to pay for the new headquarters. Ground breaking was on November 30, 1989. For simplicity, the new building was called the New Shack. With a very generous donation by the Clear Creek County Sheriff's Posse, the new building was completely paid for when it was officially opened on November 10th, 1990. The new building and land are currently leased from the Foothills Fire Protection District, formally the Lookout Mountain Fire Protection District, for the sum of $1.00 per year. The first order of business each year at the Teams first Board meeting in January is to pay the $1.00 rent.

Since the early 90's the team has increased their number of emergency vehicles, snowmobiles and ATV's that are used in search and rescue operations. In 2004 the Alpine Board of Directors appointed a committee to look into the long range plans of the team in terms of the current lease and the housing of possible future vehicles, trailers, ATV's and snowmobiles.

In 2007 the committee reported to the Board of Directors that an individual had come forth and was willing to donate the costs of a new building to the team. Construction began in December of 2007 and the team was able to move trailers, ATV's and snowmobiles into the new 2000 square foot building on July 1, 2008. The new building has appropriately been named the "Shed".

On December 15, 2009 the committee was proud to announce that the Foothills Fire Protection District Board of Directors had granted Alpine an additional 20 year extension on the current lease allowing the team to operate at the Rainbow Hills location until 2048.

Building and vehicle maintenance require much more time and energy than in any other time in the Team's history. The responsibility for cleaning and maintaining the Shack and Shed belongs to every team member.

Rescue Organizations

The search and rescue community in Colorado is made up of many different groups, including sheriffs departments, fire departments, ambulance organizations and specialized mountain rescue teams similar to Alpine. In 1962, Alpine became a fully accredited member of the Rocky Mountain Region of the Mountain Rescue Association (MRA). Over the years, Alpine members have been instrumental in the development of the Rocky Mountain Regional By-laws, Policies, accreditation and reaccreditation procedures that are currently used today. Below is a listing of the current MRA teams in the Rocky Mountain Region and the year they joined the MRA. Alpine frequently works with other search and rescue (SAR) organizations and is often called to aid non-rescue organizations with problems mandating mountain rescue techniques.

Rocky Mountain Region of MRA

Current Regular Member Teams & date of Accreditation. (01/01/08)

1959 Rocky Mountain Rescue Group
1962 Alpine Rescue Team
1966 Mountain Rescue Aspen
1966 Albuquerque Mountain Rescue Council
1976 El Paso County SAR
1976 Summit County Rescue Group
1982 Larimer County SAR
1982 Vail Mountain Rescue Group
1985 Grand County SAR
1987 Western State College Mountain Rescue Team
1991 Crested Butte SAR
2001 Routt County SAR
2005 Douglas County SAR
2007 Atalaya Search and Rescue

Associate Teams:

1992 Park County SAR

Ex-Officio Teams:

Grand Teton National Park Rescue Team
Rocky Mountain National Park Rescue Team
Eldorado Canyon State Park

Colorado Search and Rescue Board

In 1960, Alpine team members became active in the creation of the Colorado Rescue Association, now incorporated as the Colorado Search and Rescue Board. The Colorado Search and Rescue Board (CSRB) is a statewide organization composed of numerous emergency response agencies. Some of these agencies participate in matters not associated with search and rescue, i.e., fire, police, forest service, and the like. Such a diverse membership greatly enhances the response capabilities of the CSRB.

During a major mission involving numerous agencies, the CSRB may be requested to act as a master coordinator. There are approximately 10 state coordinators, each rotating the duty for one week at a time. They may be reached by pager through the CSRB emergency telephone number: (800) 593-CSRB, 24 hours a day. Besides acting as an overall coordination center for multi-team missions, the CSRB is continuously involved in providing training programs in areas such as mission leadership, ICS and other topics of inter-team interest. The Board holds regular meetings, which provide its members the opportunity to communicate anything from new techniques to problems which have occurred on a specific mission.

Rocky Mountain Rescue Group (Boulder)

The Boulder County Search and Rescue Group was formed early in 1947, evolving into the Rocky Mountain Rescue Group later that year. In 1959 RMRG became the first accredited member team of the Mountain Rescue Association (MRA) from Colorado. In 1962 RMRG sponsored the Alpine Rescue Team in its initial application into the MRA. RMRG is funded through the City and County of Boulder and the University of Colorado. Many of the members are, or have been, students at the University of Colorado. In general, RMRG has many procedures very similar to ours for technical evacuations and search. Alpine frequently works closely with RMRG on large missions. In 2001, RMRG retired their power winch

used for their cable evacuations. Historically, they have the highest mission load of any mountain rescue group in Colorado.

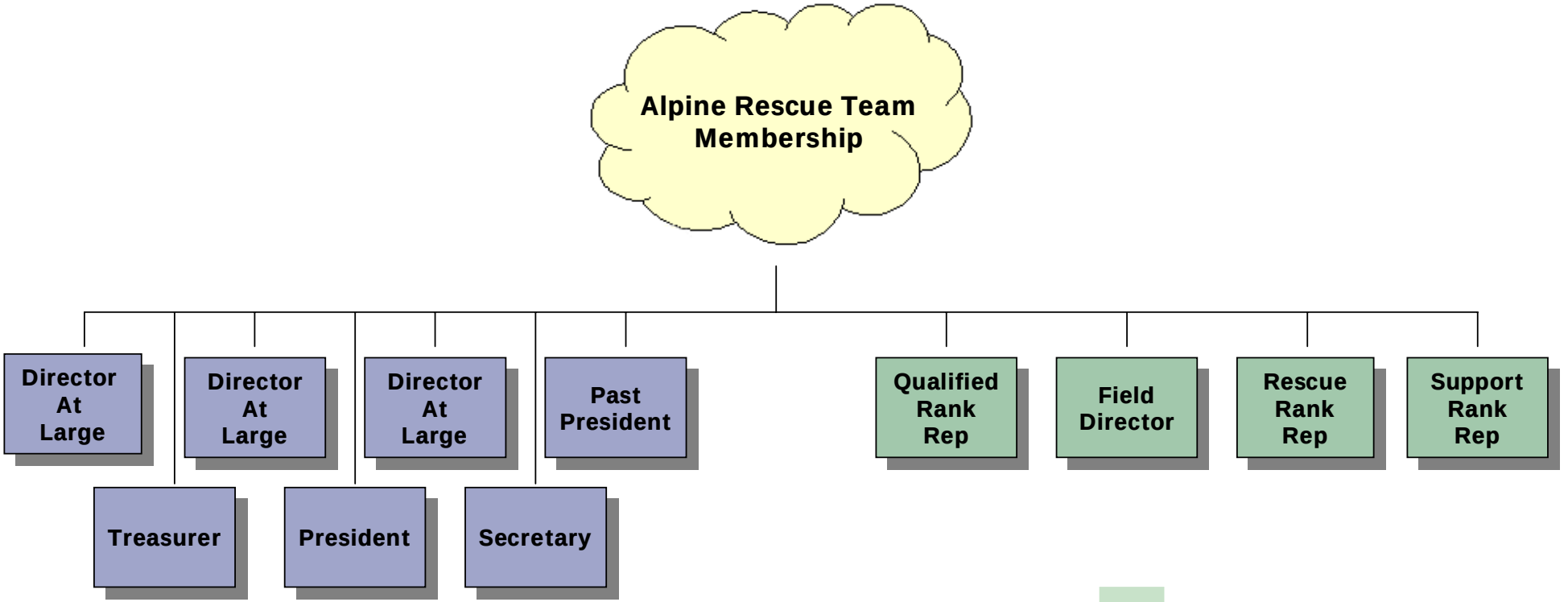
Search and Rescue Dogs of Colorado (SARDOC)

Search and Rescue Dogs of Colorado was formed in 1983 as the need arose for locating and standardizing search dogs and handlers throughout the state. Standards enable search managers to have a basis for expectations of a dog/handler team's performance in a search situation. To reach the point of certification based upon SARDOC's standards, a dog/handler team trains several times weekly for generally two years. SARDOC is dispatched by the Larimer County Sheriff's Department.

Front Range Rescue Dogs (FRRD)

Front Range Rescue Dogs of Colorado (FRRD) was formed in 1984. The FRRD teams work primarily in Boulder County but have been requested to assist on searches throughout Colorado and neighboring states. As with SARDOC, the standards established by FRRD enable search managers to have a basis for expectations of a dog/handler team's performance in a search situation. It takes approximately two years for a dedicated handler and dog to become qualified. FRRD is dispatched by the Boulder County Sheriff's Department.

Alpine Rescue Team Organizational Chart



The President has the authority to appoint individuals to assist in the administrative affairs of the Team. These roles may include:

- Speakers Bureau
- Small Store
- Pro Purchase
- House
- Maps
- Fundraising: (Alumni,Special Projects)
- PIO
- MRA Rep
- CSRB Rep
- Jeffco Fire Council Rep
- Historian
- Insurance
- Computer
- Website

The Field Director has the authority to appoint individuals to assist in the operational activities of the Team. These roles may include:

- Training
- Medical
- Vehicles
- Communications
- Equipment
- PIO (Missions)
- Mission Leaders
- Snowmobiles
- ATV's
- Prospective Member Program
- Mission Reports & Attendance

Alpine Rescue Team

Blue Book

Part 2 – By-Laws and Appendices

ALPINE RESCUE TEAM
A Colorado Nonprofit Corporation

BY-LAWS

ARTICLE I

Objectives

The objectives of the Alpine Rescue Team, a Colorado nonprofit corporation (referred to in these By-Laws as the "Team") are:

a. To maintain a ready capability to carry out humanitarian search, rescue and recovery operations in mountainous terrain, under all climatic conditions, and in any other situation compatible with Team capabilities.

b. To encourage and actively assist Team members in acquiring mountaineering and mountain rescue skills, knowledge and experience.

c. To teach individuals and groups safe mountaineering practices and safety in the mountains.

d. To cooperate with other mountain search and rescue organizations and with other rescue disciplines through formal association, compacts and mutual agreements at the local, regional, national and international levels.

e. To maintain and foster the independent character of the mountain rescue discipline through formal association with other mountain rescue groups and to encourage and assist groups that make a similar commitment.

ARTICLE II

Offices

Section 2.1 Principal Office. The principal office of the Team in the State of Colorado shall be located in Jefferson County, State of Colorado. The location of the principal office may be changed from time to time by the Board of Directors.

Section 2.2 Registered Office. The registered office of the Team, required by the Colorado Revised Nonprofit Corporation Act to be maintained in the State of Colorado, may be,

but need not be, identical with the principal office of the Team in the State of Colorado. The address of the registered office may be changed from time to time by the Board of Directors.

Section 2.3 Registered Agent. The registered agent of the Team, required by the Colorado Revised Nonprofit Corporation Act, shall be designated by the Board of Directors.

ARTICLE III

Members

Section 3.1 Membership. Prospective Team membership and Team membership shall be determined in the following manner:

Section 3.1.1 Prospective Members. Prospective Members shall be at least 18 years of age, shall have submitted an application for Support Rank membership, shall meet the criteria for membership adopted by the Board of Directors, and shall be accepted into the prospective member program approved by the Board of Directors. No person may be admitted as a member without such person's consent.

Section 3.1.2 Field Active Members. Field Active Members shall meet the requirements for their rank and shall meet the minimum attendance and participation requirements established by the Field Director. They shall be at least 18 years of age and shall be listed on the current call list approved by the Field Director. Field Active Members shall be divided into the following ranks and shall be elected to rank membership in the manner set forth below. The Board of Directors may deny approval of a nomination only due to failure of a nominee to meet the requirements of the Guidelines of Proficiency.

a. Support Rank. The Support Rank shall be comprised of the Support Rank Members, who shall have been nominated by the Field Director, approved by the Board of Directors, and elected to membership by the Support Rank, Rescue Rank and Qualified Rescue Rank Members present at a Team business meeting voting as a single group. Members of the Support Rank shall have the rank S1, S2, S3 or S4 as determined by the Guidelines of Proficiency. Upon election to the Support Rank a member shall have the rank S4. Promotion to higher rank within the Support Rank shall be recommended by the Field Director and shall become effective upon approval by the Board of Directors.

b. Rescue Rank. The Rescue Rank shall be comprised of the Rescue Rank Members, who shall have been nominated by the Field Director, approved by the Board of Directors, and elected to membership by the Rescue Rank and Qualified Rescue Rank Members present at a Team business meeting voting as a single group. Members of the Rescue Rank shall have the rank R1, R2, R3 or R4 as determined by the Guidelines of Proficiency. Upon election to

the Rescue Rank a member shall have the rank R4. Promotion to higher rank within the Rescue Rank shall be recommended by the Field Director and shall become effective upon approval by the Board of Directors.

c. Qualified Rescue Rank. The Qualified Rescue Rank shall be comprised of Qualified Rescue Rank Members, who shall have been nominated by the Field Director, approved by the Board of Directors, and elected to membership by the Qualified Rescue Rank Members present at a Team business meeting.

Section 3.1.3 Sustaining Field Members. Sustaining Field Members shall be members that provide a supporting role in Team functions and / or operations. Sustaining Field Members shall have been recommended by the Field Director and the Qualified Rescue Rank and approved by the Board of Directors. Membership requirements may be imposed by the Field Director. The contributions made by Sustaining Field Members shall be reviewed annually by the Field Director and the Qualified Rescue Rank, and such members shall continue as Sustaining Field Members upon recommendation of the Field Director and the Qualified Rescue Rank and approval of the Board of Directors. Sustaining Field Members shall meet one of the following qualifications:

a. Technical Specialists. Technical Specialists shall be Team members that have exhibited an exceptional proficiency in a particular aspect of mountain search and rescue. These members shall be currently or shall have been in the past, actively involved in their specialty outside of the team.

b. Reserve Members. Reserve Qualified Rescue Members shall have at least seven (7) years of field active service as a Qualified Rescue Rank Member; Reserve Rescue Members shall have at least ten (10) years of field active service as a Rescue Rank Member or higher; Reserve Support Members shall have at least fifteen (15) years of field active service as a Support Rank Member or higher.

Section 3.1.4 Associate Members. Associate Members shall be willing and able to render some regular and useful administrative service to the team.

a. These services may include administrative (non-field) duties during a Team training and/or operation.

b. They shall be appointed by the Board of Directors.

c. Their contributions to the Team shall be reviewed annually by the Board of Directors and they shall continue as Associate Members upon approval by the Board of Directors.

Section 3. 1.5 Honorary Members. Honorary membership may be awarded to non-Team members who have made a significant long-term contribution to the Team. Any two Field Active members may recommend an Honorary Member. Honorary membership shall be conferred by the Board of Directors.

Section 3.1.6 Members Emeritus. Emeritus membership may be bestowed by the Board of Directors upon former members of the Team who have been members for at least Twenty (20) years, not including periods of leaves of absence, probation or suspension, and who have been a Field Active Member for at least Ten (10) years.

Section 3.1.7 Dual Membership. Individuals that want to hold Dual Membership in the Team and in any other volunteer organization(s) that provide emergency medical or search and rescue services may do so only upon application, recommendation by the Field Director and by the Qualified Rescue Rank, and approval by the Board of Directors. After initial approval, Dual Membership shall be reviewed annually by the Field Director and the Qualified Rescue Rank. Dual Membership shall continue upon recommendation of the Field Director and the Qualified Rescue Rank and approval of the Board of Directors. Dual Membership privileges may be suspended or revoked at any time by the Board of Directors.

Section 3.2 Leave of Absence. Field Active Members in good standing shall be eligible for leave of absence upon application to the Field Director and approval by the Board of Directors. Field Active members on approved leave of absence shall be eligible for return to field active status upon application to the Field Director and approval by the Board of Directors, subject to such conditions as may be recommended by the Field Director and approval by the Board of Directors.

Section 3.3 Suspension of Membership. Membership in the Team may be suspended at any time by the Field Director or acting Mission Leader during the course of any field operation, including operations for training, search, rescue or recovery purposes, or by the President at any other time. A suspension shall become effective immediately upon notification of the suspended member by the person with authority to issue the suspension. During a suspension, a suspended Member shall not participate in Team trainings, missions or meetings. Within five (5) days after notification of a suspension, the suspended member shall be given written notice of the reason for and duration of the suspension. A suspended member may appeal his or her suspension to the Board of Directors. To be considered by the Board, written notice of such appeal shall be delivered to the President within thirty (30) days after delivery of written notice of the reason for and duration of the suspension. Any such appeal shall be heard by the Board within thirty (30) days after notification of appeal with no fewer than six (6) directors present and voting. A two-thirds (2/3) vote of the directors present and voting shall be required to confirm an appealed suspension. By the same vote, the Board may change the duration of a suspension.

Section 3.4 Termination of Membership. Membership in the Team may be terminated by the Board of Directors. Notice of the proposed termination of a Member, together with the reasons for such termination, shall be delivered in writing to the Member following a two-thirds (2/3) vote of the directors, with no fewer than six (6) Board Members present and voting for termination. A Member receiving a notice of proposed termination may appeal his or her termination for reconsideration by the Board. To be considered by the Board, written notice of such appeal shall be delivered to the President within thirty (30) days after delivery of written notice of the proposed termination and the reasons for termination. Any such appeal for reconsideration shall be heard by the Board within thirty (30) days after notification of appeal with no fewer than six (6) directors present and voting. A two-thirds (2/3) vote of the directors present and voting shall be required to confirm an appealed termination. A confirmed termination shall become effective five (5) days after the vote of the Board confirming the termination.

Section 3.5 Annual Meetings. The annual meeting of the members shall be held at such time on such day in November as shall be established by the Board of Directors, commencing with the year 2002, for the purpose of electing directors and officers and for the transaction of such other business as may come before the meeting. If the election of directors shall not be held on the day designated herein for any annual meeting of the members, or at any adjournment thereof, the Board of Directors shall cause the election to be held at a special meeting of the members as soon thereafter as may be convenient. The annual meeting may be held in conjunction with or as a part of a regular Team business meeting.

Section 3.6 Special Meetings and Team Business Meetings. Meetings of members that are not annual meetings may be either special meetings of members or Team business meetings. Special meetings may be called as necessary to satisfy the requirements of these By-Laws, the Articles of Incorporation or the Colorado Revised Nonprofit Corporation Act. Special meetings may be called by the President, Field Director, Secretary, Treasurer or two members of the Board of Directors, and shall be called by the President at the request of one-tenth (1/10) of the Field Active Members entitled to vote on any issue at the meeting. Notice of any special meeting of members shall be given pursuant to Section 3.7. Team business meetings may be held for any purpose or purposes that do not require notice pursuant to Section 3.7. Team business meetings shall be scheduled by the Board of Directors in a manner determined by the Board. A special meeting of members may be held in conjunction with or as a part of a Team business meeting.

Section 3.7 Notice. Written notice of any annual or special meeting of the members specifying the place, date and time of the meeting shall be given by U. S. mail, facsimile, electronic mail, or bulletin that is mailed, posted at the Team headquarters or handed out no fewer than fifteen (15) days and no more than sixty (60) days prior to the meeting for which such notice is given. Such notice shall include an agenda stating the purpose or purposes for which

the meeting is called and shall contain a description of any matter or matters to be considered at the meeting.

Section 3.8 Quorum. Twenty five percent (25%) of the Field Active Members, represented in person, shall constitute a quorum at any meeting of members, except as otherwise provided by the Colorado Revised Nonprofit Corporation Code and the Articles of Incorporation. In the absence of a quorum at any such meeting, a majority of the Field Active Members present may adjourn the meeting from time to time for a period not to exceed seventy (70) days without further notice. At such adjourned meeting at which a quorum shall be present, any business may be transacted which might have been transacted at the meeting as originally noticed.

Section 3.9 Voting. Unless otherwise provided by these By-Laws or the Articles of Incorporation, each Field Active Member shall be entitled to one vote upon each matter submitted to a vote at a meeting of members, including elections, with the exception that Support Rank Members with the ranks S3 and S4 shall be entitled to one-half (1/2) vote upon each matter submitted to a vote at a meeting of members.

Section 3.10 Manner of Acting. If a quorum is present, the vote of the Field Active Members present at the meeting and entitled to vote on the subject matter shall be the act of the members., When a vote is taken in accordance with these By-Laws for approval of an action, the action is approved if the number of votes in favor exceeds the number of votes against the action, unless the vote of a greater proportion or number, or voting by voting groups, is required by statute, the Articles of Incorporation or these By-Laws.

All meetings of members shall be conducted in accordance with the procedural rules set forth in the most recent edition of *Roberts' Rules of Order*.

Section 3.11 Ineligible Members. Any reference to Field Active Members in this Article III shall exclude members who are currently under suspension or members who are on a leave of absence, who shall not be eligible to vote.

Section 3.12 Informal Action by Members. Any action required or permitted to be taken at a meeting of members may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the Field Active Members entitled to vote with respect to the subject matter thereof.

Section 3.13 Voting by Ballot. Voting on any question or in any election may be by voice vote or by division unless the presiding officer shall order or any Field Active Member shall demand that voting be by ballot.

Section 3.14 Vote by Proxy. Voting by proxy shall not be allowed.

Section 3.15 Cumulative Voting. Cumulative voting shall not be allowed.

ARTICLE IV

Board of Directors

Section 4.1 General Powers. The business and affairs of the Team shall be managed by its Board of Directors.

Section 4.2 Performance of Duties. A director of the Team shall perform his or her duties as a director, including his or her duties as a member of any committee of the Board upon which he or she may serve, in good faith, in a manner he or she reasonably believes to be in the best interests of the Team, and with such judgment as an ordinarily prudent person in a like position would use under similar circumstances. In performing his or her duties, a director shall be entitled to rely on information, opinions, reports or statements, including financial statements and other financial data, in each case prepared or presented by persons and groups listed in paragraphs a, b and c of this Section 4.2; but he or she shall not be considered to be acting in good faith if he or she has knowledge concerning the matter in question that would cause such reliance to be unwarranted. A person who so performs his or her duties shall not have any liability by reason of being or having been a director of the Team. Those persons and groups on whose information, opinions, reports and statements a director is entitled to rely upon are:

a. One or more officers of the Team whom the director reasonably believes to be reliable and competent in the matters presented;

b. Counsel, public accountants, or other persons as to matters which the director reasonably believes to be within such persons' professional or expert competence; or

c. A committee of the Board upon which he or she does not serve, duly designated in accordance with the provisions of the Articles of Incorporation or the By-Laws, as to matters within its designated authority, which committee the director reasonably believes to merit confidence.

Section 4.3 Election, Number, Tenure and Qualifications. Directors shall be Field Active Members and except for the immediate Past President, shall be elected at the annual meeting of the members, or at a special meeting of the members called for that purpose if the election is not held at the annual meeting or the annual meeting is not held, as follows:

a. The President, Field Director, Secretary and Treasurer shall be directors and shall be elected by the Field Active Members voting as a single group.

b. Three directors at large shall be elected by the Field Active Members voting as a single group.

c. A director (the "Support Rank Representative") who is a Support Rank Member shall be elected by the Support Rank Members.

d. A director (the "Rescue Rank Representative") who is a Rescue Rank Member shall be elected by the Rescue Rank Members.

e. A director (the "Qualified Rescue Rank Representative") who is a Qualified Rescue Rank Member shall be elected by the Qualified Rescue Rank Members.

f. The immediate Past President shall serve as a director for the year following their service as President.

A nominating committee comprised of the three Rank Representatives shall present to the Team a slate of candidates for directors and officers at the Team business meeting held during the month prior to the annual meeting of members. Nominations of other candidates for directors and officers shall also be accepted from Field Active Members at this meeting. No person shall be a candidate for more than one position. If a vacancy occurs within the slate of candidates after the slate is presented to the Team, the nominating committee shall, prior to the election, solicite an alternate candidate or candidates to fill the vacancy in the slate. If a Team business meeting is not held during the month prior to the scheduled annual meeting of members, the slate of candidates, and any other nominations of candidates, for directors and officers shall be presented at the annual meeting, or if an annual meeting is not held, at a special meeting held for the election. The slate of candidates to be presented by the nominating committee and any other nominations may be posted for Team notification at the discretion of the Board of Directors. The candidate elected for each position, shall be the candidate receiving the greatest number of votes.

Each such director shall hold office for a period of one year commencing January 1 of the year for which he or she is elected or until his or her successor shall have been appointed and qualified.

Section 4.4 Regular Meetings. The Board of Directors shall provide, by resolution, the time and place, either within or without the State of Colorado, for the holding of regular meetings without other notice than such resolution. The Board shall meet at least once during the thirty (30)-day period preceding each annual meeting of the members.

Section 4.5 Special Meetings. Special meetings of the Board of Directors may be called by or at the request of the President, Field Director, Secretary or Treasurer, or any two directors.

The person or persons authorized to call special meetings of the Board of Directors may fix a place, within the State of Colorado, as the place for holding any special meeting of the Board of Directors called by them.

Section 4.6 Attendance of Meetings. All meetings of the Board of Directors, with the exception of executive sessions, shall be open to all members of the Team. The privilege of the floor shall be extended to non-board members at the discretion of the chair. The President, the Field Director or any two members of the Board of Directors may call executive sessions of the Board. Only members of the Board and those persons expressly invited by vote of the Board of Directors shall attend an executive session.

Section 4.7 Notice. Written notice of any special meeting of directors shall be given by written card, letter, facsimile, electronic mail or bulletin that is mailed, posted or handed out in sufficient time to reach each member two (2) days prior to the meeting for which such notice is given.

Section 4.8 Quorum. Except as otherwise provided in these By-Laws for suspension or termination of a member, six (6) directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors but if less than such number is present at a meeting, a majority of the directors present may adjourn the meeting from time to time without further notice.

Section 4.9 Manner of Acting. Except as otherwise required by law, the Articles of Incorporation or these By-Laws, the act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. In the event of a tie vote, the vote cast by the President shall be the deciding vote.

All meetings of the Board of Directors shall be governed by the procedural rules set forth in the most recent edition of *Roberts' Rules of Order*.

Section 4.10 Fiscal Matters. An accurate and detailed report of receipts and disbursements shall be made by the Treasurer at each meeting of the Board of Directors. Any expenditure that is in addition to or in excess of the amount for a budget category in the annual budget approved by the Board of Directors shall be submitted to and approved by the Board of Directors prior to the expenditure, except emergency expenses connected with the mission readiness of the Team.

Section 4.11 Standing Committee on Rules, Policies and Procedures. The directors elected by the Support, Rescue and Qualified Rescue Ranks shall constitute a permanent committee to review the general rules, administrative policies and field procedures of the Team.

They shall encourage input from all members and make recommendations to the Board of Directors for appropriate changes to such rules, policies and procedures.

Section 4.12 Advisors. The Board of Directors may appoint such advisors to the Board as may be necessary to assist in the management of the Team.

Section 4.13 Informal Action by Directors. Any action required or permitted to be taken by the Board of Directors or by a committee thereof at a meeting may be taken without a meeting if each member of the Board of Directors in writing either: (a) votes for such action; or (b) votes against such action or abstains from voting and waives the right to demand that a meeting be held to take such action.

Section 4.14 Participation by Electronic Means. Any members of the Board of Directors or any committee designated by the Board may participate in a meeting of the Board of Directors or committee thereof by means of telephone conference or similar communications by which all persons participating in the meeting can hear each other at the same time. Such participation shall constitute presence in person at the meeting.

Section 4.15 Resignation. Any director of the Team may resign at any time by giving written notice to the President or the Secretary of the Team. The resignation of any director shall take effect upon receipt of notice thereof or at such later time as shall be specified in such notice. Unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 4.16 Removal. Any director or directors of the Team may be removed at any time with or without cause, by action taken at a special meeting of members called for that purpose.

Section 4.17 Vacancies. Any vacancy occurring in the Board of Directors shall be filled at a special meeting of members called for that purpose by the vote required for election of the director pursuant to Section 4.3. Excepting Rank Representative positions, a vacancy shall be filled only if more than four months remain in the annual term of the Board at the time the vacancy occurs unless otherwise determined by the Board of Directors. A director elected to fill a vacancy shall serve for the unexpired term of his or her predecessor in office.

Section 4.18 Committees. The Board of Directors may designate two or more directors to constitute a committee of the Board. Any such committee shall have such authority as the Board of Directors shall designate and as shall be prescribed by the Colorado Revised Nonprofit Corporation Act.

ARTICLE V

Officers

Section 5.1 Designation of Officers. The officers of the Team shall be the President, Field Director, Secretary and Treasurer. Such other officers and assistant officers as may be deemed necessary may be elected by the Field Active Members voting as a single group.

Section 5.2 Election and Term of Office. The officers shall be elected in the manner and for the term of office set forth in Section 4.3.

Section 5.3 Resignation. Any officer of the Team may resign at any time by giving written notice to the President or the Secretary of the Team. The resignation of any officer shall take effect upon receipt of notice thereof or at such later time as shall be specified in such notice; and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 5.4 Removal. Any officer or officers of the Team may be removed at any time, with or without cause, in the same manner as provided in Section 4.16 for removal of a director or directors.

Section 5.5 Vacancies. A vacancy in any office shall be filled in the same manner as provided in Section 4.17 for filling a vacancy occurring in the Board of Directors.

Section 5.6 President. The President shall be the chief executive officer of the Team and, subject to the control of the Board of Directors, shall in general supervise and control all of the administrative affairs of the Team. He or she shall, when present, preside at all meetings of the members and of the Board of Directors. He or she may sign, with the Secretary or any other proper officer of the Team thereunto authorized by the Board of Directors, deeds, mortgages, bonds, contracts, or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Directors or by these By-Laws to some other officer or agent of the Team, or shall be required by law to be otherwise signed or executed; and in general shall perform all duties incident to the office of President and such other duties as may be prescribed by the Board of Directors from time to time. The immediate past President shall assume the functions of the President in the absence of the President. The Secretary shall assume the functions of the President in the absence of the President and the immediate past President.

Section 5.7 Field Director. The Field Director shall be a Qualified Rescue Rank Member and shall take charge of, and be responsible for, all operational activities of the Team and shall establish such procedures as may be necessary and appropriate to this charge.

Operational control of the Team during search, rescue, recovery, standby or training, shall be vested in the Field Director or any other leader or leaders that the Field Director may designate. Actions of the Field Director shall be subject to review by the Board of Directors. The Field Director shall appoint and delegate authority to such members of the Team as may be necessary to carry out the objectives and responsibilities of the Team. In recommending promotions to the Board of Directors, the Field Director shall consider input from the Rank Representatives. The Field Director may appoint one or more mission leaders, whose qualifications have been approved by the Board of Directors, to take operational command of all Team resources for a specified or indeterminate period of time.

Section 5.8 Secretary. The Secretary shall: (a) keep the minutes of the proceedings of the meetings of members and the Board of Directors in one or more books provided for that purpose; (b) see that all notices are duly given in accordance with the provisions of these By-Laws or as required by law; (c) be custodian of the corporate records and of the seal of the Team and see that the seal of the Team is affixed to all documents the execution of which on behalf of the Team under its seal is duly authorized; (d) keep a register of the post office address of each member which shall be furnished to the Secretary by such member; and (e) in general perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors.

Section 5.9 Treasurer. The Treasurer shall: (a) have charge and custody of and be responsible for all funds and securities of the Team; (b) receive and give receipts for moneys due and payable to the Team from any source whatsoever, and deposit all such moneys in the name of the Team in such banks, trust companies or other depositories as shall be selected in accordance with the provisions of Article VI of these By-Laws; and (c) in general perform all of the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors.

Section 5.10 Bonds. If the Board of Directors by resolution shall so require, any officer or agent of the Team shall give bond to the Team in such amount and with such surety as the Board of Directors may deem sufficient, conditioned upon the faithful performance of their respective duties and offices.

Section 5.11 Salaries. The officers shall serve without salary.

Section 5.12 Loans to Officers. No loans shall be made by the Team to any officer or director of the Team.

ARTICLE VI

Contracts, Loans, Checks and Deposits

Section 6.1 Contracts. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Team, and such authority may be general or confined to specific instances.

Section 6.2 Loans. No loans shall be contracted on behalf of the Team and no evidences of indebtedness shall be issued in its name unless authorized by the Board of Directors. Such authority may be general or confined to specific instances.

Section 6.3 Checks, Drafts, etc. All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Team shall be signed by such officer, officers, agent or agents of the Team and in such manner as shall from time to time be determined by the Board of Directors.

Section 6.4 Deposits. All funds of the Team not otherwise employed shall be deposited from time to time to the credit of the Team in such banks, trust companies or other depositories as the Board of Directors may select.

Section 6.5 Gifts. The Board of Directors may accept on behalf of the Team any contribution, gift, bequest or devise for the general purposes of or for any special purposes of the Team.

ARTICLE VII

Nondiscrimination

The members, officers, directors, committee members and employees of the Team shall be selected on a nondiscriminatory basis with respect to age, sex, race, religion, national origin, and sexual orientation.

ARTICLE VIII

Books and Records

The Team shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of the Board of Directors, committees having any of the authority of the Board of Directors and annual and special meetings of members held pursuant to these By-Laws.

ARTICLE IX

Fiscal year

The fiscal year of the corporation shall end on the last day of December in each calendar year.

ARTICLE X

Corporate Seal

The Board of Directors may provide a corporate seal which shall be circular in form and shall have inscribed thereon the name of the corporation and the state of incorporation and the words "CORPORATE SEAL."

ARTICLE XI

Waiver of Notice

Whenever any notice is required to be given under the provisions of these By-Laws or under the provisions of the Articles of Incorporation or under the provisions of the Colorado Revised Nonprofit Corporation Act, or otherwise, a waiver thereof in writing, signed by the person or persons entitled to such notice, whether before or after the event or other circumstance requiring such notice, shall be deemed equivalent to the giving of such notice.

ARTICLE XII

Amendments

Proposals for amendment, including repeal or replacement, in whole or in part, of these By-Laws may be presented in the form of a motion by any Rescue Rank Member or Qualified Rescue Rank Member or through petition by any two (2) Support Rank Members at an annual or a special meeting of members called for that purpose. Upon being duly seconded, such a proposal to amend the By-Laws shall be open for discussion by the Field Active Members. After discussion, the proposed amendment shall be tabled and the meeting shall be adjourned for no less than twenty (20) days and no more than seventy (70) days. Upon an affirmative vote of two-thirds (2/3) of the Field Active Members present at the reconvened meeting, the proposed amendment shall be adopted effective the date of adoption or a later date if specified.

ARTICLE XIII

Emergency By-Laws

The Emergency By-Laws provided in this article shall be operative during any emergency in the conduct of the affairs of the Team resulting from a catastrophic event preventing the formation of a quorum of the Board of Directors, notwithstanding any different provision in the preceding articles of these By-Laws or in the Articles of Incorporation of the Team or in the Colorado Revised Nonprofit Corporation Act. To the extent not inconsistent with the provisions of this article, the By-Laws provided in the preceding articles shall remain in effect during such emergency and upon its termination the Emergency By-Laws shall cease to be operative.

During any such emergency:

(a) A meeting of the Board of Directors may be called by any officer or director of the Team. Notice of the time and place of the meeting shall be given by the person calling the meeting to such of the directors as it may be feasible to reach by any available means of communications. Such notice shall be given at such time in advance of the meeting as circumstances permit in the judgment of the person calling the meeting.

(b) At any such meeting of the Board of Directors, a quorum shall consist of the number of directors in attendance at such meeting.

(c) The Board of Directors, either before or during any such emergency, may, effective in the emergency, change the principal office or designate several alternative principal offices or regional offices, or authorize the officers so to do.

(d) The Board of Directors, either before or during any such emergency, may provide, and from time to time modify, lines of succession in the event that during such an emergency any or all officers or agents of the Team shall for any reason be rendered incapable of discharging their duties.

(e) No officer, director or employee acting in accordance with these Emergency By-Laws shall be liable on the ground that the action was not authorized.

(f) These Emergency By-Laws shall be subject to repeal or change by further action of the Board of Directors or by action of the members, but no such repeal or change shall modify the provisions of the next preceding paragraph with regard to action taken prior to the time of such repeal or change. Any amendment of these Emergency By-Laws may make any further or different provision that may be practical and necessary for the circumstances of the emergency.

ARTICLE XIV

Dissolution

In the event of dissolution of the Team, all assets of the Team remaining after meeting the obligations of the Team shall be transferred to another organization organized and operated for a similar exempt purpose or to the federal, state or local government.

ARTICLE XV

Addendums to By-Laws

The Field Active Members may adopt such addendums to these By-Laws as may be necessary to regulate Team affairs. Such addendums shall be adopted in the same manner as provided in Article XII for amendments of these By-Laws. The currently effective addendums are set forth in the following appendices:

a. Guidelines of Proficiency (Appendix I)

b. Code of Ethics (Appendix II)

c. Insignia (Appendix III)

d. Mountain Rescue Association (Appendix IV)

e. Ratification of MRA By-Laws (Appendix V)

The appendices shall be considered part of these By-Laws; however, the provisions in the preceding articles of these By-Laws shall take precedence over any conflicting provisions of the Appendices.

CERTIFICATE

I hereby certify that the foregoing By-Laws, consisting of _____ (_____) pages, including this page, constitute the By-Laws of the Alpine Rescue Team, Inc., adopted by the members of the Team as of _____, 20_____.

_____

_____, Secretary

Team By-Laws - Appendices

Appendix I - Guidelines of Proficiency

Pursuant to Article XV, (a.) of the Bylaws of the Alpine Rescue Team of Evergreen, Colorado, as adopted November 13, 2002, the following Guidelines of Proficiency are established for Field Active membership. Every member of each rank should maintain the level of proficiency required for his/her current rank and for all lower ranks. Any Team member may request a lower rank if he/she feels no longer proficient in his/her current rank.

Support Rank

1.0 SUPPORT Support Rank members provide field support to the Team and train to advance to the Rescue Rank.

Support-4 (S-4)

1.1 SUPPORT-4 (S-4)

1.1.1 Possession of adequate personal clothing and equipment to participate in search, rescue, and recovery missions for at least 48 hours under normal Colorado weather in spring, summer, and fall.

1.1.2 Knowledge of the Team's purpose, objectives, bylaws, policies and organizational structure.

1.1.3 Ability to walk in mountainous terrain, including:

1. walking on hard ground, grassy slopes, scree slopes and talus,
2. walking at a proper pace,
3. using the rest step,
4. using proper trail etiquette.

1.1.4 Ability to backpack personal equipment plus one team rope at least four miles with an elevation gain of at least 2000 feet.

1.1.5 Proficiency in personal survival in mountainous country.

1.1.6 Proficiency in back country navigation including the ability to triangulate a position, use a GPS unit, provide a UTM, and follow a route to a new location using a topographical map and compass.

1.1.7 Knowledge of potential mission locations in the Team's primary response area including: locations of prominent peaks and well-known climbing areas, and the highway approaches to these areas.

1.1.8 Knowledge of the Team's rescue techniques.

1.1.9 Proficiency in hasty and line search techniques.

1.1.10 Proficiency in the use of Team handheld communications equipment including proper transmitting, receiving, and care procedures and use of MRA codes.

1.1.11 Proficiency in bagging, coiling, throwing and storing Team ropes.

1.1.12 Proficiency in tying each of the standard Team knots, and knowledge of their applications and strength efficiencies:

1. figure eight
2. high-strength bowline
3. high-strength sheet bend
4. butterfly
5. double fisherman's
6. Prusik hitch
7. water knot in webbing
8. munter hitch

1.1.13 Knowledge of the Team's mission-response protocols.

1.1.14 Possession of a current certificate in either of these two CPR courses: BLS for Healthcare Providers (from the American Heart Association) or CPR for the Professional Rescuer (from the American Red Cross).

1.1.15 Certification in ICS 100, 200 and 700

Support-3 (S-3)

1.2 SUPPORT-3 (S-3)

1.2.1 Possession of adequate personal clothing and equipment for search and rescue missions for at least 48 hours under normal Colorado winter weather conditions below timberline.

1.2.2 Ability to select and inhabit adequate campsites for Team operations during normal Colorado winter conditions below timberline.

1.2.3 Ability to travel on snow below timberline using snowshoes or skis.

1.2.4 Ability to build and use snow shelters including caves and trenches.

1.2.5 Knowledge of procedures involved with helicopter transport including:

1. common types of helicopters,
2. safe entry and exit,
3. safety procedures,
4. landing zone selection and preparation.

1.2.6 Ability to recognize avalanche hazards.

1.2.7 Knowledge of Teams organized avalanche search and rescue techniques.

1.2.8 Proficiency in the use of avalanche beacons.

1.2.9 Ability to affect avalanche companion rescue.

Support-2 (S-2)

1.3 SUPPORT-2 (S-2)

1.3.1 Knowledge of the types, functions, location, care, and storage of equipment used by the Team for search and rescue missions.

1.3.2 Proficiency in non-technical subject transport including:

1. assembly and repackaging of the Team litters,
2. preparation and securing of an injured subject for transport in a litter,
3. transporting a subject in a litter over first- and second-class terrain[1].

1.3.3 Knowledge of the guidelines for selecting and rigging anchors for use in climbing and rescue.

1.3.4 Ability to follow on rock climbs rated up to 5.6.

[1] Rock classifications are from Appendix 2 in **Mountaineering, The Freedom of the Hills**, Fourth Edition, The Mountaineers, Seattle, Washington, January, 1982.

1.3.5 Knowledge of the several types of rope and webbing used by the Team including their strengths, weights, elasticity's, and limitations.

1.3.6 Ability to evaluate rope damage.

1.3.7 Proficiency in the use of personal and rescue carabiners in climbing and rescue.

1.3.8 Proficiency in personal belaying including:

1. sitting and standing belay positions
2. use of common belay devices and Munter hitch.
3. rope management during belays,
4. verbal belay signals,
5. static and dynamic belays,
6. proper tie-off after belaying a fall.

1.3.9 Proficiency in rope ascending and descending with Prusiks including knot passing.

1.3.10 Proficiency in rappelling including use of verbal signals, knot passing, and tying off.

1.3.11 Proficiency in the use of Team base communication equipment including proper transmitting, receiving, and care procedures.

Support-1 (S-1)

1.4 SUPPORT-1 (S-1)

1.4.1 Ability to lead a field team on searches.

1.4.2 Ability to travel on steep snow including:

1. step kicking,
2. use of ice-axe (carrying on trails, for self-arrest, for self-belay, for glissading),
3. descending on snow (plunge step and glissade),
4. self-arrest with and without ice-axe,
5. snow belays using ice-axe and boot-axe techniques.

1.4.3 Ability to make or set snow anchors including:

1. bollards,

2. ice-axe anchors,
3. pickets,
4. flukes and other deadpan anchors.

1.4.4 Knowledge of use and care of the Team (OHV) Off Highway Vehicles.

1.4.5 Possession of a current certification as a 1st Responder or a current certification that meets or exceeds the US. Department of Transportation curriculum guidelines for training 1st Responders.[2]

1.4.6 Certification in ICS 800

Rescue Rank

2.0 Rescue Rank members perform technical mountain search and rescue.

Rescue-4 (R-4)

2.1 RESCUE-4 (R-4)

2.1.1 Possession of equipment and clothing for search or rescue missions in any Colorado weather for at least 48 hours above timberline.

2.1.2 Understanding of the fundamentals of mountain weather in the Rocky Mountain area.

2.1.3 Proficiency in search techniques including those listed in Section 1.1.9 and:

1. use of search dogs,
2. man tracking,
3. directing line searches and probe lines.

2.1.4 Understanding of the mechanical forces involved in technical rescue systems.

2.1.5 Proficiency in the selection and setup of rescue anchor systems including:

1. natural anchors,
2. artificial anchors
3. human anchors
4. tensionless anchors

[2] Team members in the Rescue and Qualified Rescue ranks are not required to maintain this certification.

5. load distributing anchors

2.1.6 Proficiency in technical litter evacuation and transport including:

1. Route selection
2. Brake systems (brake tube, rescue Figure 8, tree wrap and transferring rope knots through brake systems)
3. Litter descents (on steep, vertical, and overhanging rock, on scree and snow, and traversing)
4. Raising a subject or litter.

2.1.7 Certification in ICS 300

Rescue-3 (R-3)

2.2 RESCUE-3 (R-3)

2.2.1 Proficient at estimating the mechanical forces involved in technical rescue systems and estimating factors of safety.

2.2.2 Proficiency in the use, placement and analysis of artificial rock protection.

2.2.3 Proficiency in the use of highline including selection of locations and anchors, setting up the highline system, and directing its use for personal and litter evacuations.

2.2.4 Proficiency in the use of slings, etriers, Prusik hitches and mechanical ascenders.

2.2.5 Proficiency in the organization and direction of technical litter evacuation

2.2.6 Proficiency in one-on-one rescue techniques.

Rescue-2 (R-2)

2.3 RESCUE (R-2)

2.3.1 Proficiency in snow and ice climbing including:

1. setting of the anchors listed in Section 1.4.4 as well as ice screws.
2. step kicking on hard snow,
3. use of an ice axe including for step cutting on hard snow or ice,
4. descending on steep snow,
5. use of crampons on hard snow and ice,

6. self-arrest with and without an ice axe, as an individual and in a team arrest of a roped party,
7. belays including ice axe, boot-axe, and "stomper" or standing belays,
8. ice climbing.

2.3.2 Proficiency in high and low-angle, technical snow and ice rescues and evacuations including transport of an injured subject across snow and ice.

2.3.3 Proficiency in avalanche search and rescue, including:

1. avalanche hazard recognition
2. safe travel
3. site organization and leadership
4. search tactics and technologies

Rescue-1 (R-1)

2.4 RESCUE-1 (R-1)

2.4.1 Ability to plan and organize search and rescue trainings and missions.

2.4.2 Ability to direct the Team on trainings and missions.

2.4.3 Graduated from a Team recognized mission leader or mission coordinator training program.

2.4.4 Understanding and awareness of Team liability and legal responsibilities on trainings and missions.

2.4.5 Certification in ICS 400

Qualified Rescue Rank

Qualified Rescue Rank (Q)

3.0 Qualified Rescue Rank members direct the Team in all phases of technical mountain search and rescue.

Q-Rank members must possess leadership and management capabilities in order to direct the Team. These capabilities are proven by their successful conduct of trainings and search and rescue missions. Because of the emphasis on management, Q-Rank members are not expected to maintain the same degree of physical proficiency as is outlined in the Support and Rescue Rank guidelines. However, they must maintain the highest practical standards of proficiency in

search and rescue techniques and must teach these techniques to other Team members.

3.1 Ability to assume the leadership of any Team field activity.

3.2 Ability to supervise and instruct all phases of Team training including the preparation and use of training outlines, lesson plans, equipment, and training aids.

3.3 Knowledge of advancements in techniques and equipment for mountaineering, search, and rescue.

Appendix II - Code of Ethics

The Code of Ethics is a set of minimum ethical standards to which members of Alpine Rescue Team shall adhere.

As a member of Alpine Rescue Team I will:

1. Consider the welfare of myself and my fellow teammates as my primary concern.

2. Represent the Team with the utmost integrity, honesty, respect and professionalism.

3. Always uphold the Team standard of "Never Charging" for any of our search, rescue or educational services.

4. Always represent my association with the Team in an appropriate and prudent manner.

5. Always maintain the dignity and privacy of every search or rescue subject.

6. Not respond to or remain on any field function of the Team while under the influence of either alcohol or drugs.

Appendix III - The Alpine Insignia

SECTION 1

Background and History

SEC. 1.1 The Team emblem dates back to the original organization and incorporation of the Team in 1960.

SECTION 2

Insignia

SEC. 2.1 The blue triangle represents the sponsorship of the volunteer fire departments of the three communities of Evergreen, Indian Hills and Idledale during the formative stages of the Team, prior to incorporation.

SEC. 2.2 The Red Cross symbolizes the commitment to aid those in need of the services of the Team, and the significant assistance of the Jefferson County Chapter of the American Red Cross during the early years of the Team.

SEC. 2.3 The climbing rope and ice axe refer to the specialty in which the Team engages, and to the environment -- the mountains.

SECTION 3

Use of the Insignia

SEC. 3.1 The insignia of the Team shall always be worn or used with the respect due it, in a manner which reflects the pride of membership which has characterized the Team since its beginning.

SEC. 3.2 General policies relating to the use of the Team insignia by team members or non team members shall be established by the Board of Directors.

Appendix IV - Mountain Rescue Association

SECTION 1 Background and History

SEC. 1.1 The Mountain Rescue Association (MRA) is a nonprofit, volunteer public service organization dedicated to the saving of lives through mountain rescue and public safety education.

The Association was officially organized on June 7, 1959 at Timberline Lodge on Mt. Hood, Oregon. The Association was incorporated the following year in the State of Washington as a nonprofit organization.

The Association was formed out of the recognized need by individual rescuers and rescue groups for a central coordinating organization. Although non-operational in field search and rescue, the Association creates a central source through which the efforts and activities of member units may be coordinated to more effectively promote mountain safety and provide integrated mountain rescue service. Through publications and meetings it promotes safety education, a free exchange of ideas on rescue techniques and procedures, equipment changes, and a standardization of procedures to insure safety and effectiveness on rescues.

The Alpine Rescue Team joined the Mountain Rescue Association in June of 1962. In 1966, the Team helped in the formation of the Rocky Mountain Regional Council of the Association.

SECTION 2 Insignia

SECTION 3 Use of the Insignia

SEC. 3.1 The insignia of the MRA shall always be worn or used with the respect due it, in a manner which reflects the pride of membership with the Association.

SEC. 3.2 General policies relating to the use of the MRA insignia are to be found in Policy 701:Insignia and Logo and Policy 703: Uniforms, Patches, Stickers, Emblems of the current Mountain Rescue Association Policies.

Appendix V - Ratification of MRA By-Laws

1. As a member unit of the Mountain Rescue Association, a National Organization, the Alpine Rescue Team implicitly accepts, ratifies and agrees to abide by the rules, concepts, procedures, standards and guidelines as set forth in the Constitution of the Mountain Rescue Association.

2. The above mentioned Constitution is to be found in the Blue Information and Policies Manual published by the Association and distributed to all member units. The current issue of this manual shall be considered the source of information and adjudication for questions and disputes regarding Mountain Rescue Association policies, rules and standards, excepting when the Board of Directors of the Association, or their authorized representative, is appealed to directly, in which case their decision will have precedence over any prior material or action.

Alpine Rescue Team

Blue Book

Part 3 – Administrative Policies

Administrative Policies

General

Dues

Dues of $30.00/year are required from all Field Active members. Dues are payable between January 1 and January 31 each year. Dues are not required from Sustaining Members, Associate Members, Honorary Members and Members Emeritus but can be paid voluntarily by these members. New members who have been voted on the team prior to the October Board Meeting have thirty (30) days from when they become members to pay their dues. New members voted on the team at or after the October Board Meeting are not required to pay dues for that year.

Mountain Rescue Association (MRA)

For all dues paying members, Alpine Rescue Team will pay for membership in the MRA.

Team Expenditures

The power to make expenditures without prior Board approval shall be limited to persons authorized by the Board, excepting emergency expenses deemed necessary for the mission readiness of the team. This authorization must come from the on-call Mission Leader or the Field Director.

Soliciting Discounts

Unless prior arrangements have been made with the Board, no ART member shall use their membership to solicit discounts from a vendor. The list of current vendors offering a discount is located on the team website.

Personal Indebtedness

Personal indebtedness to the team shall be limited to 30 days. At that time, if an extension is needed, the debtor must appear before the Board to explain and request an extension.

The Shack

Smoking downstairs only. Do not give the door lock combination to non-team members. Only certified search and rescue dogs allowed in building. The responsibility for cleaning and maintaining the building and premises is every Team member's.

Awards Banquet

All current Team members, their spouses and family or significant others will be invited to the annual awards banquet. Any member who left the team in good standing during the year will also be invited to that year's banquet. Charter members or their family members, Honorary Members and Members Emeritus are welcome to attend the annual awards banquet.

Invitations to former members and guests each year will be determined by the acting President and Field Director. These guests may be asked to reimburse the team for the cost of their dinner.

Adopted 01/01/94
Revised 2/9/05
Revised 6/8/05
Revised 12/13/06
Revised 02/13/08

Administrative Policies

Team Check Signing

TEAM CHECK SIGNING

- No Officer (as referenced in Article V Section 5.1 of the team bylaws) may by themselves sign a check to himself or herself
- Checks greater than $250, to team members, require a second Officer's signature.
- All checks greater than $500 require a second Officer's signature.

Adopted 2/9/00
Revised 2/9/05

Administrative Policies

Membership Criteria

Individuals applying to become members of the Alpine Rescue Team shall:

1. Not be an active member of another volunteer organization that provides emergency medical services or search and rescue services, or both. Approval for Dual Membership may be applied for after the applicant has become a member of Alpine. Dog Handler candidates with Search and Rescue Dogs of Colorado (SARDOC) may apply for membership and maintain their membership with SARDOC.

2. Not have received or been subject to any suspension, termination or other disciplinary action while serving as a member of another EMS or search and rescue agency, unless the Board of Directors approves a waiver of such requirements following a determination that the disciplinary action and its related circumstances do not at the time of application for team membership provide evidence of behavior which is detrimental to the team and its objectives.

3. Be required to provide a completed application, which describes the applicants areas of interest and background which supports their usefulness to the team.

4. Have signed a copy of the Membership Agreement signifying they will:
   (a) Adhere to the By-Laws of the Team;
   (b) Adhere to the Policies and Procedures of the Team;
   (c) Adhere to the Code of Ethics of the Team.

* For individuals applying for Field Active membership:
   (a) Not have any limitations, which would prevent qualification as a Support member of rank Support-4 (S-4).
   (b) Have the personal equipment required for qualification as a Support Member of rank Support-4 (S-4).

*For individuals applying for Technical Specialist membership:
   (a) They will be listed as a Prospective Member and will be required to go through a six (6) month evaluation period prior to being voted on the Team.

(b) Technical Specialist members shall be recommended by the Field Director and the Qualified Rescue Rank and approved by the Board of Directors.
(c) Current Team members that are requesting a membership change to Technical Specialist are not required to go through the evaluation period

* For individuals applying for Associate membership:
(a) Associate members shall be recommended by the President and the Associate Member Manager and approved by the Board of Directors

Transfers into Alpine Rescue Team

Participation in our Prospective Member course is strongly recommended for all new members. However, individuals who have served 2 years in good standing with another Regular Member Team from the Rocky Mountain Region of the Mountain Rescue Association can submit an application to waive the requirement of participation in the Prospective Member course. They must include a letter of recommendation from the operations leader of their former team.

Individuals requesting a transfer to the team must have a recommendation from the Field Director and Qualified Rescue Rank and approval of the Board of Directors. The applicant must be elected to membership in accordance with Article III of the bylaws.

Dual Membership

Members may receive approval to join other volunteer organizations that provide emergency medical or search and rescue services, provided they meet the following requirements:

The member shall be in good standing with Alpine Rescue Team, having met all attendance requirements for the past 12 months and maintained the skills required of their rank. Dual Membership shall have been recommended by the Field Director and the Qualified Rescue Rank and approved by the Board of Directors.

Factors that should be considered include, but are not limited to, the following:

1) Benefits to Alpine Rescue Team resulting from this Dual Membership
2) Time of service in Alpine Rescue Team
3) Level of commitment and attendance during Alpine Rescue Team functions
4) Level of commitment and attendance required by the other organization
5) Possible conflicts during functions involving both organizations

Members who apply for and do not receive approval for Dual Membership may reapply for Dual Membership no more often than once every 12 months.

Annual Membership Review

The membership review for membership categories requiring an annual review shall be conducted in the first quarter of each calendar year.

Prospective Member Course

Each year the Field Director and the Qualified Rescue Rank shall recommend to the Board of Directors for approval whether or not the Team shall hold a Prospective Member course the following year and the number of new applicants that will be admitted into the course by the first Board of Directors meeting of the fourth quarter.

Adopted 02/13/08
Revised 03/14/12

Administrative Policies

Associate Member Program Guidelines

OVERVIEW

From the By-Laws: *Section 3.1.4 Associate Members*. Associate Members shall be willing and able to render some regular and useful administrative service to the team. They shall be appointed by the Board of Directors. Their contributions to the Team shall be reviewed annually by the Board of Directors and they shall continue as Associate Members upon approval by the Board of Directors.

ASSOCIATE MEMBER MANAGER

The President will appoint an Associate Member Manager who will be responsible to the Board of Directors for the management of these members. All member participation will be managed by the Associate Member Manager. The Manager will review member participation on a quarterly basis and determine their usefulness to the team on an annual basis.

TEAM REPRESENTATION

After being voted onto the Team, Associate Members will be allowed to represent Alpine to the general public in a limited capacity based upon the direction of the Associate Member Manager. This will include but not be limited to the areas of education and fundraising. Associate Members are expressly forbidden to represent the Team in matters relating to public, interagency, and government relations, or to the press. Associate Members in the course of their duties may wear appropriate team identification, such as those credentials and garments deemed appropriate to the position by the Board of Directors.

PARTICIPATION

Areas of emphasis for Associate Members will include but not be limited to the following categories:

1. **Administrative Duties:** Office management, which would include various tasks ranging from Information Technology administration, to filing and records keeping.
2. **Fundraising:** All aspects of fundraising programs and events from the creation, organization and management to general staffing and support.
3. **Education/Community Outreach:** All aspects of education and outreach from creation, organization and management to general staffing and support.
4. **Directorship Assistance:** Associate Members may assist in various field related activity administration in areas of equipment, medical, vehicle or other areas as requested by Directors.

Adopted 2/13/08

Administrative Policies

Public Information

When appropriate and available, the Alpine Rescue Team will make every attempt to provide information to the news media and therefore the public regarding search and rescue incidents, provided that such information does not interfere with patient confidentiality or privacy, and complies with all local, state, and federal laws regarding the release of information.

"OFFICIAL" TEAM INFORMATION

Information about specific search and rescue incidents must be handled punctiliously and if made available, will be communicated by "official" sources, either the relevant jurisdictional authority (typically the local sheriff's department) or by the Team. When communicating official information from the Team, a Team Public Information Officer (PIO) or their designee, under the authority of the acting Mission Leader or Field Director, will manage the communications to traditional news media and social media. Currently, the Team uses its website, Facebook page, and accounts formally set up on several specific Internet forums. The Team may adopt other technologies as social media evolves.

"UNOFFICIAL" TEAM INFORMATION

Individual Team members may use personal social media to post information about other Team activities such as trainings, public presentations, fundraising events and other non-mission-specific events. This communication is considered "unofficial" and should always be presented in good taste and with respect. Members are also reminded that any time they wear a Team or Mountain Rescue Association logo – even in social, non-Team related activities – they represent the Alpine Rescue Team.

This chapter provides guidelines for the communication of official and unofficial Team information to the public.

PUBLIC INFORMATION OFFICER (PIO)

The President and Field Director shall appoint a Public Information Officer (PIO) to manage all aspects of media handling and communication with the public. The PIO may designate assistants, subject to the approval of the President and Field Director that may act as the PIO in cases where the primary PIO is unavailable. Media contact, not involving missions, whether re-active or pro-active, should be directed through the PIO. In turn, the PIO will keep the President and Field Director apprised of all such contacts.

The PIO fields and directs inquiries as a spokesperson for the Team. Where technical expertise is required, qualified Team members will be provided, if available and with approval from either the President or the Field Director.

MEDIA GUIDELINES – MISSION RELATED

The acting Mission Leader, Field Director, PIO or their designees are the only Team members authorized to make statements to the media regarding missions. Any statements made by other Team members, MUST have prior approval of the acting Mission Leader, Field Director, PIO or their designees.
Members of the media may be allowed into the field on a mission only with the permission of the Sheriff's Office and the acting Mission Leader, and only with a designated-PIO as an escort. Appropriate equipment and clothing is required by the media member(s) and appropriate field personnel will be informed of the media presence. Safety, subject-privacy and mission needs will remain paramount concerns at all times.

Information of the following nature, but not limited too, may be released to the media, with the specific information to be released determined by the acting Mission Leader.

- Nature and description of the incident
- Time and location of the incident
- Number of rescuers responding
- Rescue units involved
- Number of subjects
- General condition of the subjects

No information that would identify the subject shall be provided without the approval of the Sheriff's Office.

No recorded image (photos, video, etc.) that shows the subject's face or other identifying features shall be released to the news media or general public without written authorization from the subject.

No information, recorded image (photos, video, etc.) or comments about another agency's incident will be released by any Team member without the explicit permission of that agency.

SOCIAL MEDIA GUIDELINES – MISSION RELATED

The internet and social media sites such as Facebook, Twitter, blogs, and discussion forums present a unique challenge to the Team and its members. Specific guidelines regarding how these are treated as public information outlets is required, and are as follows:

Only members that have been designated by the PIO and approved by the Board of Directors shall be allowed to post mission-related information on the Team's

Facebook page, discussion forum sites, or any other publicly-accessible internet site.

All mission related information must follow these guidelines:

- No subject's names will be used without the written permission from the subject.
- No photos will show a subject's face or other identifying feature without the written permission of the subject.
- No photos will show blood, bodies, or anything else that might be deemed offensive or upsetting to the public.
- No medical information will be given without the written authorization from the subject.
- No derogatory or condescending comments will be made about the subject(s), the general public, or other agencies that work with Alpine Rescue Team.

No mission related information or images can be used by Team members for any purpose unless authorized by the President, Field Director, PIO or their designees. Permission to use photos, videos, and any mission-specific information for the purposes of public education or team trainings will generally be given, as long as the above guidelines are followed.

Any site that is specifically designated as "Alpine Rescue Team Members Only" may be used by all members to post and share any Team related information, including mission-related items. Any images or information posted here is understood to be used by authorized Team members in public postings, public education and/or Team trainings.

SOCIAL MEDIA GUIDELINES – OTHER EVENTS & PERSONAL USE

Any member of the Team is permitted to post information or photos/videos on their personal Facebook pages, websites, blogs, etc. regarding upcoming events, public presentations by the Team, and Team trainings as long as they follow the above guidelines.

Members are encouraged to share or link any and all information posted on the Team's website, Facebook page, or any media story about the Team. But before posting any information including images, please remember that anytime a member wears a Team or MRA logo, even in non-Team events, the member is seen as representing the Team. Use common sense when participating with online communities. Inappropriate postings will be removed if requested by the Field Director, President, or PIO.

Adopted 08/10/11

Administrative Policies

Pro-Purchase Program

PRO-PURCHASE PROGRAM

The Pro-Purchase program has evolved over many years of building relationships with vendors of various outdoor products. These vendors have allowed individuals to purchase their products directly at substantially discounted prices. This program is intended for Qualifying individuals listed below and will not extend to anyone else (spouses, friends, family) unless authorized by the vendor; failure to adhere to this will result in a loss of purchase privileges for all accounts.

This program is available to individuals meeting any one of the following criteria:

- Field Active, Sustaining or Associate Members (not on leave of absence, probation or suspension).
- Prospective Members who have successfully completed the written test, knot test, physical test (1.1.4 as defined in the Guidelines of Proficiency) and /or have approval from the current Prospective Member Director.
- Other individuals whom the Field Director has identified and will provide benefit to the Team through their participation.

The Pro-Purchase Manager will oversee all Pro-Purchase vendor and bank accounts. The Pro-Purchase Manager will assign an Account Representative for each vendor account.

All monetary transactions will be processed through the Alpine "Pro-Purchase Program" bank account using Checks or the Team credit card.

Only the Pro-Purchase Manager and/or Team Officers may authorize drafts against the "Pro-Purchase Program" bank account.

This account is exempt from the two signature requirement for checks over $500 of the Team Check Signing Policy adopted on 02/09/00.

Adopted 04/11/01
Revised 11/13/02
Revised 02/13/08
Revided 11/11/09

Administrative Policies

Team E-Mail and Listserver and Members only Website

TEAM E-MAIL LISTSERVER AND MEMBERS ONLY WEBSITE

The team E-Mail Listserver and the Members only Website are designed and managed to provide authorized users with information and communication to conduct the day-to-day business of Alpine.

Access privileges to the E-Mail Listserver and Members only Website will be monitored and maintained by the Computer Director or their designee.

The Team E-Mail Listserver and Members only Website are available to members meeting any of the three following criteria:

- Anyone with a "Member" status on the team. This includes Field Active, Sustaining Field Members, Associate Members, Members Emeritus and Honorary Members.

- Prospective Members who have successfully completed the written test, knot test, physical test (as defined in Section 1.1.4 of the Guidelines of Proficiency) and /or have approval from the current Prospective Member Director.

- The Field Director or President may recommend for approval to the Board of Directors, individuals that have a working relationship with Alpine or who's participation in the E-Mail Listserver will be of benefit to the team. Individuals granted access through this process will be reviewed annually by the Board of Directors.

Adopted 7/9/03

Administrative Policies

Team Representative Expense

TEAM REPRESENTATIVE EXPENSE

WHEREAS The Alpine Rescue Team encourages it's members participation in Mountain Rescue Association (MRA) activities, of which the Team is a member, and other such related activities; and

WHEREAS these activities often involve expenses borne by the team member themselves (including but not limited to; lodging and transportation); and

WHEREAS these activities are beneficial to the team and the individual team member themselves;

THEREFORE be it resolved that the Board of Directors establish a general policy for covering approved Team Member expenses in relation to MRA and other related and approved activities.

Funding. The team budget shall be amended to include a line item entitled "Team Representative Travel" or any such other name as may be adopted by the Board of Directors. At the start of each fiscal year the Board of Directors shall have the option to budget funds to the team Expense Account category. The amount budgeted shall be based on a "best guess" of related team activities that would qualify for reimbursement during the subject fiscal year.

It is not the intent of this policy to place undue hardship or budgetary constraints on the team. Therefore, funding of this budget item shall not be mandatory each fiscal year. All decisions relating to the funding thereof shall be at the sole discretion of the Board of Directors

Reimbursement. Any team member may apply to the Board of Directors at any time of the year for reimbursement under this account for any approved activity and expense as defined below. The application may be made prior to or after the event itself. The Board of Directors shall have the option to approve or deny reimbursement to any team member. The Board of Directors should consider the type of activity; its benefit to the team, its cost and any other pertinent issues. Approval may be given prior to or after the activity, however reimbursement will be made only after the activity has been completed and actual expenses can be verified if so desired by the Board.

Team Expense Account cont.

TEAM REPRESENTATIVE EXPENSE– CONT.

By accepting reimbursement from the team, the team member agrees to make a satisfactory presentation to the team if so requested by the Board of Directors regarding the activity for which reimbursement was given

Approved activities and expenses. The intent of this fund is to provide for reimbursement of certain expenses relating to MRA functions or other related activities that directly benefit the team. These functions and activities include, but are not limited to, MRA annual meetings, MRA accreditation and reaccreditations and general MRA meetings. Any team member or members attending such event shall be eligible to apply for reimbursement of any reasonable and customary expenses associated with travel to and lodging at such events and any other expenses or costs as approved by the Board of Directors. What is reasonable and customary for a given approved event shall be determined by the Board of Directors on a case-by-case basis and the Board shall take into account, among other factors, team finances. For example, reasonable and customary may be to send one delegate to the MRA annual meeting, but not numerous team members if airfare is involved. If such a meeting were more local in proximity, gasoline expenses for members attending, my be deemed reasonable and customary by the Board of Directors.

Adopted 5/9/01
Revised 12/13/06

Administrative Policies

Team Jackets

ADMINISTRATION OF TEAM JACKETS

- The Board of Directors or its appointees are responsible for the administration of this program.
- The Team will pay up to $100 for each Team member's jacket.
- The Board of Directors may at any time vote to have the amount paid by the Team increased.
- Any costs over the amount paid by the Team will be paid by the Team member.
- The useful life of the Team jackets is estimated to be 5 years.
- The Team will retain ownership of each jacket for their estimated 5 year useful life, unless purchased by a qualifying Team member.
- A qualifying Team member is one that has been a member of the Team for a minimum of 5 years. A qualifying member can purchase their jacket at any time for a percentage of the amount paid by the Team. That percentage will be 20% per year based on the amount paid by the Team
- This program is available to all Team members.
- Each Team member is responsible for the cleaning, care and maintenance of their jacket.
- If a member takes a leave of absence for more than 90 days, is placed on probation, or suspended, the jacket will be returned to the Team.
- Team members resigning during the estimated 5 year useful life of the jacket will return it to the team and be reimbursed 20 % per year based on amount initially paid by that member.

Adopted 3/10/00
Revised 2/8/06
Revised 2/13/08

Administrative Policies

Team Blue Book

ADMINISTRATION OF TEAM BLUE BOOK

- Electronic copies of the Blue Book will be available to all current team members.
- Prospective members will be issued an electronic version of the Blue Book after being accepted into the Prospective Member program. An electronic version of the Blue book will be posted on the team computer and the internal team website.
- Notification to the membership of any updates or changes to the Blue Book on the team website will be done by email.
- All files in the Blue Book will be in a PDF format.
- Administration and the updating of the Blue Book will be under the direction of the Board of Directors or their designee (Blue Book Manager).
- All changes and updates will be listed on a tracking sheet that is located in the Appendix of the Blue Book.
- Electronic copies of these updates will be provided for all current team members at the time of the update.

DISTRIBUTION OF TEAM BLUE BOOK

- Distribution of the Blue Book will be under the authority of the Blue Book Manager with the concurrence of the current President and notification to the Board of Directors.
- The team will make the Blue Book available to any Search and Rescue organization for the fee of $25 unless waived by the President and the Blue Book Manager.
- The entire Blue Book will be distributed in an electronic format.

Adopted 02/09/05
Revised 12/13/06
Revised 09/10/08
Revised 12/14/11

Administrative Policies

Outreach Program

Outreach Program

The Outreach Program for the team involves the participation in the following types of events:

- Fundraising Events
- Education Events
- Public Relations Events

Outreach Committee

The current Team President, Development Director and Training Director will constitute a permanent committee to oversee the Outreach Program.

Duties of the Committee

Will review all current Outreach Program events for the team on an annual basis and make recommendations to the Board of Directors each year as to which events the team will participate.

Will evaluate and determine the team's participation in potential new events on an ongoing basis subject to review by the Board of Directors.

Will ensure all education programs being presented by the team have been reviewed

Coordination

An Outreach Coordinator will be appointed each year. This person together with the Training Director will coordinate the scheduling of all outreach events. This person will also serve as the initial contact person for all outside inquiries for the different events.

Adopted 09/10/08

Administrative Policies

Donations

Oversight

The Treasurer shall oversee the implementation of this policy through the Major Donor Coordinator and Bookkeeper

Major Donor Administration

Objective

To assist members in securing major gifts ($500+) for the team, a Major Donor Coordinator shall be appointed by the team President. This person shall coordinate solicitation efforts to avoid multiple requests of the same donor, ensure optimal donation requests sizes, and utilize the best persons for the task.

Specific Actions

- Maintain records of past donations and pertinent details
- Maintain a file of request presentations and letters
- Help coordinate the optimal team or person to make the request
- Make sure requesting parties know donors giving history
- Make sure the proper thank you occurs following contribution
- Consider and manage occasional broad-based thank you programs or open houses
- Insure proper Website recognition occurs

Donor Recognition

Thank You Letters

All donations shall receive a thank you letter sent by the book keeper.

Website

Donations shall be recognized under the following levels:

- Mount Elbert Level - $10,000 or more
- Grays Peak Level - $5,000 to $9,999
- Torrey's Peak Level - $1,000 to $4,999
- Mount Evans Level - $500 to $999
- Mount Bierstadt Level - $250 to $499

Website - cont.

Corporate donors in excess of $500 may have their logo displayed.

Such listing on the website shall be for two years.

Gifts

Plaques shall be given to all donors contributing $5,000 to $9,999

Framed Ice axes shall be given to all donors contributing from $10,000

Adopted 08/12/09

Alpine Rescue Team

Blue Book

Part 4 – Field Procedures

Field Procedures

General

Field Procedures may include, but not be limited to, the areas of Training, Vehicles, Equipment, Communications and Medical.

Changes in Field Procedures may be made at any time upon the initiative of the current Field Director. All changes must be dated, and due notice given to the membership.

Due notice for these changes shall consist of written or verbal notification to at least ninety-five per cent (95%) of the active membership.

Driving

No member will drive in an unsafe or illegal manner to any Team function or use his connection with the Team as an excuse for such driving.

Team Equipment

Team equipment is not to be used or borrowed by members for private use. The Mission Leader or Field Director may designate any group as a training session and authorize use of Team equipment.

Adopted 12/1/94
Revised 9/12/01
Revised 5/18/09

Field Procedures

Attendance Requirements

FIELD ACTIVE MEMBERS

- Scheduled Classroom Trainings – must attend at least 25% per year
- Scheduled Field Trainings – must attend at least 25% per year
- Missions – must attend at least 20% per year

A member's mission attendance percentage will be calculated by taking the sum of their missions attended during the year, including Extra Credit missions (In-County or Out-of-County) divided by the number of In-County missions.

Note: If a member is participating on an Extra Credit Mission (In-County or Out-of-County) and additional In-County missions occur, the member will receive credit for the second and all subsequent In-County missions that occur during the same time period.

Accountability: Members attendance for each calendar year will be reviewed at the beginning of the next calendar year and those members not meeting the minimum attendance requirements will be placed on Probation. (See Sec.6, Administrative Policies)

SUSTAINING FIELD MEMBERS

Participation requirements will be set on an individual basis by the Field Director.

LEAVE OF ABSENCE (LOA)

A LOA should be requested if a team member anticipates being unable to meet the attendance requirements for a period of time during a particular year. LOA's are typically granted for a three-month period and will only be granted if the member is currently meeting the team's minimum attendance requirements. *While on a LOA, a member is only allowed to attend classroom trainings, fundraising events, and other administrative functions. Attendance at field trainings and missions is not allowed for members on a LOA.*

PROSPECTIVE MEMBERS – EVALUATION PERIOD

- Scheduled Classroom Trainings – must attend at least 50% during the Evaluation Period
- Scheduled Field Trainings – must attend at least 50% during the Evaluation Period
- Missions – must attend at least 25% during the Evaluation Period

Adopted 09/12/01
Revised 11/22/02
Revised 02/08/06
Revised 01/14/09
Revised 05/18/09
Revised 12/14/11

Field Procedures

Emergency Vehicle Standard Operating Guidelines

PERSONAL EMERGENCY VEHICLE DRIVERS

Team members will be allowed to drive their personal vehicle emergent (e.g. with lights and siren active) when the following criteria have been met:

1. Must be 21 years of age or older.
2. Must have a valid Colorado driver's license.
3. Must have a team rank of S1 or higher or have been a field active or sustaining field member or a combination of both for a minimum of two years.
4. Must have completed an ART approved Emergency Vehicle (EV) driving course.
5. Must have completed an ART approved EV classroom course.
6. The Personal Emergency Vehicle must be titled and registered in the member's name.
7. The Personal Emergency Vehicle must be equipped with the Required Equipment listed in these Guidelines.
8. Insurance meeting Colorado liability requirements must be carried on the Personal Emergency Vehicle.
9. A current copy of the member's driving record must be submitted to the field Director and placed in the member's personnel file.
10. A copy of the Team's Emergency Vehicle Standard Operating Guidelines must be signed and placed in the member's personnel file.
11. Must have approval from the Field Director, Qualified Rescue Rank and the Board of Directors.

Once the above criteria is met, members must submit an APPLICATION FOR EMERGENCY VEHICLE EQUIPMENT AUTHORIZATION, signed by the Field Director and Vehicle Director, to the Clear Creek County Sheriff's Department for approval.

No member shall respond emergent (e.g. lights and siren) without having an approved Colorado EV Authorization Application in the vehicle and the EV Authorization sticker properly displayed on their vehicle. A copy of the approved EV Authorization Application shall be placed in the member's personnel file.

Personal EV privileges are automatically revoked while the member is: a) under Team suspension, probation, or leave of absence or b) under revocation or

suspension of driving privileges by the State of Colorado. The member's approved EV Authorization Application shall be surrendered to the Field Director during the time the member's EV privileges are revoked.

The Clear Creek County Sheriffs Department, the acting Mission Leader or the Field Director can suspend personal EV driving privileges at any time. Reinstatement of driving privileges will be subject to approval of the Field Director.

A member's personal EV driving privileges must be renewed every 24 months from the date of approval by the Board of Directors. The following criteria must be met for renewal:

1. Must have completed an ART approved EV classroom course within the prior two year period.
2. Must submit a current Colorado driving record to the Field Director.
3. Must have approval from the Field Director, Qualified Rescue Rank and the Board of Directors.

Once the above criteria is met, members must submit an APPLICATION FOR EMERGENCY VEHICLE EQUIPMENT AUTHORIZATION, signed by the Field Director and Vehicle Director, to the Clear Creek County Sheriff's Department for approval.

TEAM TRUCK DRIVERS NON-EMERGENT

Team members will be allowed to drive team vehicles ***non-emergent*** when the following criteria have been met:

1. Must be 21 years of age.
2. Must have a valid Colorado driver's license.
3. Must have completed an ART approved emergency vehicle driving course
4. Must have completed an ART approved EV classroom course.
5. Must have completed an ART driving checkout on each Team vehicle they wish to drive with a current truck driver on board as an evaluator.
6. A current copy of the member's driving record must be submitted to the field Director and placed in the member's personnel file.
7. A copy of the Team's Emergency Vehicle Standard Operating Guidelines must be signed and placed in the member's personnel file.
8. Must have approval from the Field Director, Qualified Rescue Rank and the Board of Directors.

Team vehicle driving privileges are automatically revoked while the member is: a) under Team suspension, probation, or leave of absence or b) under revocation or suspension of driving privileges by the State of Colorado.

The Clear Creek County Sheriff's Office, the acting Mission Leader or the Field Director can suspend Team vehicle driving privileges at any time. Reinstatement of driving privileges will be subject to approval of the Field Director.

A member's Team vehicles non-emergent driving privileges must be renewed every 24 months from the date of approval by the Board of Directors. The following criteria must be met for renewal:

1. Must have completed an ART approved EV classroom course within the prior two year period.
2. Must submit a current Colorado driving record to the Field Director.
3. Must have approval from the Field Director, Qualified Rescue Rank and the Board of Directors.

TEAM TRUCK DRIVERS - EMERGENT

Team members will be allowed to drive team vehicles ***emergent*** when the following criteria have been met:

1. Same criteria as required for Non-Emergent Team truck drivers.
2. Must demonstrate their abilities in an EV equipped Team vehicle on an emergent response mission with a current emergent Team truck driver on board as an evaluator.

Team vehicle driving privileges are automatically revoked while the member is: a) under Team suspension, probation, or leave of absence or b) under revocation or suspension of driving privileges by the State of Colorado.

The Clear Creek County Sheriff's Office, the acting Mission Leader or the Field Director can suspend Team vehicle driving privileges at any time. Reinstatement of driving privileges will be subject to approval of the Field Director.

A member's Team vehicles emergent driving privileges must be renewed every 24 months from the date of approval by the Board of Directors. The following criteria must be met for renewal:

1. Must have completed an ART approved EV classroom course within the prior two year period.
2. Must submit a current Colorado driving record to the Field Director.
3. Must have approval from the Field Director, Qualified Rescue Rank and the Board of Directors.

REQUIRED EQUIPMENT

The following equipment is the minimum required for personal vehicles to respond emergent on any ART mission and must be approved by the Field Director:

1. **Lights:** At least two 360-degree signal lamps, one red & one blue, with at least one additional white signal lamp to the front. The signal lamps must be mounted in a light bar as high as practicable, shall be capable of displaying a flashing, oscillating, or rotating light to the front and to the rear, and shall have sufficient intensity to be visible to the front and rear at five hundred feet in normal sunlight. Permanently mounted lights shall be appropriate to the vehicle in size, shape and number; this is a subjective decision by the Field Director or their delegate
2. **Wigwags:** Alternating white lights are required. It is recommended that you use your headlights for your wigwags.
3. **Audible signal:** Must be equipped with multiple audible signals, either through the siren or in combination with the siren and horn, and must have an output of at least 100 watts. Such devices shall be capable of emitting a sound audible under normal conditions from a distance of not less than five hundred feet.
4. **Radio:** Two-way communication with an output of at least 25 watts on 155.160 MHz and 155.025 MHz is required.
5. **Identification:** Two magnetic Mountain Rescue Association (MRA) signs, a minimum of 7-inch diameter, must be displayed on the vehicle's side while running emergent. Vehicles with permanently mounted lights must be clearly identified with an "Alpine Rescue Team" sticker at all times.

Regardless of team requirements, if current State Statutes are more restrictive, they will apply.

USE OF EMERGENCY EQUIPMENT

1. Emergency vehicle equipment shall be used in accordance with the Colorado Revised Statues, Section 42-1-102(6) and 42-4-213. See the back page of the "Application for Emergency Vehicle Authorization" for details.
2. Personal EV Drivers are authorized to drive emergent on incidents identified as emergent response. For all other calls, personal EV drivers must have authorization by the acting Mission Leader before driving emergent.
3. Mission Leaders shall determine if a "True Emergency" exists before authorizing an emergent response. The use of emergency equipment shall be discontinued at once when instructed to do so by the Mission Leader or the Sheriff's Department.
4. Members must have in their personal EV vehicle all personal equipment needed to affect their duties when driving emergent.
5. Personal EV drivers or team truck drivers may, at their discretion, use the vehicles emergency lighting in situations of clear public safety.

DRIVING GUIDELINES

When driving emergent, all drivers must adhere to the following guidelines:

1. Drivers will drive in a prudent and reasonable manner at all times.

2. In addition to the provisions here, drivers will also obey the provisions in the Colorado Revised Statues, Section 42-4-108, which will be provided at the team vehicle trainings. *See the back page of the "Application for Emergency Vehicle Authorization" for details.*

ACCIDENT GUIDELINES

Team members involved in an accident while responding in a team vehicle or emergent in a personal vehicle shall:

1. Report the accident to the proper authorities immediately
2. Report the accident to the on-call Mission leader or the Field Director within a reasonable amount of time based on the situation.
3. Have their personal emergent driving privileges and team vehicle driving privileges suspended pending review by the Field Director.

The Field Director will conduct an accident review to ensure that the member followed team guidelines and does not pose a risk to the team

The Field Director shall inform the Board of Directors of their findings and actions.

I have read and agree to comply with the above Alpine Rescue Team's "Emergency Vehicle Standard Operating Guidelines".

_____ _____

Member Signature Date

Adopted 6/1/95
Revised 11/01/98
Revised 9/12/01
Revised 3/10/06
Revised 8/8/07
Revised 5/18/09

Field Procedures

Prospective Member (PM) Evaluation Period

WHO GOES THROUGH THE EVALUATION PERIOD?

Any prospective member who has completed the Prospective Member Program, successfully passed the team knot test, physical test and written test.

Any individual, except for current Team members, that is applying for Technical Specialist membership.

Attendance requirements for the evaluation period are outlined in Section 2 of the Field Procedures

EVALUATION PERIOD

The length of the evaluation period shall be for a minimum of 5 months and shall not exceed a time period greater than 12 months, including any extensions if applicable.

Upon completion of the designated evaluation period and requirements, the Field Director shall have the right to extend the evaluation period if, in his/her opinion, a longer evaluation period is warranted, provided however, the total time of the evaluation period shall not exceed 12 months.

Field Active membership:
Upon completion of the designated evaluation period and requirements, the Field Director shall have the right to propose the member for Field Active membership. After approval from the Board of Directors, the member must be elected by a majority vote of Field Active members present and voting at a Team Business meeting.

Upon completion of the designated evaluation period and requirements, if the member is not recommended to the team as a Field Active Member, or granted an extension of the evaluation period, or approved by the Board of Directors, or elected by the Field Active members, then that member shall be duly terminated from the team according to the applicable procedures.

Technical Specialist membership:
Upon completion of the designated evaluation period and requirements, the Field Director and the Qualified Rescue Rank shall have the right to recommend this individual for Technical Specialist membership. This member must then be approved by the Board of Directors.

Upon completion of the designated evaluation period and requirements, if the member is not recommended to the Board of Directors as a Technical Specialist Member, or granted an extension of the evaluation period, or approved by the Board of Directors, then that member shall be duly terminated from the team according to the applicable procedures.

EVALUATION PERIOD PROCEDURES

Any prospective member going through the evaluation period WILL be allowed to participate in all classrooms and field training's and all other non-field related team functions during the evaluation period. Mission response privileges may be granted at the discretion of the Field Director.

Any prospective member going through the evaluation period WILL NOT be in possession of any team gear unless waived by the Field Director.

Adopted 4/8/02
Revised 2/8/06
Revised 5/18/09
Revised 02/08/12

Field Procedures

Membership

Field Active Members

May respond to all team activities. May be issued team equipment based upon the recommendation of the Field Director. Current certification in CPR required. Must meet minimum attendance requirements as set forth by the Field Director.

Sustaining Field Members

May respond to all team activities at the discretion of the Field Director. May be issued team equipment based upon the recommendation of the Field Director. May be approved for personal EV or Emergent Team Truck Driver privileges as outlined in the teams Emergency Vehicle Driver Procedures. Current certification in CPR required. Must meet participation requirements as set forth by the Field Director.

Prospective Members

May respond to all team activities at the discretion of the Field Director and completion of all training requirements as set forth in the Prospective Member Course. May be issued team equipment based upon the recommendation of the Field Director. Current certification in CPR required prior to participating on team missions.

Associate Members

May participate on team field training and mission operations at the discretion of the on-call Mission Leader or the Field Director. Participation will be limited to administrative service and excludes field assignments. May be issued team equipment at the discretion of the Field Director.

Adopted 02/1/97
Revised 09/12/01
Revised 11/22/02
Revised 12/29/02
Revised 04/20/03
Revised 05/18/09

Field Procedures

Probation Period

WHO GOES THROUGH THE PROBATION PERIOD?

a. Any Field Active member who has not complied with the minimum attendance requirements established by the Field Director.

b. Any member who has been on an approved Leave of Absence for 3 months or longer and wishes to be reinstated as a Field Active Member, unless this requirement is waived by the Field Director.

c. Any member who has been suspended from the team.

d. Any former Alpine member that left the team in good standing wishing to become a Field Active Member.

e. Any approved member from a fully accredited MRA team who has successfully passed the team knot test and physical test. This member must also have a pack check and possess a current CPR certification.

f. Any member who, in the judgment of the Field Director or any Mission Leader, fails to adequately meet the requirements set forth in the Guidelines of Proficiency, either in whole or in part, as established under Article XV, (a.) of the By-Laws of the team.

PROBATION PERIOD - FOR MEMBERS NOT MEETING THE MINIMUM ATTENDANCE REQUIREMENTS

Member's attendance for each calendar year will be reviewed at the beginning of the next calendar year and those members not meeting the minimum attendance guidelines will be placed on Probation.

Members placed on Probation for not meeting the minimum attendance guidelines will have to meet the following requirements in order to remain a member of the team:

First Quarter – must attend at least 50% of scheduled classroom and field trainings. *Attendance at missions by the member is not allowed during the first quarter of their probationary period.*

Second Quarter – must attend at least 33% of scheduled classroom and field trainings. *Attendance at missions by the member may be reinstated by the Field Director during the second quarter of their probationary period.*

Members fulfilling the aforementioned First and Second Quarter probationary attendance requirements will be taken off Probation. Once off Probation, the member must meet the regular minimum attendance requirements for the remainder of the calendar year.

Any Alpine Rescue Team member who is placed on probation WILL NOT be allowed to participate in the Pro Purchase Program or have possession of any team issued equipment unless waived by the Field Director.

Members not meeting these Probation requirements will have their membership in ART terminated.

PROBATION PERIOD – FOR ALL OTHER MEMBER SITUATIONS

The Field Director shall designate the requirements for members placed on probation for reasons other than not meeting the minimum attendance requirements. .

The length of the probation period shall be designated by the Field Director and shall not exceed a time period greater than 12 months, including any extensions if applicable.

Upon completion of the designated probation period and requirements, the Field Director shall have the right to reinstate the member as a Field Active Member, subject to review by the Board of Directors.

Upon completion of the designated probation period and requirements, the Field Director shall have the right to extend the probation period if, in his/her opinion, a longer probation period is warranted, provided however, the total time of probation shall not exceed 12 months.

Upon completion of the designated probation period and requirements, if the member completing the probation period is not reinstated as a Field Active Member, or granted an extension of the probation period, then that member shall be duly terminated from the team in the manner provided under Article III, Section 3.4, of the By-laws.

Any Alpine Rescue Team member who is placed on probation WILL be allowed to participate in all classrooms and field training's and all other non-field related team functions during the probation period.

Any Alpine Rescue Team member who is placed on probation WILL NOT be

allowed to participate in the following team functions unless waived by the Field Director.

- Team Missions
- The Pro Purchase Program
- Possession of any team issued equipment (pagers, radios, etc.)

Adopted 12/1/94
Revised 09/12/01
Revised 04/08/02
Revised 02/08/06
Revised 01/14/09
Revised 05/18/09
Revised 12/14/11

Field Procedures

Mission Leader Requirements

General

Article V, Section 5.6 of the by-laws states, "The Field Director may appoint one or more mission leaders, whose qualifications have been approved by the Board of Directors, to take operational command of all Team resources for a specified or undetermined period of time."

The Team has charged the responsibilities of mission management to the Qualified Rescue Rank Members. Sustaining Members that have previously served as Mission Leaders and select Rescue Rank Members may also serve as Mission Leaders upon approval of the Field Director and Qualified Rank.

- All Mission Leaders are expected to fulfill their attendance requirements as determined by the Field Director
- The responsibility of Mission Leader coverage falls upon the Qualified Rescue Rank and selected Rescue Rank and Sustaining members.

Mission Leader Charge

Mission Leaders accept this charge and the responsibility to stay current with external and internal resources. Mission Leaders are expected to know individual Team member's strengths and weakness as they relate to the performance of their assignment; this is accomplished by participating in Team activities and as well as being a contributing member of the leadership of the team.

Adopted 4/14/04
Revised 12/31/10
Revised 12/14/11

Field Procedures

Mission Recording

OVERVIEW

This procedure defines the way in which the Team records missions within our attendance program, SARTEAMS and what constitutes team member participation for a specific mission.

A mission number is assigned to each event that is initiated by a request for the on-call Mission Leader to call a dispatching agency or request for Team members to respond to a current or future mission. ("Information Only" pages are excluded.)

A new mission number is assigned each time an event continues into an additional Operational period as determined by the acting Mission Leader.

A CSRB report and SARTEAMS entry will be completed by the Mission Leader for each mission number.

TEAM MEMBER PARTICIPATION FOR A SPECIFIC MISSION

A team member may record participation for a specific mission if there is a team page requesting an immediate response of some type and the member responds to the request or makes changes to their work and/or personal schedule in anticipation of responding to the request.

For Extra Credit (In-County or Out-of-County) missions, only those members who are selected by the on-call Mission Leader receive credit for participation.

If a member is participating on an Extra Credit Mission (In-County or Out-of-County) and additional In-County missions occur, the member will receive credit for the second and all subsequent In-County missions that occur during the same time period.

If there are additional In-County missions while the Team is already participating on an In-County mission, members who responded to the original mission will receive credit for all additional missions that occur during the same time period.

In the case of a "ML Page Only", in which the Team is not requested to respond at any time, only the on-call Mission Leader and those members that assisted them can record participation for this event.

This procedure and the definitions herein cannot delineate all activities and situations that may or may not be considered for inclusion as a Team Mission.

Adopted 12/14/11

Field Procedures

Spinal Immobilization in Backcountry Settings

Due to the nature of backcountry medical care it may not be possible to provide traditional manual inline stabilization of suspected spinal injuries. In these situations a cervical collar or other devices may be used to provide support. The non-use of manual inline stabilization is at the discretion of the senior medical person on scene.

Rational

1. Extended time for the arrival of immobilization and transport equipment would necessitate extended manual stabilization. The ability to provide appropriate continued stabilization could be compromised.

2. Limited personnel may be available. Use of someone to provide manual inline stabilization may remove rescuers from other tasks that may delay evacuation and transport.

3. In mid-wall hanging situations attempts at manual inline stabilization can risk extraneous movement since the rescuer and patient are unsupported. Additionally, the hanging third man rescuer would be unable to perform any other functions requiring additional personnel, putting both the patient and rescuer at risk..

Considerations

1. Monitoring of consciousness and ABC still required.
2. Manual stabilization is required when moving the patient on to the spinal immobilization device, except in mid wall loading.
3. All other points of the Denver Metro EMT Protocols Apply

Adopted 6/1/05

Field Procedures

Snowmobile Skill Classification

Basic ("x") Classification Requirements

Recommendation by the Snowmobile Director that have met the following requirements:

- Attended snowmobile classroom training
- Demonstrated basic snowmobile operations skills
- Approval of Field Director

Advanced ("1") Classification Requirements

1). Member must demonstrate knowledge and ability in a backcountry alpine environment including the following:

Thorough knowledge of each team snowmobiles, their proper application, and all related equipment. Ability to safely lead a snowmobile team and be proficient in:

- Conducting all emergency field repairs
- Recovering buried snowmobiles
- Route finding day or night
- Patient evacuation
- Navigating difficult terrain/deep snow conditions
- Identifying and avoiding avalanche hazards
- Possess leadership and winter survival skills

2). Member should be able to function independently and be able to assist others in the field with less experience.

3). Member must be recommended by the current snowmobile director and approved by the Field Director

4). Field testing will be administered by the snowmobile director and graded on a pass or fail scale.

Adopted: 3/10/06

Field Procedures

Team Training Events

OVERVIEW

Search and rescue activities, including training activities, involve an element of physical risk to members. It is important that the Team provide for the safety of our members during training activities. This procedure addresses specific factors related to the safety of our members during training activities – the minimum number of members needed to conduct a training activity, notification and approval requirements. This procedure cannot and does not attempt to address all factors related to the safety of our members.

REGULARLY SCHEDULED

Regularly scheduled training activities, i.e. team training activities, are currently listed on the Team calendar and posted on the Team website.

DEFINITION OF TEAM TRAINING EVENT

Ad-hoc or small group training activities that only involve a small number of members rather than the entire team are not automatically considered to be Team events. This kind of training activity is not normally scheduled as a team training activity, and is often initiated by individual members with very short notice to other members. If this type of training activity is to be considered as a Team event, then it must meet the following criteria:

- A minimum of 4 members must participate in the activity.
- The activity must be approved by the on-call Mission Leader.
- The activity must focus upon team related skills.
- The on-call Mission Leader may impose additional criteria as they deem appropriate.

This procedure and the definitions herein cannot delineate all activities and situations that may or may not be considered for inclusion as a Team Training event. .

Adopted 1/14/09

Revised 12/31/10

Alpine Rescue Team

Blue Book

Part 5 – Training Guidelines

Team Safety Philosophy

Safety is of paramount importance to the Alpine Rescue Team and is reflected in our Guidelines of Proficiency, Administrative Policies, Field Procedures, Technical Procedures and trainings.

The Alpine Rescue Team promotes and continuously reinforces the principles of self-reliance and safety. Each team member is prepared for the search and rescue mission demands and Colorado's alpine terrain and climate. Every team member is responsible for the safety of themselves first, their teammates second and then the subjects safety.

It should also be understood that there may be cases in which alternative methods may be utilized. All technical practices and procedures should be based on the following safety criteria:

- Team members are responsible for continuous assessment of hazards.
- Team members are responsible for wearing appropriate protective gear. Body substance isolation for patient contact; helmet, gloves and pack for litter operations; and avalanche beacon, probe pole and shovel for operations in avalanche terrain.
- An independent safety officer is assigned, when applicable, to oversee hazardous operations. Every team member is responsible for their own safety and the safety of their teammates.
- Team members are responsible for stopping an operation that they judge or suspect to be unsafe.
- A Safety factor of 4:1 shall be maintained in all technical systems.
- Technical equipment is certified by accepted industry standards, routinely inspected and retired when damaged or at the end of its service life.
- Team equipment is maintained in field ready condition at all times.

Team member proficiency in search, rescue and medical skills is maintained and advanced through structured classroom and field trainings. Team members are evaluated and ranked according to the progressive guidelines of proficiency, outlined in the following sections of this document. The safety history of the Alpine Rescue Team and mountain rescue in general is excellent. Only through a culture focused on all aspects of safety and the continuous vigilance of individual team members, will that level be maintained.

Mission Response & Protocols

Search and rescue missions are the primary reason for Alpine's existence. To a new member unfamiliar with mission behavior, the beginning of a mission must appear totally chaotic. In reality, each member is doing a small but necessary part of the whole job. It is here that the long hours of training pay off and members function as a true team to find or rescue the subject(s) expeditiously. This chapter should give the reader an understanding of the underlying structure of a mission: how it starts, ends and the individual responsibilities of each member.

Terms

Mission Leader (ML)
Incident Commander (IC)
Operations Section Chief (OSC)

The Mission Leader's duty is to coordinate the activities of a mission. During a mission, the Alpine ML may serve as the IC, the OSC or both. During some missions, someone from the Sheriff's Department may assume the role of IC. If the Sheriff or one of their deputies serves as IC, Alpine's ML then serves in the role of Operations Section Chief. In either role they are in full command of the operation aspect of the mission until the mission is completed or authority is transferred. Each Mission leader typically serves as the on-call mission leader in one week rotations. It is not uncommon for two ML's to share the week's duty.

Charge of Quarters (CQ)

A Team member who acts as a dispatcher from the Shack. The CQ is generally only used during a large or multi-agency mission. Primary duties are:

Call List

A list of members and their phone, radio and pager numbers in descending order of rank. The call list also details medical and vehicle qualifications. An abbreviated resource list is on the back-side of the call list. It is updated as necessary. Copies may be found at the shack, on the team's website and on the computer at the shack. This information is confidential and can only be distributed outside of the team for official Alpine business purposes.

Terms Cont.

Incident Command Post (ICP)

The ICP is usually a vehicle and/or the communications truck at the trailhead, equipped with a radio. The ML directs the operation from here. A name for the Command Post will be established by location and referred to as "*location* Command". Example – "St Mary's Command" or "St Mary's Operations"

Alpine Base

The radio designation for "The Shack".

Mission Startup

Alpine is dispatched directly through the Clear Creek Sheriff's Office (CCSO), or the Jefferson County Sheriff's Office (JCSO), in response to a request from the Sheriff's Office itself, other Sheriff's offices, or the Colorado Search and Rescue Board. The chronology of a typical mission looks like this:

1. A digital page from CCSO or JCSO, with printed instructions (*see Communications section*). In accordance with current team procedure, pages for Alpine usually come in one of two formats:

a. Mission Leader (ML) call. This page is for the on call Mission Leader to call dispatch. Verbiage is often "ML call dispatch for an overdue party". It is not yet a call for the team to respond, but rather for the ML to confer with dispatch about a pending call and to determine the level, if any, of Alpine's response. This page should be an indication for team members to make any last minute preparations for their departure. Usually an ML call will result in an all team page shortly thereafter. Sometimes there will be a delay as the ML works to gather more information and decide whether or not to have Alpine respond. Every effort will be made to keep the team informed as soon as possible. There have been times when it has taken over an hour for this team page to happen. If it is determined that Alpine will not respond, team members can expect a stand down page to follow. If a second page for the Mission Leader is put out by the CCSO, any off-call Mission Leader can call in to start the mission.

b. All Team page. This page is for the entire team to respond to the location indicated on the page. Verbiage is often "All Alpine Members respond to St. Mary's Glacier for an injured skier". Any call involving an injured party can be presumed to be a code 3 (lights and siren) response unless otherwise indicated on the page. Also look for additional information from the ML, i.e.: which team vehicles should respond, or other equipment to bring.

Mission Startup Cont.

2. The ML may contact a team member to act as CQ, passing on the mission information and any special directions or requirements they believe will be needed. If a CQ is used, they should respond to the shack where they will announce on MRA 1, "Alpine Base in service" over the base radio. The CQ will then help coordinate communications such as directions, equipment needed, number of responding members, the media, family, etc. Members are asked to respond directly to the mission or to a meeting point to arrange rides. The CQ reports back to the ML with the names and number of members responding, weather forecasts, and other requested information.

3. Team truck drivers will be needed to drive the team's vehicles. Those team members that are qualified to drive should make every effort to ascertain whether they are needed to do so. This can be done by radio or by stopping by the shack while enroute to the mission.

4. When the ML reaches the scene, they will evaluate the situation and relay any new information or requests to dispatch or the team. If available, the ML or their designee then questions the reporting party (RP) and develops a plan on how to conduct the mission.

All of the above actions can occur rapidly, sometimes in less than 30 minutes.

Call-Around

Our primary method for mission notification is our pager system. All active team members are issued pagers. If this system happens to fail, we may start a "call around". In general, the call around works in a pyramid where the ML, or their designee calls only about 2-6 people. Since it is very likely that several of them will not be able to go on the mission, he or she assigns each of them the responsibility of calling a small part of the call list and reporting back with the names of members who are able to respond to the mission. A call around can be completed very quickly if both the caller and the person receiving the call do the following:

To effectively receive a page or call:

1. Have a pencil and paper near your telephone at all times so that you can Quickly write down the information. Don't rely on your memory to retain the details.

2. Talk only long enough to get what kind of mission, where the mission is (directions), who/where/when do I have to meet for a ride.

3. Make the decision to go or not quickly. If you're not sure, say no, and ask if you can help in any other way. If you find you can go later, call the CQ or Command Post just before you leave.

Call-Around Cont.

4. Always consider the weather and your physical condition, so you know at any time whether or not you're "up" for a mission.

5. Explain to family members that when you are called for a mission the caller will identify himself as being from the Team and that the Team has a mission. If you can't respond promptly to the telephone, a message should be taken for you to call the appropriate person for information. Family members should not tie the caller up with questions.

To effectively perform a call around:

1. You must have the most recent call list. A new one is available approximately every month at the Shack, on the team computer, or the team website.

2. You should have some sort of code to mark people as "going," "not going," "can go later," "not reached," or "phone busy" worked out ahead of time so you don't confuse yourself. Don't be afraid to mark up the call lists - you can get another.

3. Announce yourself as "Hello, I'm (name) from the Alpine Rescue Team. We have a mission. Is (name) home?" This will alert the person at the other end of the phone that you do not have time to answer any unnecessary questions and that they should be prompt in getting your party to the phone.

4. Follow some sort of sequence of questions and answers so that all of the pertinent data is given to the people who are going.

5. Make calls short. If the member is not going and no further help is needed on the call around, get on with the call list.

6. When finished, call the ML or their designee and relay the names of those people available immediately, those available at a later time and those people you were unable to reach so that they can be contacted later. It's important that the ML know how many people are responding.

Mission Response

Mission response is the time from when you get the page (or hang up the phone) to when you arrive at the ICP, or the staging area. Your response time consists of two parts; the time required for you to leave your location and the driving time to the mission.

The time it takes to leave your location is a function of how well you have prepared your gear and the other individuals affected. Ideally, your gear should be

fully packed and stored in a readily available place (the trunk of your car or truck, closet, etc.). If you have removed something from the storage area, leave yourself a note or you will forget it. Family members should be trained ahead of time not to bother you with needless questions about the mission. It will be difficult for you to tell them what time you will return because you don't know.

The time it takes to get to a mission is fixed by the speed limit, the distance to travel and driving conditions. Speeding is not acceptable. Some members are authorized by the State to run emergent and while responding code 3, are permitted to drive over the posted speed limit. It is against team policy to use a mission as an excuse should you be stopped. Doing so may result in suspension from the team. You may not use red lights and siren unless you have an Emergency Vehicle (EV) sticker issued through the team and have authorization to run code.

The most time saved is in getting out of the house, not driving to the mission. It has been shown repeatedly that well prepared east Denverites can beat poorly prepared Evergreenites to the top of Mt. Evans.

Gasoline is obviously a critical item for a rapid response. It takes at least 10 minutes to gas up (about 10 miles of driving). If the mission is a considerable distance away, car-pooling may be an excellent idea for a number of reasons. One is cost, but car pooling also permits the passengers to get fully dressed and organized enroute and cuts down on the parking problem at the Command Post. The meeting time is the departure time. Make certain you are there and ready to leave at the appointed time so that drivers will not have to wait. Help your driver with a generous donation, which at least covers your share of the driving expenses.

When responding to distant or out of county missions, team members often drive as a group so that if the mission is called off, everyone is easily turned around. It is also a good idea to keep in touch with the ML or their designee while enroute to verify that the mission has not been stood down.

Command Post Protocol

Finding the Command Post from the directions given in the call around can be difficult. The National Forest Service maps are particularly useful in helping to find the fastest route to the mission. Probably by the time you get in the area, the intersections will have been flagged with surveyors flagging or a law enforcement officer will be there to direct you.

Approach the ICP slowly and with caution. When you get to the Command Post, park in a designated area or in such a way as you will not block other vehicles. Have your keys tagged with your name and leave them either at the Command Post or in your car. You will get checked in and briefed by a specified leader and you should be prepared to leave the base after this briefing. Unless specifically

asked, members should not "hang around" the Command Post to find out what's going on. If your group is not being sent out into the field immediately, you and the rest of your group should remain in an area away from the command post, but where you can easily be summoned.

Do not speak freely to non-members (relatives, news media, etc.). When talking to other members, remember that relatives and news media may overhear whatever you say. Should the news media approach you directly with questions about the mission, refer them either to the law enforcement personnel or to the team's PIO or ML. Information given to the media about any mission will only come from the Sheriff's Department, the acting ML, or the Alpine PIO (See Section #5, Public Information of the Team administrative policies.).

Although not the general rule, there are times when the local officials will provide food and coffee for an extended search or rescue. This should never be taken for granted or be expected. You are expected to have your own food and water for every mission. Your particular search team may be asked to spend the night in the field and begin from that point in the morning.

The Search or Rescue

The type of mission is an important piece of information to get from the initial page. This is because it enables you to get mentally prepared and equipment prepared before you get to the Command Post. Ideally, a rescuer should be ready for any eventuality on any mission. But since this would require 100+ lbs. of equipment, most members change their pack from mission to mission. For example, rock gear on a search in rolling forest terrain is unnecessary weight. However, you should be prepared for any likely events such as darkness, thunderstorms, or a search mission in rugged terrain turning into a rescue.

During a rescue, members will do as they are told if their abilities are sufficient. This does not mean that a member should stand around until told otherwise. It means that a rescue is not a democratic process. If a job obviously must be done, then do it. If you're not sure, ask. If you see a safety hazard, announce it loudly so that others take note. If you find yourself doing nothing, think about what could be done, look for something other people missed, or pitch in where you can help the most.

On a search mission, you may be assigned as a Team Leader to help cover a section of ground. Do your full share of the looking and morale maintenance for your team. Be prepared to debrief with Command/Operations upon return with notes including times, locations, clues and your POD. (Probability of Detection) POD is covered in Section 6 of the Training Guidelines.

End of the Mission

After returning from the field, every member should check out with Operations. It is team policy that no one will leave the command post until all team members are out of the field. The mission is not over until the all the equipment has been put away and the trucks are mission ready. All members are expected to help with the cleaning of the vehicles and equipment back at the shack.

Responsibilities for ML

Mission Leader (ML)
Incident Commander (IC)
Operations Section Chief (OSC)

The Mission Leader has the overall responsibility of the mission.

The Mission Leader:

- Changes shift at 1900 hours, Wednesday; coordinates as necessary with previous ML and is responsible for the mission readiness of the team.
- Makes arrangements with another Mission Leader if he/she cannot fulfill ML responsibilities.
- May make special arrangements such as a "bash team" for special events, or decisions related to what team members will respond to various out of county missions.

on notification of a mission, the ML:

- Goes into service immediately. Contacts CCC dispatch on Green Vote or JCSO Dispatch on JCO Fire VHF or 800 MHz, letting them know they are "In service and en route". May go directly to the mission site to set up the Command Post and talk with the requesting agency and/or the reporting party (RP).
- Contacts CQ or a designee if necessary to advise number and type of members needed as well as equipment.
- Upon arriving at the Command Post, reports to IC (if one is on scene) or becomes the IC otherwise; locates and talks with reporting party and requests that RP stay in the area.
- Determines "big picture" requirements of overall mission, or obtains requirements of team personnel from the incident commander.

Responsibilities for ML Cont.

- Handles field responsibility of team, assigning duties and overseeing technical and medical requirements.
- Maintains communications with appropriate team members to facilitate additional requirements of personnel and external resources.
- Considers need for other external resources: dogs, helicopter, and snowmobiles, etc. early enough to give them advance notice.
- At rescue missions, may go into the field for on-scene leadership, assigning another senior member to handle liaison with authorities, communications and external resources. If necessary they will assign an on-scene leader and a Safety Officer. The Safety Officer has the on scene responsibility of insuring appropriate safety margins are maintained throughout the operation. (If resources allow, this should be the Safety Officer's sole duty).
- At search missions, remains at the command post for overall operation coordination; if personnel requirements permit, may delegate additional ICS positions, or keep an assistant with them for their training and assistance in the operation coordination.
- Considers requirements of food, lodging and transportation for personnel as well as additional manpower.
- Considers need for an ambulance and makes arrangements.
- Considers need to recharge radios or replace batteries on extended missions.
- Maintains mission log or assigns task to assistant.
- Confirms that all field personnel are checked in and receive a briefing from field team leaders.

at the end of a mission, the ML:

- Verifies that all members are out of the field and accounted for; supervises collection of equipment against equipment checklist; verifies transportation arrangements of personnel returning home.
- Coordinates necessary follow-up arrangements or liaison with authorities; if necessary, discusses press release or photographs with Sheriff Dept..
- Prepares both the Mission Attendance Report and the CSRB Report.

Responsibilities for CQ

Charge of Quarters (CQ)

The Charge of Quarters (CQ) is in charge of the Alpine Base radio; has responsibility for mission call around; handles transportation needs and makes certain that necessary equipment gets to the Command Post. (A CQ may or may not be used in an actual mission. It is at the discretion of the ML. With the expansion of multiple communications systems in use by the Team, a Ham qualified CQ position is becoming highly desirable. When utilized, the CQ:

- Goes into service immediately; contacts ML to ascertain mission information, precise directions to the Command Post for future broadcast, and equipment needed.
- Gets to the Shack as quickly as possible and puts Alpine Base into service.
- Begins assembling equipment requested by the ML. Arranges for someone to collect equipment for transportation to the Command Post.
- Determines how many members (by name) are enroute and who might be available later; notifies ML of members en route.
- Coordinates consideration of possible external resources with ML and makes contacts as necessary, notifying them in advance, if possible, of standby status.
- Provides relay via whatever radio or phone system provides the best communication between the Command Post and Alpine Base to relay medical information to the hospital, request for medical helicopter, weather information, etc.
- Maintains Alpine Base until mission is terminated or until otherwise instructed by ML; on extended missions, may request other members to assist at Alpine Base.
- Maintains logs of all radio/telephone/events, and turns information over to the ML for inclusion into the mission report.

Responsibility

"Uphold the reputation of your organization. Public esteem earned over the years by dedicated work can be shattered by one act of misconduct."

L. L. Priar

The Incident Command System

The Incident Command System (ICS) is an organizational framework that has been around since the 1970s. It is used by nearly every emergency service discipline, and others that co-respond with emergency service units to manage the emergency. It is also used to manage pre-planned, non-emergency events, such as the Olympics.

It is used agency-wide by the National Park Service, U.S. Forest Service, Colorado State Forest Service and virtually all fire departments -- and has been mandated by the Governor for use by emergency services in Colorado.

The ICS encourages person in charge to limit their oversight to three to seven people. Its structure also encourages documentation and distribution of responsibilities.

In our area, a small search can escalate, and has, into one of immense proportion, requiring a well-planned framework for its management. If that occurs, and other agencies respond to assist, with the ICS everyone works from the same page

Characteristics

- The ICS allows leadership by a variety of combinations of agencies or authorities:
  - ✓ single jurisdiction/single agency (e.g. Clear Creek Co./A.R.T.)
  - ✓ single jurisdiction/multiple agencies (e.g. Clear Creek Co./A.R.T., EMS and FD)
  - ✓ multiple jurisdictions/multiple agencies (e.g. Clear Creek Co., Summit Co. and U.S.F.S./A.R.T. and S.C.R.G. and C.A.P.)
- It is modular in design, offering expansion in a logical manner, only when needed -- for either a 10 person search or a 1500 person wildfire.
- It encourages a manageable span of delegation/control for leaders.

- The ICS has common basic elements in organization, procedures, job descriptions and terminology.

- Fosters documentation of all activities.

Major components of the ICS

The greatest tenet of the ICS is to reduce confusion with responders of several entities. Common terminology for general, common, assignments includes:

I. Organizational functions
A standard set of major functions and "units" is always used: Incident Commander; Plans, Operations and Logistics Sections; Rescue or Medical Group; and Food or Communications Unit.

II. Resources
This can be personnel or equipment. Common names are used for all primary and support personnel/equipment.

III. Facilities
Common identifiers are used for such aids as command post, staging area and helibase.

Modular Organization

The management of an incident in the ICS develops from the top down, with additional levels added only as the work load increases. Job functions are assigned by the initial IC as functions must be delegated.

In descending order of organization from Incident Commander (IC) the ever shrinking units are:

- Section -- headed by a Section Chief to direct major functions: e.g., Plans or Operations
- Group -- headed by a Group Supervisor, assigned by functions: e.g. Medical Group
- Unit -- headed by a Unit Leader and has a single function: e.g. Search dog or Search team.

Unified Command

Unified command in SAR is important because SAR incidents, particularly searches, have no regard for lines on the map – boundaries. The unified command consists of a representative from each jurisdiction involved. Some incidents – e.g. a large plane crash -- might use a unified command (within a single jurisdiction) that includes representatives from the several disciplines : SAR, fire, EMS, law enforcement, etc.

Span of control is the number of people or units that can be adequately supervised by one. In general, the ICS suggests three to seven. Volunteer professionals may find three to four best, simply due to their more limited experience.

Resource Management

Resources are managed in a couple of ways ways, depending on the needs of the incident.

I. Single resource
A single resource is the smallest unit that can operate independently, e.g. a helicopter, a search dog with handler, an ambulance, a search team.

II. Task force
A task force is any combination of different types of resources assembled for a specific task. It has common communications and a single leader.

III. Command Staff
Command Staff comprises certain functions that assist the IC. These are Information, Safety and Liaison. This staff can be, and frequently is, assembled from several agencies involved.

Keys to Effective Use of ICS

Several key functions of the ICS are most basic, and worth remembering:

- Think jobs, not people (especially with radio communications)
- Plan ahead (the ICS is designed around 12 hour cycles, or shifts.).
- Document actions, so subsequent planners, etc. can understand what has been done.
- Predetermined radio uses by function (networks) eases radio traffic.

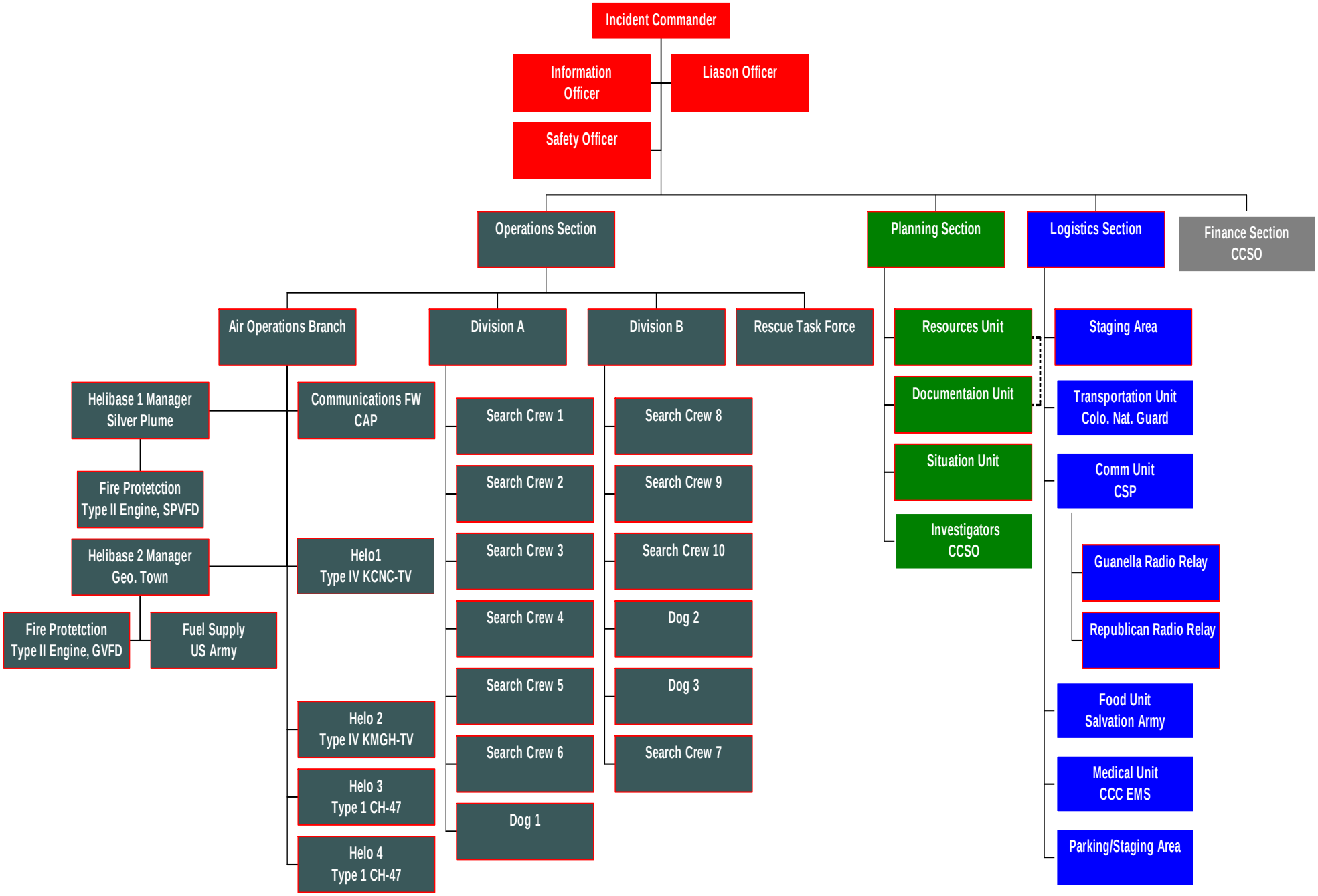
The greatest benefit in ICS is in a large or rapidly growing incident. But those with the greatest ease of using ICS are those that use it all the time: even in small incidents, most fire departments use it on every incident. They may only "fill" three boxes, but they understand the ICS. Most EMS personnel, since they deal (usually) with small isolated incidents, are not well versed in ICS. If ICS is used by you as a matter of course, it will become second nature to you too. Then when the seemingly short and simple search grows to four days with 125 people from 11 agencies, you won't be confused.

Glossary

Agency Rep.	Has full authority of assisting or cooperating agency (this would be ART's "ML" on out-of-county missions).
Air Ops	In charge of all aviation operations. Part of Operations Section.
Division	A subdividing of an incident by geography/topography. Part of Operations Section.
Group	A subdivision of an incident by function: rescue, medical, etc. Part of Operations Section.
Helibase	An area, for the duration of an incident, at which helicopters load, refuel, park, etc.
Helispot	A temporary location, in the field, at which a helo lands to load/unload. Formerly called "LZ."
Incident Commander	(IC) Individual given overall responsibility at any given time.
ICP or CP	Incident Command Post; radio call sign is "name" command, e.g. "Guanella Pass Command."
Information Officer	Media & family relations, etc.

Liaison Officer	Maintains contact with all agency's representative.
Logistics Section	Headed by a "chief," obtains materials & personnel: searchers, food, equipment, etc.
Operations Section	Headed by a "chief," charged with minute-to-minute actions.
Planning Section	Headed by a "chief," plans strategy, tracks resources, tracks current situation, documents all operations, prepares alternative strategies, plans demobilization.
Single Resource	Smallest unit that can operate independently: helicopter, ambulance, dog team, searcher.
Staging Area	Area in which available resource are staged awaiting assignment. Usually kept away from ICP.
Task Force	Dissimilar resources, with common communications and a single leader, combined for a specific task, e.g. a dog crew with a search crew.
Technical Specialist	Investigator, psychologist, avy hazard analyst, etc.
Safety Officer	Charged with overall safety of all incident operations.
Unified Command	All agencies with jurisdictional responsibility unite to determine incident actions

Large SAR Incident



ICS organization chart from a seven day search by Alpine Rescue Team and others near Silver Plume, Colo, 1988.

Medical

The Alpine Rescue Team is faced with a much different situation than a fire department or ambulance crew when it comes to rendering care to subjects of accidents, exposure or other medical emergencies. The typical setting for a mountain rescue mission, the type in which Alpine members engage, is far different than "on the street" type rescues.

All rescue team personnel must be familiar with the risks and hazards in any backcountry terrain. A team member must be able to avoid injury while monitoring the safety of his fellow rescuers as well as the care and safety of the patient.

Colorado weather, especially in the mountains, is exceptionally variable. Often rescuers as well as the patient must brave extreme temperatures and blizzard conditions, as well as the risk of hypothermia and frostbite. Therefore, emphasis is placed upon the members' ability to be self-sufficient in all types of weather and terrain to avoid creating a situation in which the rescuer becomes another subject.

Besides adverse effects of weather and terrain, the team member must realize the value of time in mountain rescue. Unlike a metropolitan area, where an injured person receives help in a matter of minutes, the typical mountaineer who becomes injured or ill usually has to wait longer before receiving medical care. This, combined with the extended time required for a safe evacuation in back country situations, weighs heavily on the medical considerations of mountain rescue.

Another problem encountered in mountain rescue medicine is limited resources. Therefore, certain restrictions must be considered when deciding what equipment is mandatory to assure the patient receives adequate medical attention. Alpine has adapted a specialized medical system to address this situation.

Alpine's medical equipment ranges from specialized titanium litters and lightweight traction splints to traditional medical equipment found elsewhere in the pre-hospital setting that can be of value in the back-country. This manual does not intend to train you in the use of this equipment. That is **your** responsibility. Its purpose is a general guide to the equipment's use and location.

To provide the best medical care and treatment to a person in the field, Alpine works closely with, and is supervised by, a Physician Advisor/Medical Director. The Physician Advisor/Medical Director sets treatment protocols in accordance with the most modern basic and advanced life-support techniques. These protocols are available in writing from the Medical Director.

In specific cases and when needed, some sort of communications link is attempted between the field operations and the hospital physician. If not possible, information can be relayed through dispatch to the hospital physician.

Actual individual medical capabilities vary greatly among team members. Members may have little or no medical experience, or they may be extremely knowledgeable in the care and treatment involved in advanced life support. For the most part, we encourage team members to be certified to a 1st Responder level and we require all members to maintain their CPR certification. The team has Emergency Medical Technicians (EMT), some with I.V. training (EMT-IV) and Paramedics (EMT-P).

The 1st Responder level of training is obtained through courses given by instructors approved by the Colorado Department of Transportation. Training includes how to recognize and treat basic illnesses and injuries. All medically qualified team members must maintain a basic working familiarity with all medical equipment used by Alpine.

In recent years many members of Alpine have been trained through the National Ski Patrol program, "Outdoor Emergency Care" (OEC). The knowledge and skills learned are oriented toward the wilderness environment, with special emphasis on ski and snowboard injuries, high-altitude and cold-weather illness, wilderness extrications, and the special equipment needed for emergency care and transportation in the outdoor environment.

Emergency Medical Technicians play a major role in the team's medical system. These people possess thorough training in basic life support and pre-hospital care and management of patients, in addition to an extensive knowledge of backcountry medical care, i.e., mountain medicine. Current training requirements mandate attendance at ongoing medical training sessions offered by the Physician Advisor/Medical Director for all EMT's. Paramedics can offer Advanced Life Support.

It is difficult to maintain medical skills and proficiency with patient interaction through Alpine trainings only. You must keep up with outside training opportunities to advance your skills. Remember that it is **your** responsibility to keep your certifications current. A copy of your certificates needs to be given to the Team's Medical Officer or their designee.

Medical training has traditionally been paid for by the individual team member. Some financial support from the team or other EMS grants may be available. All medical training sessions approved by our Physician Advisor/Medical Director count for continuous education (CE's). Be sure to document your attendance with your instructor and/or the Team's Medical Officer or their designee. Emergency

medicine, procedures, and requirements change daily! Stay current on all requirements.

After insuring the scene is safe and proper body substance isolation (B.S. I.) precautions for team members has been taken, patient stabilization is the next responsibility of the field team. Gloves are readily available on ever team vehicle and members should always have a pair in their pack. Care should be administered to the patient, which will minimize any life-threatening condition, prevent any further deterioration and prepare for the evacuation. It is imperative that any foreseeable complications be attended to before the evacuation is begun, thereby insuring the patient's safety as well as the safety of the rescuers.

Once the patient has been evacuated to a location where transportation to a hospital or appropriate medical facility can be provided, the technical rescue responsibility of the team to that patient is usually terminated. This may not be the case, however, with the medical responsibility. Treatment of a patient may not be discontinued by Alpine members until someone with equal or greater medical capabilities assumes responsibility for the care and transport of that patient, i.e., a flight nurse, ambulance EMT or Paramedic. It is prudent, both from a medical as well as a legal aspect, that the provider exercise good judgment when relinquishing medical responsibility for the patient.

The team uses specialized medical equipment to render medical care in the backcountry situation. This equipment is designed to be lightweight and compact for easy transportation by team members to difficult-to-reach locations. All of the medical equipment used by the team is transported in categorized medical packs. Every member of the team should possess a current knowledge of the location, identification, and operation of equipment in these packs as they may be called upon to get equipment out of a pack by the attending medical provider. Team medical equipment is intended for use on injured patients. Team members should carry their own basic 1st aid kit for minor cuts, abrasions, blisters, bites, etc.

Rescue Vehicles Medical Equipment

Latex exam gloves	Heat packs
Large medical pack	IV's in warming pouch
Small med. packs	Pulse Oximeter
Vacuum Splints	O2 and regulators
Vacuum Mattress	SKED / Litters
KED / Sagar traction splint	Trip reports

Communications

Communication is the ability to convey information accurately from one person to another. Although mountain rescue was carried on for many years without the benefit of two-way radio communication, operating without radios is uncommon to the modern rescue team. In emergency situations the failure to communicate can cost valuable time and lives.

Alpine currently uses commercial radio equipment licensed by the Federal Communications Commission (FCC). Our license allows us to operate on only a few frequencies under strict rules. The FCC can issue severe fines or revoke the license for violations of these rules. Violations include use of profanity, traffic that interferes with other licensed users and failure to give our call sign. Fines can be as much as $10,000 for each violation.

The Alpine Rescue Team, and all the members of the Mountain Rescue Association, have found the system of choice to be "very high frequency - frequency modulated" - commonly referred to as VHF-FM. We operate on a frequency of 155.160 MHz (megahertz), referred to as MRA 1 and are assigned that particular frequency by a license granted to the Team by the FCC (individual operator licensing is not required.) Our call sign is "KXL 315". This assignment of a particular operational frequency means that we share our frequency only with other rescue teams (e.g., Rocky Mountain Rescue Group, El Paso and Summit). The equipment we use meets very high technical standards and is checked annually to ensure continuing conformity to those standards. Available power ranges from 1.5 watts to 100 watts in Alpine's equipment. The major drawback to VHF gear is its cost. A hand-held unit varies depending upon brand and available discounts at the time of purchase.

There are several Communications Procedures that provide detailed instructions for specific types of missions or radio systems. These procedures are contained in the Appendices Section of the Blue Book. The specific procedures include:

1. 911 Cell Phone Initiated Missions.
2. Personal/Aircraft Locator Beacon Initiated Missions.
3. Westcliffe Area Communications Procedures.
4. Operating the APRS Field Team Tracking System.
5. Operating the UHF Radios/Evergreen Fire Procedures.
6. Operating the 800 MHz Digital JEFFCO/Mutual Aid Channel Radios.
7. Radio Relay Locations for Remote Mission Areas.

Alpine Rescue uses a variety of radio systems to maintain Team safety, coordinate an effective response by Team members, maintain communications during SAR missions, and allow MLs to effectively manage resources in the field. These systems include our Team tactical VHF radios, UHF radios, 800 MHz digital radios, and Amateur VHF/UHF radios.

The UHF radios provide communication with the Evergreen Fire Department. The 800 MHz digital radios provide communications with the Jefferson County Dispatcher and other local, regional, and state-wide 800 system users. The Amateur radios greatly extent wide area and remote area coverage for Team members who are also licensed Hams. Amateur radios may not be used on Team MRA frequencies since they are not "type accepted".

Alpine Rescue also uses a Ham Radio frequency for the Automatic Position Reporting System (APRS) used to track field teams during inclement weather or other demanding conditions. APRS uses small portable radio beacons carried by the teams and a computerized mapping system in Comm 4 to track teams in real time. The APRS system is controlled by one of the licensed Hams on the Team. Another type of radio that can be used by Alpine is the Family Radio Service (FRS). The FRS has very limited range and poor audio quality but maybe carried by people visiting the mountain areas

Communication Equipment

Base Radio

The 100-watt radio in the Shack CQ office is powered by commercial power and has a fixed antenna, and a larger transmission coverage area.

Mobile Radios

Radios that are permanently mounted in a vehicle, powered by the vehicle electrical system and have the antenna mounted on the vehicle. Their coverage will depend on their location. Mobile radios are typically 30 - 100 watts.

Handheld and Portable Radios

These radios are self-contained and small enough to carry with you. Their range however is restricted. Handheld to handheld range may be less than one mile. Handheld to mobile and handheld to base ranges can be much greater. Hand-held radios are typically 5 watts. When taking a handheld radio in the field, you should always take a spare battery.

Pagers

Alpine currently uses alphanumeric pagers. Members can also make use of the numeric function of the pagers, and each member has their own number. These pagers are also part of several team paging groups.

Antennas

Antennas are a critical part of the radio. A poor antenna can make a radio useless. Never push the transmit button unless the antenna is connected to the radio, as this may cause severe damage. Our handheld radios are usually equipped with a flexible rubber-covered spring antenna ("Rubber Ducky") about 6-1/2 inches long. This is a very sturdy and convenient antenna, being able to take much abuse and staying out of the way of the operator's face and gear. Sometimes, however, a field team may find that it cannot hear or be heard by mission base due to factors of distance and/or terrain. Reliable communication can often be reestablished by holding the radio as high as possible and using the speaker- mic to talk. Moving to a higher spot can also improve communications.

The perfect antenna will radiate the signal equally in a 360-degree circle. Due to the shape of a vehicle, an antenna will never be perfect. Putting the antenna as close to the center of the roof or trunk lid will give the best results. Mounting the antenna on the edge of the fender will cause the signal to be in a lopsided pattern.

Various antennas are available for mobile use, the two most common being the 1/4 wave whip and the 5/8-wave gain antenna which increases both receive and transmit coverage.

The 1/4 wave whip is a springy wire about 18 inches long (at our frequency) attached to an insulating base. It can be mounted permanently to a vehicle or temporarily to a clamp or magnetic base.

The 5/8-wave antenna has a whip about 40 inches long above a plastic-encapsulated loading coil. Most antennas of this type double the effective radiated power of the radio they're connected to.

Operation of Radios

The actual use of radios is simple, with few controls to operate on most of the team radios. The squelch (if equipped) should be set to where the receiver is quiet with no signal, volume control to a level that is suitable for the situation, and the frequency control to the proper channel. All team radios have the MRA 1 frequency (155.160) as frequency 1.

Keep in mind that it takes some time for the transmitter to key up and for the receiver at the other end to unsquelch. Key the mic for at least one second before you start talking. Know what you want to say before you begin transmitting.

When using handhelds, keep in mind where the other station is located. If it is close, it won't make much difference as to how the radio is held or your location, but if you are further away, it will help to hold the radio vertical and to stand away from trees and on higher ground.

When transmitting, hold the radio or microphone about two inches from your mouth; speak clearly, slowly, and in a normal volume. If you become excited and/or shout into the radio, your transmission will be very difficult to understand.

Equipment Care

While our radio equipment is very durable, reasonable care in its use will result in a long life and low maintenance. Protection from shock is paramount in field use and care. Always use the case or harness provided for the radios. If you are carrying a radio, be aware of its presence at all times - avoid dropping it or having it swing into rocks. Protection from weather is another consideration. While our portables are rugged, they are not weatherproof. Protect them from rain and snow by keeping them under a parka or in a pack. Keep extra batteries warm. If you should drop a radio in water, turn it off at once, remove the battery, and see that it is given to the Communications Director. Should a radio appear to be functioning incorrectly, discuss the problem with the Communications Director or another team member experienced in the use of the equipment. Make certain that if a radio has a problem, it is not put back in service. Tag it and give it to the Communication Director or the Mission Leader. Only authorized personnel may attempt to service or repair communication equipment. After use, the radios must be placed back in the charger units to become mission ready.

Radio Procedures

The overall responsibly and control of radio traffic is that of the Mission Leader. Our call sign (**KXL315**) must be given by the base at least every hour. Example: "KXL315, Alpine Rescue Team on a mission" or just “KXL315” at the end of a conversation. Team members should only use the MRA codes listed below. Members should be aware that the MRA codes are different than the CCSO codes.

MRA Code	Explanation
1	Subject found O.K., no assistance needed
2	Subject found, assistance needed
3	Team member in need of assistance
4	Subject found dead (usually preceded by code 5)
5	Isolate radios and/or turn volume down; prepare for next transmission. Typically used prior to code 4 transmissions. Used as a signal to Alpine members that a potentially sensitive transmission is to follow.

The Clear Creek sheriff also has a code system that is not to be used except on their channels.

CCSO Code	Explanation
1	On scene
2	Respond without red lights and siren
3	Respond with red lights and siren
4	Everything is OK
9	Fatality

Normally only ML's, Team vehicle drivers, or Team members designated by the ML will talk on Clear Creek, Jefferson, or Gilpin County dispatch frequencies. Normally on Clear Creek frequencies traffic is directed to the dispatcher. E.G. "Georgetown this is Alpine 601 enroute". For Jefferson County frequencies traffic is also directed to Dispatch. E.G. "JEFFCO this is Comm 4 enroute to the XXX call". After arriving on scene, the communication would be, "Georgetown, Alpine 601, I'm code 1". Many times the dispatcher will acknowledge a call by giving their call sign and the time or just the time.

The following are the frequencies that our team is licensed or authorized to use:

Channel Description	Frequency (MHz)
MRA 1	155.160
MRA 2 (a.k.a. Rescue 2)	155.235
MRA 3 (a.k.a. Alpine 3)	155.205
Green Vote (Clear Creek County)	155.025

Blue Vote (Clear Creek) **[MLs only]**	155.610
JCO VHF Fire	153.935
800 MHz (Jeffco Fire & LE Talk Groups	
UHF (EVFD Channels 1-6)	453.950
Gilpin Red	153.845
Gilpin Blue **[MLs Only]**	154.025
NLEC (National Law Enforcement)	155.475
FERN (Fire Emergency)	154.280

We may use the last three channels to communicate with other agencies. The radio must be type accepted for operation under Part 90 of the FCC Rules and Regulations. Team members are responsible for insuring that their radios are properly checked for conformance to FCC standards. The Communication Director is responsible for team radios.

Radio Numbers

Always precede the radio number with "Alpine" (example - Alpine 600)

Alpine Radio Number(s)	**Explanation**
600	Current Field Director
601	On-call Mission Leader (ML)
602	Second Mission Leader ML (on
	Multiple Missions)
610 – 619	Alpine Mission Leaders
620 – 649	Alpine Rescue (R) members
650 – 679	Alpine Support (S) members
680 – 699	Alpine Tech Specialists & Reserve
626	Retired Numbers

Radio use during Missions

When using radios, there are several rules that must be followed.

1. Only the personnel directly involved in an evacuation (litter radio operator, brake person, 3rd man, etc.) should be transmitting on the frequency being used (typically the team uses MRA 2 for technical evacs). The only exception

to this rule would be when the safety of the patient and/or rescuer's is at risk. Members in any of these roles should NOT have their radio on scan during the evacuation.

2. Listen before you talk to make sure the frequency is not in use. Keep transmissions short and avoid unnecessary chatter. Every transmission causes both your sending radio and all receiving radios to discharge their batteries.

3. Occasionally voice communications are not possible because of terrain or a weak battery. The Operations Chief may ask a field team to answer "YES" or "NO" questions using radio clicks. Simply click the microphone button 2 times to answer "YES" and 1 time to answer "NO" to questions they may ask you.

4. The radio frequencies we normally use (MRA 1 and MRA 2) are Simplex frequencies, there are no repeaters to relay traffic if mountains block the signal. Therefore, sometimes it is necessary to have someone relay traffic. If someone is in a good location to help relay traffic, they can just use the call sign 'relay', and teams can call them direct to have messages relayed. Field teams are also encouraged to relay traffic when needed.

5. Mission traffic has priority over training traffic.

6. The FCC requires that we respect all other licensed users that might be operating on the same frequencies that we use.

7. If a conflict arises with other licensed users on the same frequency, the best choice is to move to another channel or use handhelds instead of the radios in the vehicles. If that is not possible, then the Mission Leader can tactfully request the other user to change. We cannot order or demand that another licensed user stop using the radio.

Search Techniques

Searching for lost or overdue parties is one of the primary functions of the Alpine Rescue Team.

It is important to arrive at the command post prepared to be deployed quickly – be properly dressed and have your gear together. Unless specifically asked to, members should not "hang around" the Command Post. If you are not being sent out into the field immediately, you should remain in an area where you are available but away from the command post. Do not speak freely to non-members such as relatives or news media. When talking to other team members, be sure that non-members cannot overhear you. Refer questions by non-members to the designated person in the command post, or the sheriff.

Prior to committing personnel into the field, the mission leader works with the Sheriff's office and the reporting party (RP) to learn as much as possible about the subject's plans, route, habits, mental state, clothes and equipment, physical condition, etc. This interrogation will continue throughout the mission.

Members are assigned to field teams and field teams are given assignments by the Operation Leader based upon subject information, weather, terrain and past experience in the area. The Mission Leader will appoint a field team leader and brief them with information about the subject and give them their team assignment. The team leader will then discuss the subject information and assignment with the other members of their team. Prior to leaving the command post, field team members will be assigned specific duties such as radio communication or navigation. Members will also check to be sure they have proper team equipment and personal gear for the assignment.

If you are asked to carry an APRS tracking beacon into the field for your team, keep it at the top of your pack to insure proper operation of the GPS and radio beacon units.

While in the field all teams should be looking for clues, doing verbal attraction and being observant of their surroundings as well as looking for the subject. Clues are very important in determining the probability of the subject having been in the area. Clues may be articles of clothing, equipment, food or drink containers, and tracks. All clues should be located on a map and reported to mission base. If the clue is determined to be important, it should either be marked with flagging and, if necessary, protected from being disturbed or brought back to the Command Post. Team members should always be assessing their search area for areas of high probability that the subject might have traveled or possibly been injured. One of

the underlying challenges of all field team members is maintaining a high level of alertness and a good mental attitude. It is easy to loose concentration when you have been in the field for a long time.

In addition to general search techniques, the following are some specialized search methods used by the Team.

Hasty or Scratch Search

One of the first methods used early in the mission is the Hasty or Scratch Search. The philosophy of a Hasty Search is to quickly check out those areas thought to have a relatively high probability of success. A field team may be assigned to do a Hasty Search of the probable route of the subject, other likely trails in the area, or areas of high probability where the subject might have gone for shelter or where the subject might have become injured. These teams are looking for clues that might indicate that the subject was in the area and are also doing attraction in hopes of getting a response from the subject. These teams are usually small, two or three members, and carry minimal equipment so that they can move quickly.

Perimeter or Confinement Search

Field teams may be asked to conduct a Perimeter search in an effort to determine the outer limits of the search area. The field teams are searching trails, roads or other routes that the subject may have traveled or crossed for tracks or other clues left by the subject. The teams are also using attraction methods. These teams, like the hasty teams, are usually small and carry minimal equipment so that they can move quickly.

Line Search

When an area needs to be covered in more specific detail, the search team will move through the area in a line. The number of searchers available, terrain, time and size of area determine the distance between members and length of the line. The most efficient use of manpower, resulting in the fastest finds, is by multiple sweeps of an area by widely spaced lines. However, a member should be able to see most of the area between himself and the next member. As the terrain changes adjustments may be made in the spacing. As the line advances, members should search the area on either side of them, behind them, in front and above them, constantly shouting the victim's name, and then listening for a response.

River Search

Occasionally the Team is called upon to assist with a river search. This usually involves searching the riverbanks and assisting swift water rescue teams. All field team members are required to wear helmets, carry Team approved throw ropes and wear Team approved Personal Flotation Devices (PFD's). When a field team is assigned to search along swift water banks the team should have a minimum of three members. One member probes the water along the bank, checking holes, snags, etc. Another member walks in front of and slightly down stream of the member doing the probing. This member is searching the bank and water for clues as well as checking the safety of the member doing the probing. The members near the edge of the water should not wear their packs. A third member should walk above the members along the bank making sure the other members are safe and generally checking for clues in the water and on the banks. The members high on the bank away from the water should wear their pack and carry a radio.

Search Dogs

Background

Dogs and humans have worked together for thousand of years. Hunting and herding in partnership has resulted in a bond between humans and dogs for generations. A natural evolution of this partnership has been the use of dogs in search and rescue. The ability to hunt prey by using scent is inherent in a dogs' nature. Search dog teams have become more widely used in Colorado over the past two decades and are now considered an integral and valuable part of Colorado search and rescue.

What is Scent?

Humans shed dead skin cells or skin *rafts* throughout the day and night, whether moving or being still. Consequently, these rafts are left behind anywhere a person has been and on whatever the person has touched. These skin rafts leave a scent trace wherever an individual has traveled and are carried in the air to mingle with other scents.

Search dogs in Colorado are trained to discriminate between multiple scents (*contamination*) and to stay focused on the scent of an individual. It has been said that a dog remembers the scent of anyone they've ever come in contact with in their lifetime. When searching for a lost person, the dog's ability to scent discriminate allows it to find traces of the lost person, including articles the person has touched.

What is a Dog Team?

A search dog team in Colorado consists of a *certified dog and handler* and at least one *support person or navigator*. Colorado search dog teams always go into the field with at least one support person.

The Dog

Certified search dogs should have the following characteristics:

- Be obedient
- Be non-aggressive
- Like people
- Be physically fit

SAR dogs can start training in wilderness search as early as 7 weeks of age. The dog and handler are required to train several times each week over several years before they're able to test for certification. Once certified, the dog and handler must continue to practice a wide variety of scenarios to be ready for any circumstance. For wilderness work, dogs are certified in either *Trailing* or *Air Scent* disciplines. Although dog teams certify in a specific discipline, any search situation may require the other discipline and the handler is expected to be able to *read* or see and understand when their dog is working with either style.

Trailing Dogs follow the scent *as it falls to the ground.* The goal of a Trailing dog is to determine the direction a person has taken and where a person may have walked, run or even ridden on horseback or bike.

Deployment of a trailing dog requires:

- An uncontaminated scent article (see below)
- An area where the lost person was last known to have been

A trailing dog is taken to the last known area of presence and given the scent article to identify the lost person. It's best to keep this area as uncontaminated as possible. Although these dogs are trained to scent discriminate the dog can work faster when there are fewer scents to eliminate at the start of a search.

Once "scented" the dog begins to work by sniffing the ground around the area, eliminating other scents and narrowing down the person's direction of travel. The dog should be allowed to work uninterrupted during this time with clear access to the area. The dog continues to follow ground scent and generally works in a very steady and methodical fashion.

In Colorado's dry and windy climate the scent often blows off the actual path taken. The skin rafts, being minute and light, collect on vegetation, in rocks, and moisture (snow, water), so the path the trailing dog follows doesn't always seem direct. The dog should also be able to indicate any article the lost person has dropped along the way, giving the search team more clues.

Air Scent Dogs follow the scent of the lost person *as it's carried in the air.* Air Scent dogs determine where a person is at the moment they pick up the scent. Air scent dogs are also used to clear areas or verify that the subject is not in an area.

Deployment of an air scent dog does not require a scent article, although it's best to use an article to allow the dog to focus on the scent of the lost person. Without a scent article, an air scent dog will indicate any individual in the search pattern.

Assignments for air scent teams are based on geographic areas or terrain features such as valleys, ridges or drainages. The handler's job is to move the dog into the wind using a grid pattern organized to cover the assigned area. Wind direction changes constantly in Colorado so the handler must watch the dog and the wind to keep the dog working into the wind in a perpendicular pattern. An experienced dog will often move itself back into position to keep following up on the scent.

Since air scent dogs are assigned areas to work, several air scent teams can be deployed at the same time on a search. As long as a scent source is in the area an air scent dog can be used. These dogs have been used to locate body's months after the initial search has ended.

The Navigator

The support person for a dog team is an indispensable part of the team. This person is needed to navigate the search and keep track of the dog's search pattern. The navigator may also be asked to handle radio communication so that the handler can focus on the dog.

Navigators are required to:

- Be aware of topography.
- Be clue aware.
- Pinpoint the team's position at any time.
- Map the search pattern of the dog.
- Note wind direction.

Being aware of topography is critical for both the handler and the dog. Since the handler is watching the dog she/he may not be aware of a feature that may be dangerous to the dog that is focused on the scent. The navigator should be aware of, and alert the handler to changes in topography (rivers, cliffs, etc.)

Clues indicated by the dog need to be marked on the map or GPS and the navigator can also look for clues (footprints, discarded articles, etc) during the search.

The navigator shows the handler their location on a map and radios the location to the Command Post. The handler uses the map as a visual representation of what the scent may be doing based on topographic features.

Since trailing dogs follow a specific direction, the navigator is asked to draw that direction on the map. The dog will show turns and loops, as well as scent pools. This should be drawn on the map or marked on the GPS. Essentially, the navigator is mapping the scent when supporting a trailing dog.

Mapping for air scent dogs consists of noting the wind direction, grid patterns, and the dog's *alerts* or indications of the scent. This is important for pinpointing the lost person's location, and reporting the patterns to the Command Post. Since multiple air scent dogs may be working a mission, the information is valuable for comparing with other dogs' alerts. Command should be able to piece together the information and see a pattern based on the alerts and the wind direction.

Scent Articles

Scent articles are critical in most searches. A scent article is something worn, carried or used by the lost person. It's important that the scent article have only the scent of the lost person on it and that it's not touched by anyone else. Some things to remember when picking up an article are:

- Don't directly touch the article
- Use a plastic bag to carry the article
- Make sure the article belongs to the lost person

When picking up the article use tongs, a stick or turn a plastic bag inside out and grasp the article through the bag. It's best to use a fresh (unused) zip lock-type bag rather than garbage bag which may be deodorized and thus cover the scent. Close the zip lock bag to avoid "leaking" the scent as you walk and confusing your path with the path of the lost individual. Once the article is packaged, keep it out of direct sunlight to keep the scent intact, as the sunlight tends to "bake" the skin rafts and dry them out, leaving minimal, if any scent. ***It is very important to be certain that the article belongs to the lost person.***

Specialties

There are multiple specialties in which a dog team may certify after achieving wilderness certification.

Avalanche

Dogs use air scent techniques to locate subjects buried under the snow. There's no need to scent discriminate since they're looking for anyone buried. As in wilderness, they also locate objects containing scent that, in this case, are buried in the snow. Three dogs are able to cover in 4 hours the same area that would take 40 probe searchers approximately 8 hours to cover.

Water

Using air scent techniques, dogs also locate drowned victims. They are able to detect scent as it percolates to the surface of the water and narrow the search area very quickly. The difficulty in water search is the fact that scent is carried by currents under the water and by the air above the water.

Disaster

Dogs are almost always used in major man-caused or natural disasters these days. Using air scent techniques, the dog searches for any human scent in the debris. Disaster work is physically and emotionally difficult for both the dog and the handler. Dangerous and unstable debris and the potential for disease can create extremely hazardous conditions for searching. Dogs have saved countless man-hours locating disaster victims throughout the world.

Evidence

Following a crime, dogs are often used to locate clues or weapons. Locating objects in areas may or may not involve scent discrimination. When there is no scent article, the dog covers the area looking for any article. A dog may be trained to retrieve the article, to lie down next to the article, or to bark to indicate a find to the handler.

Cadaver

While all search dogs are prepared to find dead victims, the special element in cadaver training is burial of the scent. Dogs are able to detect scent from bones, hair and body fluids that have been buried for many years. In fact, dogs have been used to locate shallow graves from the Civil War!

Map and Compass

This subject will be presented in three sections. The first two sections (Map & Compass) are more reference oriented while the last section (Navigation) has practical hands on examples.

Maps

Maps and Topography

A topographic map is a planar representation of a 3-D surface -- the earth. To the untrained eye the map may look like a jumble of different colored lines in some sort of pattern. Keys to the symbols and colors used in constructing the map may be helpful but they are no substitute for years of experience in reading and interpreting maps. Once this experience is acquired, the experienced user often has little need for a GPS or even a compass, navigating by terrain alone.

Of all of the different types of maps available, U. S. Forest Service Maps, Trails Illustrated, etc., the U. S. Geological Survey topographic maps are used most often by the team.

U.S. Forest Service Maps

Also known as Visitor's maps, these are prepared for each individual National Forest and show forest boundaries, major landmarks, roads, tracks, and most man-made objects. Because they generally cover a large area, Forest Service Maps are prepared at a small scale, commonly at 1/2 inch = 1 mile. Accuracy, in comparison to topographic maps, is marginal and no information is given regarding topography except for random spot elevations.

These maps can be very useful in locating the Command Post when responding to a call as they have up-to-date road and trail information. For this reason it is recommended each team member obtain a complete set of Colorado National Forest Maps.

The Forest Service also produces a 7.5 minute Primary Base Series map. This map contains all of the information shown on the 7.5-minute topographic map discussed below, but has been revised to show recent road and trail information (including Forest Service road and trail numbers) and campground locations.

These maps are available on a limited basis and are produced in black and white only.

Topographic Maps

USGS 30 x 60-minute Series

Much of the United States is now covered by this series. Produced at a scale of 1:100,000 (1" = approximately 1.6 miles), each of these maps covers an area ranging from 1568 to 2240 square miles. Distances and contours are shown in meters. Because of the large area covered by one of these maps, they are most useful in general planning and large-scale orientation.

USGS County Map Series

These maps are produced in both a 1:50,000-scale series (1" = approximately 4166') and an l: l00,000-scale series (1" = approximately 1.6 miles). The area covered by the map is limited to the county it pertains to, and in the case of large counties, the map may contain several sheets.

The 1:50,000-scale series is very close in content to the 15-minute series maps discussed below, making it very useful in the field. The l:l00,000-scale series is generally too small scale to be of much benefit beyond general orientation.

USGS 7.5-minute Provisional Series

In an effort to speed up the availability of large-scale topographic map coverage in all parts of the U.S., these maps are being produced for those areas where standard edition 7.5-minute series topographic maps have been unavailable.

USGS 7.5-minute Series

This type of map will be used primarily in the field during a search or a rescue. They are typically called "Topo" or "Quad" maps. We generally use what is called a 7.5 minute quad map and the 15 min. topo map. These maps cover 7.5 minutes or 15 minutes of 1 degree of latitude and longitude respectively. A circle (or the Earth) is divided into 360 degrees. Each degree is then divided into 60 equal parts, or minutes; and minutes are then divided into 60 equal parts, called seconds. (1 minute = 1/60th of 1 degree, 1 second = 1/60th of 1 minute).

Size of Map (per side)	Scale (RF)	1” = feet	1” = miles	Area (Sq. miles)
7.5 minutes	1:24,000	2,000	0.39	60
15 minutes	1:62,000	5,208	0.99	240

Topographical maps are made by photogram metric methods. This includes the use of aerial photographs and stereoscopic plotting. These photos are then drawn into a map showing all features and contours. This map is then field verified assuring the accuracy of various boundaries, land contours, roads, buildings and water features. Government standards for these maps require an accuracy of 10%; this correlates to 40 ft. on 7.5' quads, and 100 ft. on 15' quads. Be aware of the features that can be hidden between the lines AND learn to read between the lines.

USGS 7.5’ Map Components

Color

Maps are printed with a number of colors indicating specific features.

Brown — Brown indicates land contours, which represent the vertical dimension on flat paper. Generally on a 7.5' quad, contours will represent 40 ft. of elevation with a bold contour every 200 ft.. In flat country, contour lines may represent only 5 feet not the usual 40 feet.

Blue — Blue indicates water such as lakes, rivers, streams, intermittent streams, marshes etc.. Streams less than 40 ft. in width are shown as a line greater than 40' are to scale. Because of its relatively temporary nature, be aware that water features may change seasonally.

Green — Green indicates woodland cover such as trees, shrubs, orchards, etc.. Also because of its relatively temporary nature, vegetation may change dramatically. On a 30-year-old map, meadows may now be over grown completely and no longer be there.

Black — Black indicates cultural features, such as roads, trails, buildings, mines and other structures & some boundaries. Although most modern man made structures do not change seasonally, be aware that new roads can be built and trails can be re-routed or cut in since the map was produced. Again, remember accuracy is within 10%, therefore, on a 7.5' quad, roads less than 40 ft. wide are depicted as a line and anything wider is shown to scale.

Red — Red indicates important or major roads, land surveys such as sections or townships.

Purple — Purple indicates photo-revisions from aerial photos added at a date later than when the map was originally printed (NOT FIELD CHECKED).

Margins

The margin of a map is similar to a table of contents for that map. The top right corner tells the name of the map, where it is located and what series it is (7. 5', 15' etc.). The bottom right corner (Figure 1) also tells the map's name (LONGS PEAK, COLO.), when it was printed originally (1961) and when it was photo revised (actually shown in purple). Just to the left of the map's name is a depiction of where this map lies in reference to the state. In the middle of the bottom margin is the scale for this map giving a reference to measure miles, feet, kilometers and the distance in feet between the contour spacing for this map.

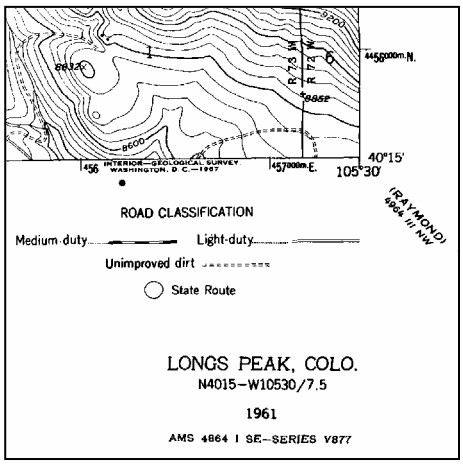


Figure 1

Just left of center is a drawing (Figure 2) showing *true north* (shown by the star), *grid north* (shown by the GN), *magnetic north* (14° shown by the MN) and their corresponding deviations in degrees at the time of original printing (1961). The bottom left corner describes further the methods of data gathering and dates for this particular map. Along the border (corners and middle of each side) of the map you will find the names of all of the maps that touch this map (RAYMOND, see Figure 1). The borders also show the latitude, longitudes and UTM's.

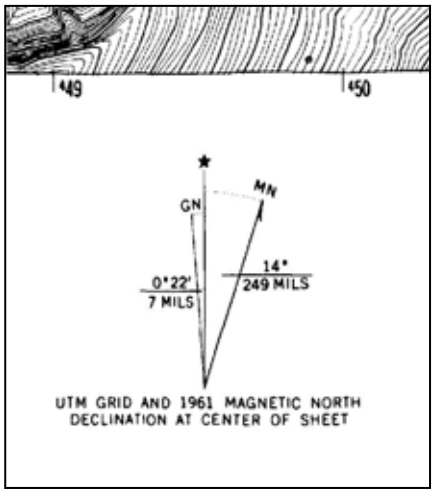


Figure 2

Topography

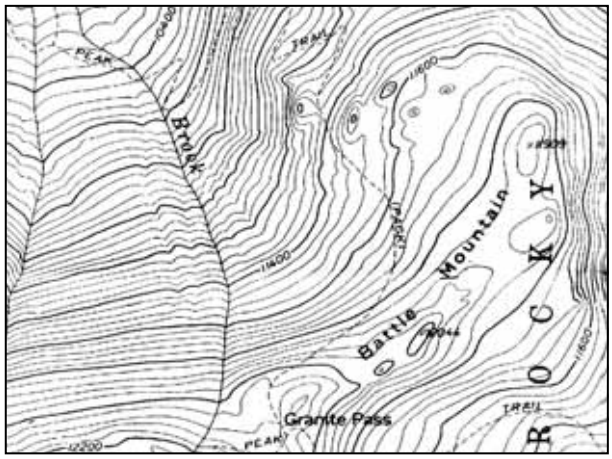


Figure 3

Contour lines are visualized as if you were looking down on the terrain from directly above it. Each line represents a point on the mountainside at that particular elevation (as if you were to slice it horizontally like a loaf of bread). Lines that are far apart represent gentle terrain (the area around the Battle Mountain ridge in Figure 3), lines closer together depict steeper terrain and lines that are very close or touching show a cliff or near vertical face (the area east of Battle Mountain in Figure 3). On a 7.5' quad map with 40 foot contour intervals, every 5th line is bolder or thicker to indicate that it is an "index" contour. These typically are every 200' and have the elevation included somewhere within the line.

Various topographical features have names depicting their formation. Below are some that you will need to know.

Summits/peaks	The top of a mountain or hill shown as an enclosed contour loop at the highest point of elevation.
False peaks	Another enclosed loop near the true summit but at a lower elevation (often mistaken for the true summit when viewed from a lower elevation).
Saddle	The lowest area between two near peaks (looks similar to the narrow middle part of an hour glass on a topo map).
Ridge	The area formed by the meeting of 2 upward sloping surfaces of earth (ridge contour lines generally form a "V" pointing down in elevation).

Bench	A flattened section of any size or shape located on a ridge or slope. (Looks like a wider spaced and normally a different shaped contour line or “bulged” line compared to its adjacent contour lines along a ridge).
Drainage	The opposite of a ridge; the area formed by 2 downward sloping surfaces of earth (drainage contour lines generally form a "V" pointing up in elevation).
Valley	A valley is similar to a drainage, but a much wider expanse, normally between two or more peaks.

UTM (Universal Transverse Mercator)

The UTM coordinate system provides a means of giving your location similar to latitude and longitude. These numbers represent the distance in meters from either the equator or Greenwich, England to a given point. UTM coordinates are shown on both the horizontal and vertical borders of a map as "tick" marks (usually blue) in 1000 meter increments. These tick marks will generally have 3 to 7 digits printed next to them. We will only use the 2 largest digits (ex: 4**57**, 44**56**000 in Figure 4) to reduce confusion. These 2 larger digits will identify your location to within a 1000 X 1000 meter square.

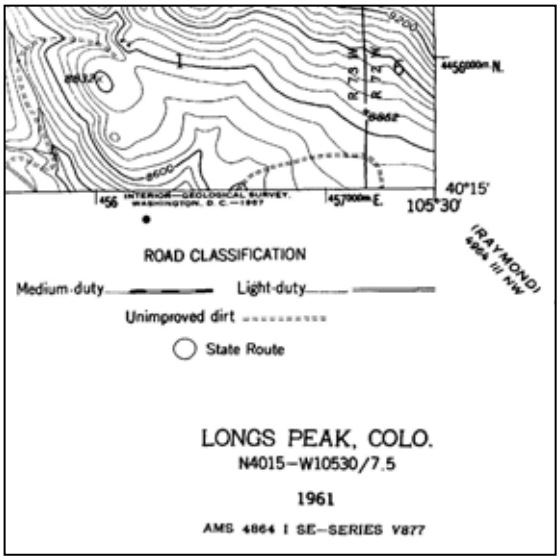


Figure 4

UTM coordinates are given as 6 digit numbers; the first 3 digits represent the horizontal component, the last 3 digits represent the vertical component (HHHVVV). When using UTM coordinates always remember the saying **READ RIGHT UP.** This tells you to **READ** from left to **RIGHT** for the first 3 digits (horizontal), then **UP** for the last 3 digits (vertical).

Using the numbers from Figure 4 you might get a UTM of 57H56V. Notice that only the first 2 digits of each component are filled. This would only allow an accuracy of 1000 meters, which is not good enough for our purposes.

Now you must narrow that down even further by subdividing each 1000 meter division into 10 equal parts (numbered from 1-9). If you are half way between 56 and 57, then that subdivision number is 5, completing the 3 digit number and giving a location of 565 (Ex:56555V). Next we do the same with the vertical component (Ex: 565556). In this example the vertical component, 555, the 55 tick mark is off the map and the user must count down from 56 to get the subdivision of 6. This places us just about on the border of the map.

Now you must relay this position back to the Command Post or another team. This is done by first giving the name of the map you are using, then the UTM, then a short feature description to help pinpoint your location. The example above would be "We are on the Longs Peak quad, at UTM 565556, on the bench at the 8620 foot contour". If more than 1 map is being used, the map name must be stated first; otherwise, it can be left out of the description. Remember you know (or should know) where you are, the person receiving your message does not, pause between descriptors allowing them time to write it down.

Compass

The Personal Compass

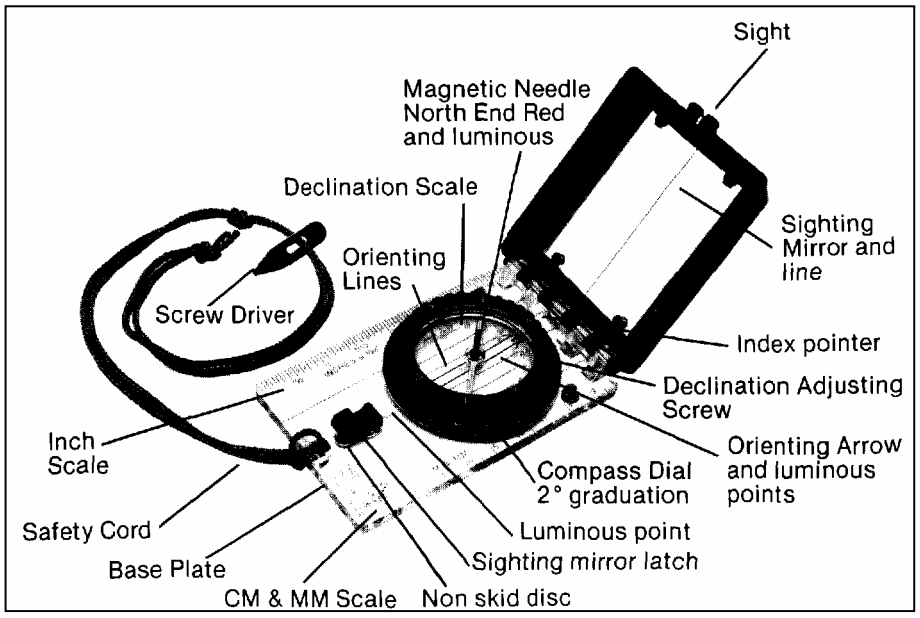


Figure 5

The suggested personal compass is a hand-held liquid filled model with gradients of 2 degrees, NOT 5 degrees. A compass with an adjustable declination scale like

the one pictured above is highly recommended, it may cost a little more but is well worth it in ease of use.

Some important compass parts are:

Base plate	The plastic bottom body plate that all parts are mounted to.
Scales	Inch, centimeter & millimeter scales to help measure distance. It is sometimes better to start your measurement from the first index mark of a scale because the zero position is typically obscured by the curve of the corner of the base plate. Be sure to compensate for the 1 index difference during measurement.
Compass dial	Rotatable dial marked off in 2^{o} increments.
Magnetic needle	A thin metal needle painted red on the end that points to the magnetic north pole, or any other metal object that is placed too near the compass.
Orienting arrow	The arrow located on the underside of the rotating compass dial that is aligned with the magnetic needle. This is sometimes also called the "Chevron arrow". This arrow can also rotate to compensate for declination if the compass is adjustable.
Index pointer	This pointer is also called the "Direction of travel arrow".
Declination Scale	This scale is used to calibrate your preset declination.
Adjusting screw	This screw is located on the compass dial and is used along with the screwdriver to adjust your preset declination.
Sighting mirror	The sighting mirror along with the sight and luminous points are used to allow an accurate line of sight to be established.

Any directions relayed to you or that you relay to anyone else will be an azimuth reading (any direction between 1 and 360 degrees). This azimuth will be a true north reading and not a magnetic north reading. The term "bearing" is sometimes used instead of "azimuth". This is actually incorrect, as bearings are given by stating the base direction (north, south, east, west), followed by the number of degrees of offset to that base and which direction that offset is referenced to the

base direction. We do not technically use "bearings" on Alpine due to its convoluted requirements, but the word is often used generically.

Remember that a compass has a magnetic needle that not only responds to the magnetic north pole, not to the geographic north pole. The compass will also point to metal objects such as car hoods, bolts in a picnic table, pack frames, radios, knives, ice axes, eye glasses, etc.. Also, try not to take readings in the immediate area of a power line, as this may give erroneous readings.

Declination

The magnetic field that surrounds the earth is similar to that of the field that surrounds a bar magnet. There is a north and a south end. The difference is that on the earth the magnetic ends are not the true geographic north and south poles. Because maps are aligned to true north and your compass points to magnetic north, we must compensate for that difference when relating a compass to a map. Magnetic declination is that difference between true north (the star in Figure 6) and magnetic north (the MN in Figure 6). 14 degrees in this example.

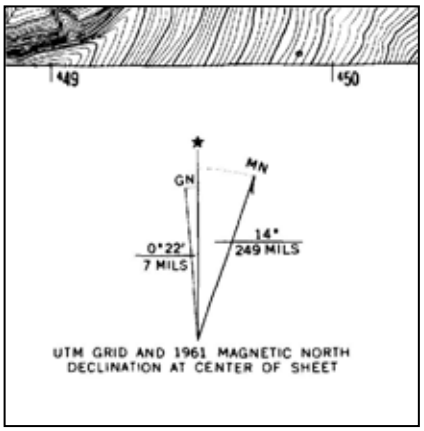


Figure 6

At the time of printing, the general magnetic declination in Colorado ranges from approximately 9 to 11 degrees to the east of true north. Any given map will have the declination at the time of printing in the lower left corner.

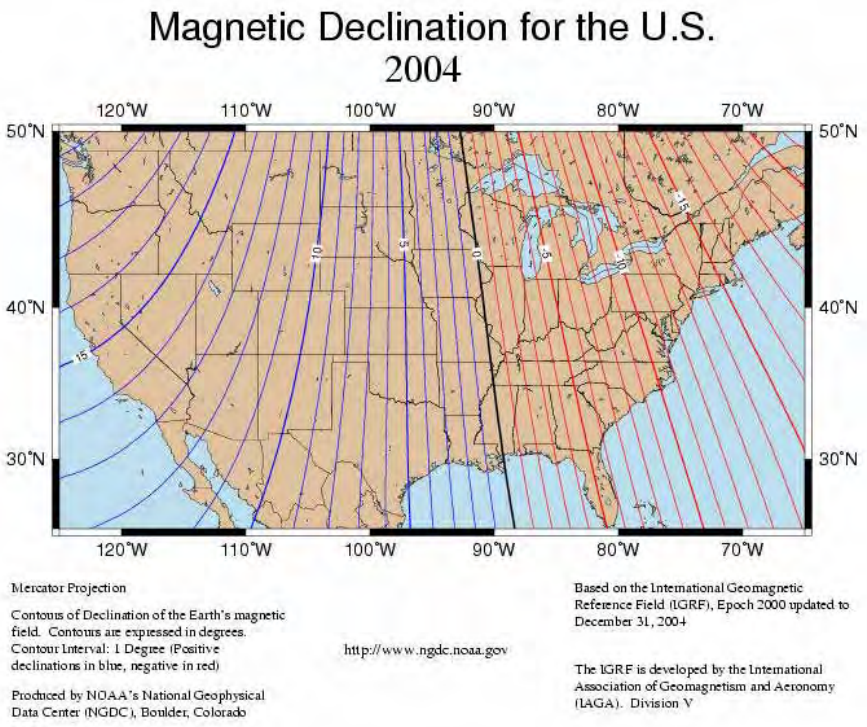


Figure 7

Below is a simplified chart & formula for how much the declination has changed since any given map was printed.

Map Age	Degrees to move WEST
5 – 12 years	1°
13 – 20 years	2°
21 – 28 years	3°
29 – 37 years	4°

Declination (approx) = Age of the map * .120833

If you do not take declination into account, you may not find your search area or patient. In Colorado, 9o to 11o off will range from 836 feet (.16 mile) to 1026 feet (.19 mile) off after you have traveled 1 mile.

Navigation

Putting it all Together

Now that you've read all of the technical stuff, here are some hands on examples to help you "Put it all Together". Remember to orient the map to true north (the terrain) and your body in the direction of travel. Most of all, Practice, Practice, and Practice!

How do I orient a Map to True North?

First, assure the proper declination is set on your compass. Next set your compass to true north by setting the "N" or 360° to the direction of travel/sighting pointer. Next open your map completely or until a left or right margin is visible, close to the area that you want to use. This margin edge is always true north with reference to that map. Align the edge of the base plate of your compass with the margin line of the map (Orienteering maps have north/south grid lines drawn within the body of the map. These lines can be aligned with the orienting lines on the compass base for alignment instead of the edge only if they are available). Then while holding the compass to the margin line, turn both map and compass around until the magnetic needle is boxed (when the magnetic arrow is centered within the orienting arrow). Your map is now oriented like the terrain around you.

How do I find the azimuth to my destination?

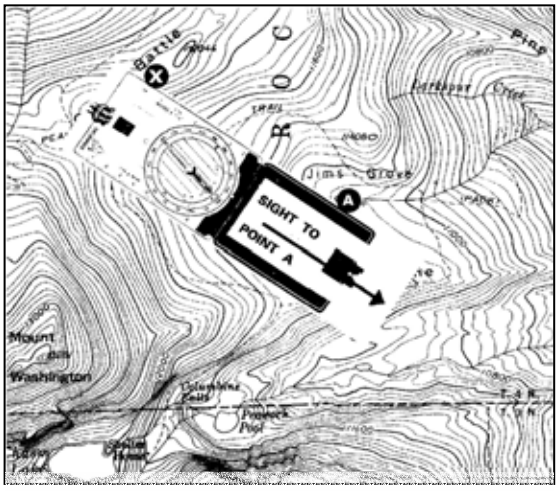


Figure 8

To find an azimuth from your location to another, first you must orient your map to true north as described previously and hold it there. Locate your present position if not already known (explained in Triangulation), and the position of your destination. Use the edge of your compass to form a line connecting these two points. Place the heel end of the compass (Figure 8) to your present location, and the toe end of the compass (Figure 8) pointing toward your destination. Then while holding the map and the compass together in place, rotate the **numbered compass dial only** until the magnetic needle is boxed within the orienting arrow in the base plate.

Now your azimuth will be the degree indicated by the direction of travel/index pointer arrow.

How do I get from here to my destination?

To follow an azimuth, first set the azimuth on your compass dial with the direction of travel arrow. Next, hold the compass level at eye level directly in front of you. While looking in the mirror at the compass dial with one eye closed, rotate your body until the north end (the pointed RED end) of the magnetic needle boxes within the orienting arrow. Make fine adjustments by turning to align the red line on the mirror with the north & south indicators next to the compass dial. Next, look straight up from the direction of travel arrow over the notch in the mirror and pick out a prominent object or landmark (a rock outcropping, saddle, knoll, lone tree or some unmistakable point) directly along an imaginary line from the direction of travel arrow. Pick your landmark far enough away so that if at all possible you are not taking sightings less than 100 feet, (compounding errors during sightings) and also not too far away so that it can be lost or confused with another object. Walk to that landmark, and if you have not reached your objective, continue sighting landmarks as described above and verifying your location as many times as necessary until you have reached your objective.

Where am I (Triangulation)?

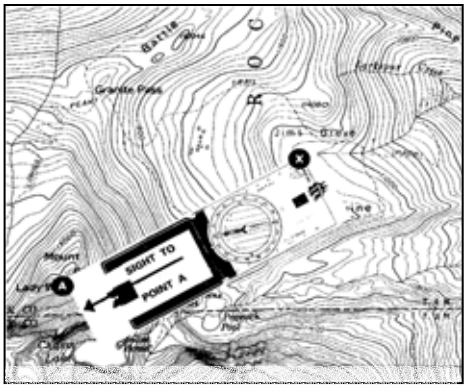


Figure 9

To triangulate your position, first you must orient your map to true north as described previously. Next you can compare the general terrain around you with the area of the map that you think you may be in. This is where being able to understand topography is very helpful. Pick out a prominent point (Figure 9) such as a peak, end of ridge, lake, town, etc. not too far away and locate it on the map that has been already oriented to true north. Next take a compass azimuth to that point.

IMPORTANT NOTE: *Be careful using points higher than you because you may only be seeing a false peak or ridge and not the true summit that you are plotting on the map*).

Next take your compass and place the edge of the toe end on the point on the map that you have just taken an azimuth on. While holding the map in place, and the edge of your compass on the point, rotate the compass around that point until the magnetic needle boxes within the orienting arrow. Now draw a line along the edge of your compass from that point on down to the heel of the compass (if you have chosen a point far away you may have to extend the line further). This is an imaginary line from you to that point. Next you must find out where you are along that line. Choose another point Figure 10) as close to 90° away from the previous one if at all possible (this will give you a more accurate location). Obtain an azimuth from this point in the same manner as the first one described above and plot it the same way as the other also.

Now you should have a "V" drawn on the map with the two points forming the top ends of the "V". Your present location should be the bottom or notch of the "V" (Figure 10). This location should now be verified by comparing it with the immediate terrain around you. Additional azimuths can be taken from other points, and should also intersect your first finding.

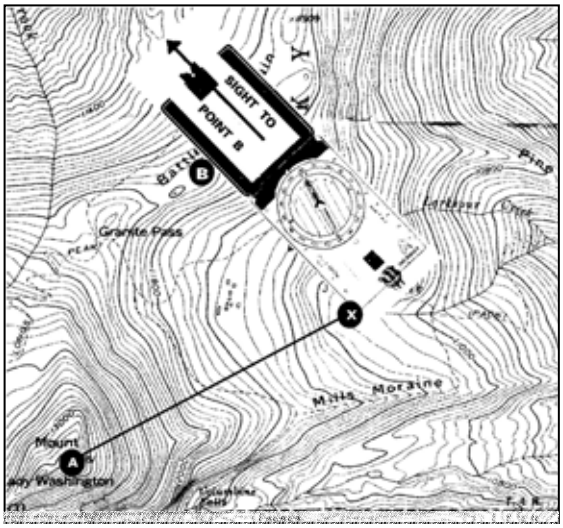


Figure 10

Remember that we are not using surveying transits to find our position and there will probably be small errors. You will find this especially when you are on a large slope or flat expanse that has very little topographic changes for you to verify with. Make additional readings; you may end up with a drawing that instead of having 3 or more lines intersecting at only 1 point, they may form a triangle or polygon. The size of the triangle will reflect your accuracy, the smaller the better.

Helpful Tips

Many people are intimidated by the technicalities of navigation by map and compass. However, most missions can be accomplished without getting the compass out if the team navigator uses some common-sense procedures.

1. *Be absolutely sure where you are when you start.* Mark it on the map. Be aware of where you are in general, at all times.

2. *As a team* let one member navigate in detail. *Individually* be responsible for knowing approximately where you are heading and how you would get out if you were accidentally separated from the rest of the team.

3. *Look ahead on the map.* How many streams, drainages or roads will you cross? Will the terrain slope uphill on your right or your left?

4. *Look behind occasionally.* It may help you to recognize landmarks if you backtrack.

5. *Keep your map out and refer to it often.*

6. *Maintain an awareness of your direction of travel* relative to terrain, sun (or moon), and/or distant landmarks.

7. *Use trails whenever possible for speed. Contour whenever possible to save energy.*

8. *Get in the habit of estimating the time your team will spend to get to checkpoints.* This important skill will be developed only with practice.

* Map portions provided courtesy of the USGS

GPS

Overview

The Global Positioning System or GPS, is a navigational aid based upon a constellation of more than 24 satellites orbiting the earth at a very high altitude. In a way, you can think of them as "man made stars", replacing the stars that we have traditionally used for navigation. The U.S. government has invested over $12 billion to build this massive system. The satellites are high, avoiding the problems encountered by land-based systems. They use technology accurate enough to give pinpoint positions anywhere in the world, 24 hours a day. GPS was first and foremost a defense system, so it's been designed to be impervious to jamming and interference.

How it works

The basic principles behind GPS are quite simple, even though the system itself employs some of the most "high-tech" equipment ever developed. GPS is based upon satellite ranging. That means we calculate our position on earth by measuring our distance from a group of satellites in space. The satellites act as precise reference points for us.

Alpine and GPS

Alpine has relied on map and compass for navigation since the team began. GPS has not changed this. GPS is just another tool we will use to help us navigate. Knowing where field teams are at any time can be achieved in only a few minutes, even at night, in a thick fog, or whiteout blizzard. Time and fuel can be saved in the use of helicopters to evacuate subjects. More accurate mapping of areas searched can be achieved, and locations of clues can be more precisely marked on maps.

All of Alpine's GPS receivers should have been programmed initially. Members should know how to check to see if the programming is correct. Should the batteries need to be replaced, the unit has a built in battery back up which will hold the programming memory for at least 20 minutes, so there is plenty of time to change the batteries.

GPS and the APRS Tracking System

The APRS tracking system beacons in use by Alpine Rescue uses internal GPS units to locate a position and then transmit the position back to the ICP via Amateur Radio. These positions are displayed in real time on computerized topographic software in Comm 4.

Limitations

For all of the wonderful things that they can do, GPS receivers have their limitations. First and foremost, they are electronic devices. This means they can be affected by anything that would bother any computer. They run on alkaline, lithium or ni-cad batteries, so the cold can significantly decrease their usage time. The units are water resistant, not water proof. The lower cost units have the ability to locate a position with accuracy as little as 5 meters, or as much as 100 meters, depending on the location of the satellites used etc. (For most Alpine uses this will be adequate).

Alpine Protocols

All Alpine GPS units should be set to the same basic configurations. The most basic is the UTM/UPS mode with a datum of NAD 27 CONUS. This should work for most of Alpine functions, and will interface with our manual system. If other agencies are involved (Flight for Life, National Guard, other MRA teams etc.) then we may want to switch to a Longitude /Latitude setting.

In the Longitude /Latitude setting there are several options for readout. The only proper setting is DDD, MM.SS.SS, which is Degrees, Minutes and Seconds and decimal seconds. Degrees, Minutes and Seconds work just like time, and should be read as such. On some units the symbol, (°) which stands for Degrees, (‘) stands for Minutes, and (“) stands for Seconds. It is very important that the unit that you are using is correctly programmed. Other formats could be interpreted as MILES off your actual location!

Under normal situations, only UTM’s will be used. GPS UTM’s are different than our manual system in one important way, they have more numbers.

If Longitude /Latitude is used the sequence is similar, read the numbers exactly as they appear on the unit.

Conclusion

GPS use with Alpine is still in its infancy. In the future more accurate and simpler to use GPS units may be available. Soon field teams will no longer have to call in their location. Operations will be able to track each field team in real time on a computer screen. With all of the advantages of GPS, we should still be experts at Map and Compass navigation. And, as always, be "aware" of your location at all times.

Helicopters

Helicopter Considerations for Alpine Rescue Team

Introduction and IMPORTANT DISCLAIMER

This material is not meant to be inclusive. Instead, it is meant to supplement the extensive material already published by the Mountain Rescue Association (MRA) that is used as the basis for Alpine's helicopter training programs. This information is free of charge and available on the MRA web site (www.mra.org)

Information about these programs is listed below

Helicopters in Search and Rescue Operations - Basic Level

Available at http://www.mra.org/Heli_B2004.pdf

This is a 35-page introductory program in the use of helicopters designed for the search and rescue mountaineer who has had little or no experience with helicopters.

This program is designed for the search and rescue mountaineer who has had little or no experience with helicopters. It is an introductory program, although it is strongly recommended that rescue teams and individual rescue mountaineers review this material frequently.

Helicopters in Search and Rescue Operations - Intermediate Level

Available at http://www.mra.org/Heli_I2004.pdf

This is a 29-page intermediate level program in the use of helicopters designed for the search and rescue mountaineer who has some experience with helicopters. This program assumes that each student has a detailed understanding of the "Incident Command System" (ICS)

This program is designed for the search and rescue mountaineer who has significant experience with helicopters. It is an intermediate program, and it is again strongly recommended that rescue teams and individual rescue mountaineers review this material frequently.

Supplemental Information in addition to that listed above…

Special Winter Operations

WINTER HELICOPTER OPERATIONS

Winter helicopter operations are very hazardous, and should be treated with great caution. There are many disadvantages of helicopter operations in mountain rescue operations. Procedures normally used during summer operations must be modified for winter operations.

FLIGHT OPERATIONS

First, the one advantage of helicopters in mountain rescue operations is the fact that helicopters require less power at altitude when the weather is cold. This is because density altitude decreases in colder weather. A lower density altitude reduces the power requirement for the aircraft at altitude.

LANDING ZONES IN WINTER

During landings on snow, no rescuers should be in the landing zone at any time. This is for two reasons:

1. The rotor wash will often cause any loose surface snow to fly around, reducing visibility to zero.
2. There is always the chance that the helicopter's weight will cause it to settle in the snow, which could be dangerous for any rescuer in the helispot.

When a snowfield is used as a helispot, rescuers should not have a ground guide. Markers such as backpacks should be placed near the helispot to give the pilot some sense of depth perception. These markers must be tied down to the snow so they do not move during landing.

Landings on snow can be very dangerous, especially if the snowpack is soft. On soft snow, rescuers can stomp out a landing pad using snowshoes, if necessary.

PROBLEMS WITH SNOWFIELDS FOR LANDING ZONES

Snowfields make very difficult landing zones, for two important reasons:

1. The white of the snow tends to reduce the pilot’s vertical reference, making it difficult to maintain a proper “depth of field.”
2. Snow can settle under the helicopter’s weight.

Whenever possible, a nearby road, clear of snow, should be used for a landing zone ("LZ")

IDEAL WINTER LANDING ZONES

Although we normally seek the largest open fields we can find for landing zones, a large open field of snow is a less-than-ideal LZ. Instead, try to locate the LZ in the UPWIND end of that large field, within 50-75 feet of a large pine tree. There are two reasons for this:

1. The tree tends to dissipate the snow cloud (billowing of the snow on the ground from the rotor wash), and
2. The tree also provides a good point of vertical reference as the pilot tries to put the helicopter on the ground.

As you'll see from the section below, the pilot will perform a maximum performance landing and takeoff, which further reduces the need for a large LZ.

MARKING LANDING ZONES

An alternative to a Ground Tender providing with hand signals to the pilot, rescuers can put skis on the snow at the location where a parking tender would normally stand. The skis should be laid flat down, bindings down – and rescuers can stomp on them to get them in place. The skis should be placed in a V pointing in direction the wind is coming from – with the open portion in the direction from which the helicopter should approach. Skis normally will not fly away as the helicopter approaches.

LANDINGS AND TAKEOFFS ON SNOW

The pilot landing a helicopter on snow does not want to do a normal landing approach using forward flight to slowly transition into in-ground-effect. Instead, landings and takeoffs will be a much slower operation in winter. The pilot will hold a high hover above the LZ to look at the LZ and evaluate the snow conditions.

The helicopter will generally enter the LZ in a full power vertical decent. Very slowly, the pilot will descend, pausing to blow snow out of the way. The pilot will stay in an out-of-ground effect hover while blowing the snow away.

This is called a "point in space" approach. The pilot will terminate the decent during out-of-ground effect to blow away snow. The pilot will slowly descend to in-ground-effect, and on to a landing.

Similarly, takeoffs will always be vertical – a maximum performance takeoff. This keeps the snow cloud smaller and keeps it in vicinity of the aircraft. It also allows the aircraft to clear high above any obstacles in or near the LZ.

APPROACHING THE HELICOPTER

For rescuers approaching and departing the helicopter, all equipment such as packs, skis, snowshoes, and ice axes must be carried horizontally below waist level, never upright or over the shoulder. Skis are especially dangerous, since mountaineers generally carry them upright, over one shoulder.

Regardless of how nice the weather might be, rescuers should be sure to fully zip their jackets, put on their gloves, and bundle themselves before approaching or departing a helicopter with rotors turning. This is especially true for subjects that might be in a litter. At 0 degrees Fahrenheit, a 40 mile-an -our rotor wash can make the effect on the skin feel like –30 degrees.

HAZARDS OF EXTENDED TIME ON THE LZ

If the aircraft is ever parked on a snowy/icy surface for an extended period, the skids may freeze to the surface of the snow/ice. This is a dangerous situation, as it can lead to dynamic rollover of the helicopter during takeoff. A nearly fatal accident occurred at Mt. Robson in Canada as a result of this problem.

FLIGHT FOR LIFE

All Flight for Life ships will have skis attached to their skids from October through March. This tends to spread the helicopter's weight, and reduce the risk of the helicopter settling.

Helicopter Resources Used by Alpine Rescue Team

MED-EVAC

FLIGHT FOR LIFE

Aircraft: A-Star B3 (one in Denver, one in Frisco, one in Colorado Springs)

The Denver ship has a call sign of "Lifeguard 1" and an N number is N96LG
The Frisco ship has a call sign of "Lifeguard 2" and an N number is N392LG
The Colorado Springs ship has a call sign of "Lifeguard 3" and an N number is N97LG

SPECIAL EQUIPMENT Med-Evac

Their backup is an A-Star B-2 model, which has less power at altitude. It's N-number is 92LG

B2 A Hover In-ground effect of 9,850 feet
A Hover Out-of-ground effect of 7,550 feet

B3 A Hover In-ground effect of 13,285 feet
A Hover Out-of-ground effect of 10,875 feet

Flight for Life CAN transport searchers, but only those with a valid "Lift Ticket."
They WILL NOT consider one-skid or hover jumps loads or off-loads of rescuers or patients.

AIR LIFE

Aircraft: Bell 407 (aka Bell 206/407 model)

ALTITUDE LIMITATIONS In cool weather, it will be able to fly above 11,000 feet, but likely NOT be able to land and or transport rescuers above 11,000 feet

Needs a long and level take off area (like a road) at high altitude

SPECIAL EQUIPMENT Med-Evac

CAN transport searchers
Will NOT do one-skid or hover jumps.

MEDIA

KCNC-TV (Channel 4)

Aircraft: Bell 407
Call sign "Copter 4"

SPECIAL EQUIPMENT Mike Silva, a VERY experienced pilot.

KMGH-TV (Channel 7)

Aircraft: A-Star B2
Call sign "Chopper 7" (not to be confused with "AirTracker 7" which is what they call it on television broadcasts)

SPECIAL EQUIPMENT Infrared (type unknown)

FOX-TV (Channel 7)

Aircraft: A-Star B2
Call Sign "Sky Fox"

KUSA-TV (Channel 9)

Aircraft: A-Star B2
Call sign "Sky 9"
Has not flown many SAR mountain missions due to accidents of the past few decades.

MILITARY

AIR NATIONAL GUARD

Contact via CSRB State Coordinator.
(ALL BETS ARE OFF AS TO AVAILABILITY DURING IRAQ DEPLOYMENT)

National Guard will generally NOT transport searchers or recover deceased victims.

Buckley Air Force Base
Aircraft: Hueys (206-B-model)

Eagle High Altitude Aviation Training Site (HAATS)
Twin Hueys - capable of high altitude loading/unloading. Arguably they are more qualified mountain pilots than Buckley

FORT CARSON (571ST) ARMY BASE

Contact via CSRB State Coordinator through AFRCC
(ALL BETS ARE OFF AS TO AVAILABILITY DURING IRAQ DEPLOYMENT)

MAST Blackhawks are specialized *rescue* ships have a hoist - but they will do rescue ONLY - no search and no transport of searchers
Blackhawks can move searchers
Rumor that Chinooks are back but not with operational teams yet

WARREN AIR FORCE BASE

Request via CSRB State Coordinator through AFRCC
(ALL BETS ARE OFF AS TO AVAILABILITY DURING IRAQ DEPLOYMENT)

OTHER

DENVER POLICE

Aircraft: Bell 407 (the same as the Air Life ships)
Fast aircraft with limited lift capability, especially at altitude

ALTITUDE LIMITATIONS In cool weather, it will be able to fly above 11,000 feet, but may not be able to land and or transport rescuers above 11,000 feet
SPECIAL EQUIPMENT FLIR Infrared - (With the mixed snow/rock on the mountain, infrared may be useless when the sun is on the rocks. It is best used in very early morning)

Avalanche Rescue

Basic Level

The purpose of this section is to discuss the basic principles in avalanche rescue.. Since "time is of the essence," the first few actions during an avalanche rescue are critical.

As much as with any other rescue situation, your actions during the first few minutes of the rescue operation are critical to the success of the rescue. This is especially true in the hasty search phase of the avalanche rescue. In this way, the avalanche rescue is more like a search than a rescue. This is due to the fact that rescuers must focus on searching for clues to discover the victims. Much like the field search for a lost subject, time can be wasted searching unnecessary areas if important clues are overlooked or if the search is performed in an unorganized manner. In the 1987 Peak 7 avalanche at Breckenridge, the hasty team was able to gather enough clues to determine that only half of the debris field (which totaled nearly 25 acres) was worthy of searching. This was accomplished in less than thirty minutes.

For the Record

Time is the enemy of the buried avalanche victim. At 30 minutes, only one-half of buried avalanche victims survive. By 35 minutes one in three survive, and by 45 minutes only about one in five survive. At this point the mortality curve flattens somewhat and at three hours one in ten victims survive. Though few buried avalanche victims will survive, it is important to know that some victims have survived burial times of many hours. The longest live recovery in North America, for example, is 25.5 hours (ironically, this victim was an "avalanche lookout" during a rescue operation and was located only after he was reported missing after the rescue.) Victims trapped in structures and vehicles have survived for days. For this reason, the search must go on. Much like field searches, the rescuers should assume that the victim is still alive.

Leadership Roles

Site Leader

The Site Leader is in charge of the search and rescue at the accident site. This rescuer must be highly experienced and travels to the site as quickly as possible and relieves the Hasty Search Leader. He or she will consult with the Hasty Search Leader to evaluate the actions of those already on scene and decide where to

search and continue or rearrange probe lines accordingly. The Site Leader will determine the best strategy to search the avalanche and will request assistance and equipment as needed from the Incident Command Post. Figure 11.1 presents an idealized representation of a typical avalanche rescue.

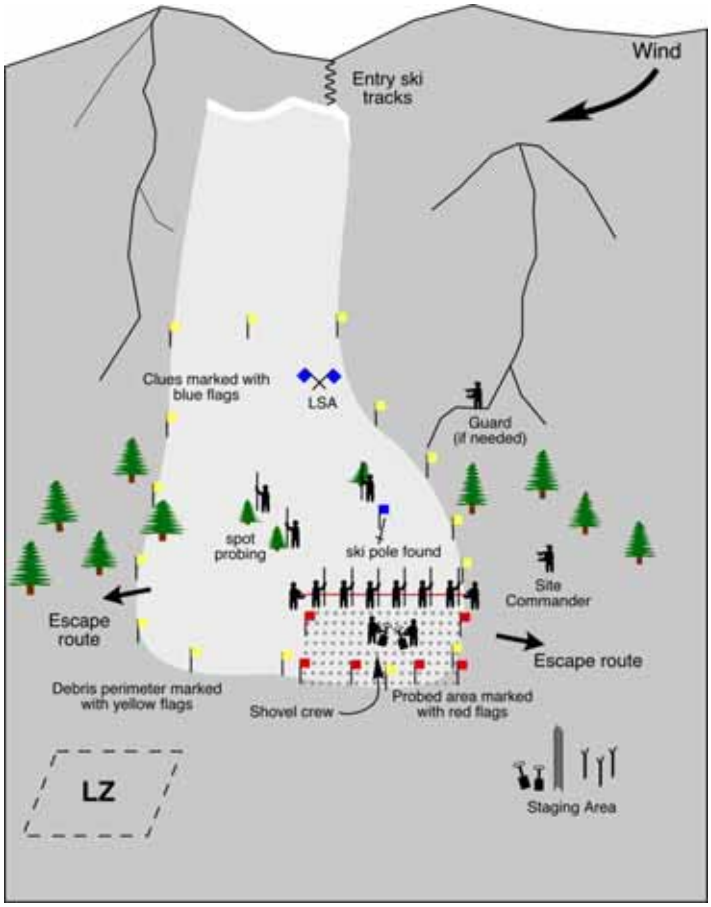


Figure 11.1. The typical organization of an avalanche rescue.

Hasty Search Leader

The Hasty Search Leader assembles a small and fast group of rescuers who can travel to the site quickly. This leader should be well trained in hazard evaluation and in search and rescue. Once on the scene, the leader will have to assess the avalanche danger, formulate a search plan, and deploy searchers. It is imperative their initial assessment is accurate and communicated to the Incident Command Post. The success of the rescue or recovery operation is due, in a large part, to the experience of the hasty team leader. The Hasty Search Leader is the Site Leader when they arrive at the accident site and may be replaced later by a more experienced rescuer or when the designated Site Leader arrives on site.

Probe Line Leaders

Probe Line Leaders are responsible for fast, continuous, and effective probing. They must be militaristic in their leadership and precise in their leading of a probe line. In small probe lines—typical of the Team's tactics—the probe line leader will

be in the line. In some operations with large probe lines the leader may direct from outside the line. Probe Line Leaders must keep their lines straight and moving. A guidon cord greatly facilitates this effort; otherwise the leader must regularly stop and realign the probe line to ensure effective probing. The leader must rest probers as they tire, but the goal is to continue the overall movement of the probe line.

Follow-Up Leaders

Command will appoint leaders to fill responsibilities for getting medical/evacuation equipment and support rescuers safely to the accident site.

Search Strategies

Hasty Search

The hasty search team is intended to be the first team to reach the accident site. Hasty team members should use the same method of snow travel (e.g. skis, snowshoes, etc.). Furthermore, they should be in peak physical condition to travel fast and should not be weighted down with too much equipment. However, the hasty team should travel to the site with the expectation that no other rescuers will follow. For this reason, minimal bivouac gear should be taken into the field. Bivouac gear will allow rescuers to take care of themselves and the victim until medical and evacuation equipment can reach the site.

In addition to basic medical and communications equipment, hasty team members **must** carry specialized avalanche rescue equipment into the field.

The following is a list of common essential equipment for the Hasty team:

- One avalanche beacon per member
- One collapsible probe pole per member
- One shovel per member
- Surveyors' plastic flagging
- Flags (both yellow, blue, and some red)
- One radio per member if possible
- Basic personal gear appropriate for the weather conditions
- One small medical kit per group

The goals of the Hasty team are:

- Find and mark a safe route to the accident site
- Assess the avalanche danger along the route and at the site

- Formulate and implement a search plan
- Find clues/victims
- Determine the likely burial areas for probe lines.

The hasty team should be careful to flag their route to the accident site so subsequent rescuers can easily find their way to the scene. This is especially important because witnesses or reporting parties may be brought to the scene with the hasty team. Future directions to the site may be difficult if the RP is in the field with the hasty team.

Upon arrival at the accident site the hasty team must identify safe areas, a staging area for caching gear, and an escape route or routes. This information must be known by all, and be relayed to all rescuers whom later arrive on scene.

As with any search operation, the number of clues found improves the chances of success and reduces the area to be searched, even if the avalanche is quite large. Conversely, the lack of clues can greatly lengthen the time spent at the accident scene.

Approach Search

Hasty team members should begin their task as they approach the slide area. Verbal attempts to contact the subject should be used throughout their journey to the area. After all, the subject may have extricated him/herself and may be wandering around in the general area, or may be en route back to the trailhead. There is one documented case of a young boy who extricated himself from an avalanche but died of hypothermia in the woods while rescuers worked on the avalanche debris alone.

With the avalanche site in view, the hasty team must seek clues that may be impossible to see once at the base of the slide. Rescuers should also perform a visual/audible search. In doing so, rescuers are attempting to locate:

- Victims
- Clues, tracks, clothing, equipment

Are any distinguishable tracks entering the avalanche visible? Any and how many tracks exiting the avalanche? Are any clues (clothing, equipment, etc.) visible on top of the debris? It is important to count the number of tracks and assess the type of tracks (Rescuers have been called to the scene of avalanches with tracks in, no tracks out only to later determine that the tracks were produced by wildlife.). Rescuers should start a paper map of what they see before they get too close to the avalanche debris.

Assessing the potential for additional avalanches and determining if it is safe to search the debris can be a difficult task. Because one avalanche has already occurred the Hasty Team should be careful to avoid all steep slopes. To determine whether it is safe or not safe to search the debris—and the weather conditions are not changing—rescuers can use the following two rules of thumb:

- If the avalanche was human-triggered release, additional triggers will be needed for another avalanche.
- If the avalanche was a natural release (or the trigger unknown), additional natural avalanches are possible.

In the case of a human-triggered (skier, snowmobiler, hiker, etc) avalanche, rescuers can generally work safely on the debris as long as other triggers avoid undisturbed snow above the fracture line or adjacent slopes. Changing weather conditions (increasing snow and blowing snow, or increasing temperatures causing thaw conditions) can quickly worsen the avalanche danger, and rescuers may chose to retreat from the accident site until control work with explosives can be affected.

In the case of a natural avalanche release (about one in ten accidents), additional avalanches may be possible, and if weather conditions worsen, even expected. In these situations the best course of action is to retreat or wait until avalanche specialists can evaluate the situation. Avalanche reduction work with explosives may be necessary.

In some situations the Hasty Team leader or Site Leader may elect to post a "guard." A guard is most valuable to warn rescuers when other triggers (skiers, snowboarders, snowmobilers, etc.) are in areas where they might trigger an avalanche onto rescuers. A guard is probably ineffective for warning rescuers of fast moving, dry-snow avalanches. However, in the springtime a guard may effectively warn rescuers of slow moving, wet-snow avalanches. In general rescue leaders considering posting a guard should consider that if conditions are dangerous enough for a guard, should rescuers even be exposed to the danger.

Visual Search

Once rescuers arrive at the scene, they should first assess whether there are any unburied victims. If so, these individuals must be given medical care immediately. If it is determined that there are no other victims in the slide (everybody is accounted for), rescuers should evacuate the area immediately, while providing appropriate care for the victims.

During visual search phase of the hasty search, the rescuers should make a close-up visual inspection of the avalanche area. Again, are any distinguishable tracks entering the slide area? Are there tracks exiting? Are there any clues (clothing,

equipment, etc.) visible on the debris? If so, all hasty team members should be alerted of the clues. Once on the debris rescuers should make sure there are no victims attached to these clues. The immediate area around the clue should be probed. In the case of an accident with numerous victims, effort must be made to determine ownership of each piece of gear or clue. After all, a clue can generally be eliminated from consideration once the owner of the clue has been located.

The Hasty Team Leader **must** be made aware of any clue, and to whom it belonged. The leader should then note the location of these clues on his or her map of the accident site. The clues should be well marked with blue flags and secured (e.g. a piece of clothing taped to a flag or a ski stuck vertically in the snow) so wind and snow do not move or bury the clue.

Rescuers must occasionally yell and listen for voices throughout the hasty search phase. Victims may be buried just below the surface. There are several accounts of buried victims who heard their rescuers and were able to yell for help.

Beacon Search (*see "avalanche beacons" in this section*)

Even if any witnesses or reporting parties insist that none of the victims were using beacons, a beacon search is still completed. It is not uncommon for a person in a group to have a beacon while their friends do not. Given the minimal amount of time required to perform a beacon search, it is well worth the effort. A thorough beacon search will quickly confirm a buried beacon or confirm that no beacons were buried. Hasty team members **must** be experienced in the use of avalanche beacons and should practice continually to refine their beacon skills.

A side-note about avalanche rescue beacons... It is all too easy to forget to turn one's beacon to transmit before entering the field. The Team should check all rescuers entering the field to be sure all beacons are on transmit.

At the accident site beacons should remain on transmit. It is ONLY during the beacon-search phase of the hasty search when rescuers will be asked to temporarily turn all beacons to "receive" or "off." This search phase is usually completed well before most rescuers arrive. After completion of the beacon search all rescuers will be instructed to return to "transmit." This action must be confirmed, typically with a show of hands.) The bottom line is beacons should be kept on transmit unless instructed otherwise.

Scuff search

The scuff search is designed to locate victims or clues. Rescuers should scuff the surface of the debris in an attempt to "turn over" the surface snow. Often, clues

will rest on the surface, but may be lightly covered by subsequent snowfall or debris. The scuff search is not formally organized; it is only a reminder to rescuers to also search with their feet as well as their eyes and ears.

Spot Probing

The next step consists of rescuers spot probing likely burial areas. These include:

- Rocks and trees in the slide path (above **and** below)
- The toe of the slide
- Curves in the debris field
- Benches and other terrain features

Last Seen Area

Unlike search teams, avalanche professionals do not refer to a "Last Seen Point". Rather, avalanche professionals refer to the "Last Seen Area." History has shown the reporting party's memory of the **exact** location of the victim(s) is often sketchy at best. Avalanche victims have been found far to the side and even above the so-called "last seen point." For this reason, the spot referred to by the RP as the last seen point should be considered the center of a "Last Seen Area" and is marked with crossed blue markers (generally crossed blue flags).

If at all possible the Site Leader should bring the RP back to the **exact** area from where he or she witnessed the accident. It is from this perspective that the RP should attempt to identify the last seen area. If the RP witnessed the slide from a chairlift at a ski area, for example, the RP should be brought back to that chairlift, if possible. After all, the accident site will probably look significantly different when viewed from below the site, as opposed to the view from the chairlift. If there were several witnesses to the avalanche, initially it is important to interview each witness separately and ask each witness to establish the last seen spot.

Marking Clues and Avalanche Perimeter

All significant items on an avalanche shall be marked with colored markers/flags:

- The borders of the avalanche shall be marked with the yellow (or yellow and black "checker-board") flags.
- Probed areas shall be marked with red flags.
- Entrance and exit tracks and objects (clothing, equipment, etc.) shall be marked with blue markers.
- The Last Seen Area shall be marked with two blue-colored crossed flags.

- Other colored flags/markers may be used to mark searched areas by other means (e.g., dog alerts, RECCO, beacon, etc.)

Organized Probe Lines

If the subject was not wearing an avalanche rescue transceiver, or not equipped with RECCO reflectors (or some type of electronic device), or if a rescue dog is not available, probing is the only practical method of searching for the buried victim. (Metal detectors typically will not work even for a buried automobile, unless the vehicle is close to the surface. Magnetometers can work for locating ferrous metals that are typically found in vehicles.) Probing requires some practice to maintain proper spacing and to give correct commands.

Before starting to probe the avalanche debris, probers should be briefed about their mission and given probing directions. Also an escape route should be identified and known to all in case they must flee the search area. If probers must evacuate, leave probes in place to mark the search area and so as not to encumber fleeing rescuers.

As opposed to avalanche rescue dogs and beacons, the probe line is an extremely slow process, one that requires large numbers of rescuers. Still, if the hasty search, dogs, or RECCO do not turn up the victims, the probe line is the next step. (Trained dogs can work concurrently with probe lines, and an effective strategy is to have the dog revisit probed areas.) Once the hasty search has established a likely burial area or areas, the Site Leader should proceed with organized probe lines (remember that probe lines should only be considered after the hasty search is of sufficient quality to establish this likely burial area.).

In general, a "coarse" probe should be conducted when searching for all buried victims; however, new research has shown the probability of detection (POD) for the traditional coarse probe (75 x 70 cm or 30 x 28 inches) for an actual body is much lower than originally thought (59% rather than 70%). Thus, the Team has adopted tighter probe spacing than described in the literature
.
The optimal probe method is the 3 holes-per-step (3HPS) method with a grid spacing of 50 x 50 cm (20 x 20 inches). Probes should of the same length and always be inserted vertically. A guidon cord facilitates probe positions and significantly increases the speed of the probe line.

In the **3HPS** method, probers stand arms out, wrist-to-wrist and probe once to the outside of their right foot, once in the center, and once to the outside of their left foot (Figures 11.2 and 11.3). This yields a spacing of 50 cm between probes. On command, rescuers advance 50 cm to the next probe position. The POD for the first pass is 88% compared to the 59% POD for the traditional method.

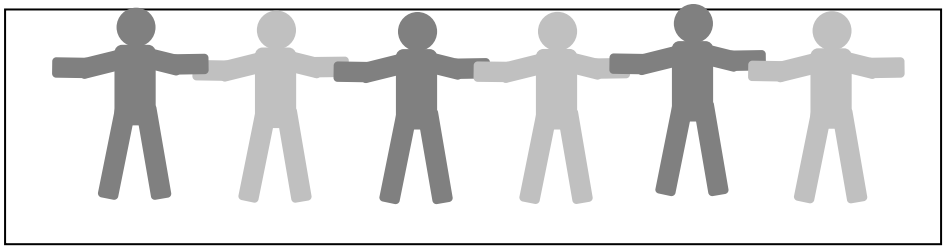


Figure 11.2. Proper spacing of rescuers for 3HPS probe line is arms out, wrist to wrist.

The Team's typical organization for a probe line (or a probe line strike team) consists of 10 rescuers:

- 6 probers including 1 probe line leader
- 2 guidon cord handlers
- 2 shovellers

Probe lines must be well disciplined and properly spaced for probing to be effective. Probing uphill helps sets the proper pace and order. Downhill probing is difficult to control. The boundaries of the probed area should always be marked with red flags, every 10 feet, as the probe line advances.

The probe line does not halt when a strike is made. The prober calls out "strike," leaves his probe in place and calls for another probe. The probe line continues to advance, while a shovel crew standing by digs down to investigate. Generally, two to four shovellers should be assigned to each probe line. They also carry extra probes. If probers become cold, rotating probers into the shovel detail will quickly warm them.

The probe line leader should join the line. Verbal commands to the probe line should be short and easily understood. Typical commands for the 3HPS method might be:

- Probe left
- Probe center
- Probe right
- Step

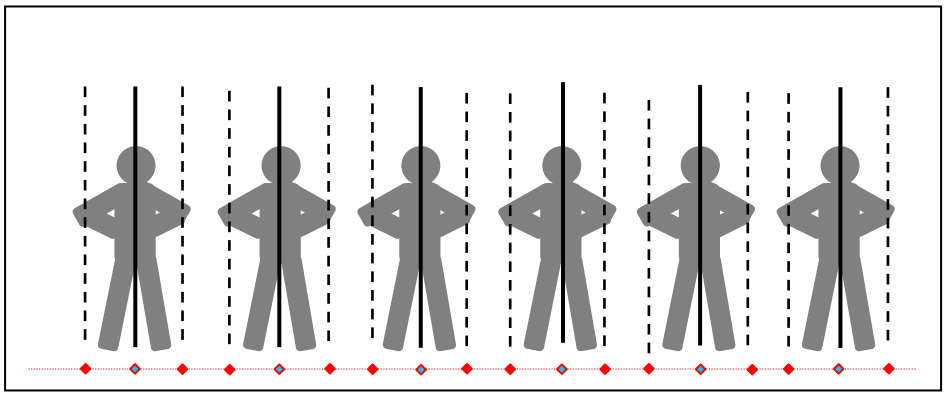


Figure 11.3. 3HPS method aided by a guidon cord. Probers are probing "center" and will then probe at the marker to their "right" and "left."

The leader should set a steady but quick pace that will not exhaust probers. When probers drift too far apart it is important to stop and redress the line. The use of a guidon cord keeps probes properly spaced and will save a significant about of time because the line does not need to be stopped and realigned. Probers should do their best to not contaminate the debris with their spit, food scraps, or urine. Also do not drop or leave behind extra clothes. They could be seen as clues from the buried victim.

The reason the **3HPS** is more efficient than the traditional 1HPS method is because **3HPS** puts more holes into the snow with less walking. It requires less walking-per-unit-area than the traditional 1HPS method. The **3HPS** method also allows fewer probers to probe wider areas. The 3HPS method requires only one-half as many searchers compared to the traditional 1HPS method, and this translates to smaller probe lines that are easier to manage and thus, can search faster.

Intuition says that the shallower the probing depth, the faster the probe line. The victim can, however, be buried at any depth up to the maximum thickness of the debris. In comparison, the little time gained by probing a limited depth is not worth the increased likelihood of missing the buried victim. Therefore, probing depth should be the entire length of the probe pole, except when strong evidence indicates a shallower burial. The strongest evidence is the ground, an ice layer or a creek. Undisturbed snow underneath debris is often difficult to recognize.

Conclusion

The key to avalanche rescue is the quick and well-organized response and determination of the likely burial areas by the Hasty Team at the scene (Figure

11.3). No victim should be penalized for the time lost due to organizational problems. After all, by the time we move on to the slow process of organized probe lines, we stand little chance of finding a survivor.

Additional References

- *Avalanche Rescue Fundamentals* – Bill Hotchkiss, Dale Atkins, Lin Ballard
- *Staying Alive in Avalanche Terrain* – Bruce Tremper
- *The Avalanche Book* – Knox Williams
- *The Snowy Torrents: Avalanche Accidents in the United States1980-1986* – Nick Logan and Dale Atkins
- *The ABC's of Avalanche Safety* – E. LaChapelle
- *Mountain Rescue Techniques* – The Mountaineers, Seattle
- *Medicine for Mountaineers* – The Mountaineers, Seattle
- *Medicine for the Outdoors*: *The Essential Guide to Emergency Medical Procedures and First Aid* – Paul Auerbach
- *The Avalanche Handbook* – Dave McClung and Peter Schaerer
- *Avalanche Rescue*: *Not a Second to Waste* – (video) Colorado Avalanche Information Center and the National Ski Patrol

Avalanche Beacons

General Facts

Avalanche beacons are electromagnetic audio-induction devices that work on the principle of a simple transformer in which a magnetic field is produced by pulsing a current in a coil on a small ferrite rod in the transmitting unit and inducing a signal on the receiving unit. All avalanche beacons since 1996 use the international frequency standard of 457 kHz.

Beacons are not radios so they are not directional. Search strategies are based upon the shape and strength of the magnetic field of the transmitting beacon and the proximity of the receiving beacon. Basically, the closer the receiving beacon to the sending beacon, the stronger the signal, but this is not always true. Beacons are very sensitive to orientation. A maximum signal is received when the receiving unit's antenna is parallel to the magnetic field of the sending unit. When the receiving antenna lies at a right angle to the field, the signal vanishes.

Searching with a beacon consists of four phases.

1. Signal Search — to acquire the signal.
2. Coarse Search — to follow the signal to within about 10 meters away.
3. Fine Search — to accurately locate the spot on the snow surface immediately above the sending beacon.
4. Pinpoint Search — to use a probe pole is used to confirm precisely the burial location and depth.

An avalanche beacon will help you locate another transmitting beacon, NOT necessarily a subject. It is important your beacon is always worn securely on your body. When carrying a beacon, always carry a shovel and probe.

Avalanche beacons do not guarantee you will be found alive. Thus, avalanche beacons are not a license to take risks. Between 2000 and 2009, 44 avalanche subjects with beacons were found alive, however, **68** were found dead!

- ***A proficient group of 4 can locate a beacon in an area of 100 by 100 meters in minutes***
- ***A proficient individual can locate a beacon in an area of 100 by 100 meters in about 10 minutes***

Care of Beacons

- Do not drop **or throw** your beacon (this may damage the antenna, causing false readings)
- Keep the battery terminals clean
- Replace batteries when prompted by the unit's self-test operation. (Batteries in most beacons will operate on transmit for 250-300 hours)
- Every year transceiver should be checked to ensure all features are functioning properly

Practicing

- Practice, practice, practice
- Practice outdoors in realistic conditions
- The team has beacons, attached to 12" x 18" boards that can be used for practice
- Before burying your beacon, place it in a glove and a plastic bag, for protection
- Practice deep burials (1-1.5 meters)
- If you bury the beacon deep, place it in a pack to avoid losing it
- Always check the buried beacon to assure it is transmitting before backfilling the hole

Before Going into the Field...Test all Beacons

Battery Strength:
Upon turning on the Team beacons, the beacon will display the battery strength between 0 and 100 percent. The manufacture, Backcountry Access, recommends that batteries be changed well before they reach 20 percent. Batteries should be replaced to ensure proper and reliable operation.

Receive Mode:
Before going into the field, it is the responsibility of each individual beacon user to ensure their device works appropriately in receive mode.

Transmit Mode:
Before going into the field, it is the responsibility of the Operations Chief and each individual beacon user to ensure beacons work appropriately in transmit mode using one of two methods – beacon "candy cane" or human checker.

Beacon Candy Cane

- At trail head or departure point set candy cane with beacon turned "on" and set to a mid-receive-range setting. (Set the candy cane 20-30 meters beyond the departure point so not to detect waiting rescuers)
- Rescuers then walk past the transmitter one at a time allowing about 10-15 meters spacing
- Rescuers should listen for and hear their received signal

Human Checker

- At trail head or departure point a person will stand with their beacon set to receive
- Rescuers then walk past the checker one at a time allowing about 10-15 meters spacing
- Checker will confirm receiving an individual's signal

General Tips for Beacon in the Field

- Wear the beacon on your body! **DO NOT** put it in your pack or coat
- Keep metal and other electronic devices at least 30 cm (12 inches) away (hardware, knives, radios, cell phones, etc.)
- Quartz watches may give phantom beep when in receive mode - carry beacon in other hand

Rescue Procedures

1. **Formulate a plan of action and safely approach debris**

2. **Go to and mark the Last Seen Area**

3. **Switch all rescuer's beacons to "receive"**

   - If the group is very large and/or the debris field is small, you may only need two or three people to perform the beacon search while others search for clues. Still, all rescuers must put their beacons on "receive" or turn them off, at the discretion of the Site Leader until the beacon search is completed. Keep in mind that some beacons have an auto – revert that will return the beacon back to transmit after a preset-time interval. See beacon manual for more information

4. **Assure that no rescuers have beacons on "transmit"**

    - If so, check any dogs that are with the group! Believe it or not, some dog owners equip their dogs with beacons. (Equipping a dog with an avalanche transceiver is strongly discouraged! The consequences could prove fatal to a buried owner)

5. **If possible, work downhill from the last seen area**

6. **In the case that a complete search of the area turns up no beacon signal**

    - Perform standard non-beacon search

7. **Procedure for one subject found; additional subject(s) still buried**

    - If possible, uncover and turn off subject's beacon. (this will assure that rescuers will not return to this beacon)
    - In the situation of a deep burial one may elect to mark the location and continue the search with hopes of quickly finding another subject who might only be slightly buried

8. **Procedures for after the only (or last) subject is found**

    - Leave subject's beacon on transmit
    - Turn all other subject's beacons back to transmit

9. **Procedures for one subject lost but beacon found unattached to subject (e.g. attached to pack, ripped from subject)**

    - Turn that beacon off and mark the location with a blue flag. Leave in place attached to marker
    - Continue beacon search to be sure no other victims are buried
    - Perform standard non-beacon search

10. **Switch all rescuers beacons to "transmit"**

    - This should be done as soon as the entire area has been cleared of transmitting beacons
    - The Site Leader will check to ensure all rescuers' beacons have been returned to transmit mode. This is normally done by having every

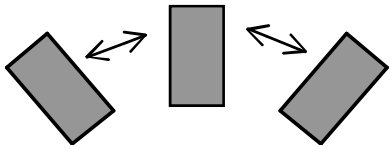
rescuer raise their hand to indicate they are back on transmit. The Site Leader may choose another method as appropriate

Search Procedures

Signal Search – acquiring a signal

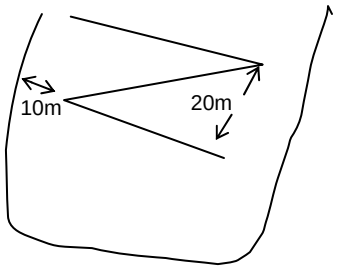
Note: The techniques described below for digital - display beacons work best with the Tracker DTS. The techniques will work with other digital-display units, but the user should consult their model's user's manual.

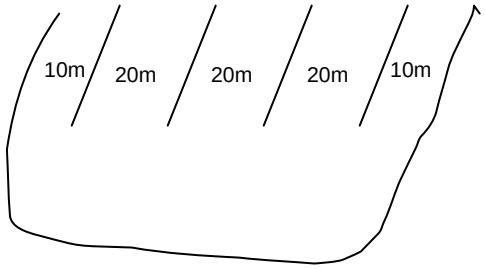
- Get onto the debris safely
- If no Last Seen Area (LSA), search the entire path
- Hold the beacon at belt level and slowly swing it to the right and left



- Maximum of 20 m between searchers and switchbacks

Search Patterns – Solo Searcher Group Search





Coarse Search – getting close

- Keep center direction light blinking and move quickly in that direction
- The distance indicator tells you, in approximate meters, how far you must travel
- Make sure distance is decreasing
- Slow down at 10 meters; at about 3 meters begin the Fine Search

Fine Search – getting real close

- Get beacon close to the snow surface
- Within 3 meters ignore direction lights, use only distance
- If distance suddenly increases or beacon hesitates with no signal (often shown with an "SE" in the distance indicator), continue moving slowly to the second and lowest distance
- Bracket perpendicularly to the sides to see find a possible new minimum distance. DO NOT change the orientation of your beacon
- Begin probing at lowest distance

Pinpoint Search – confirming burial spot and depth

- Probe vertically
- Probe in a spiral manner with each probe hole about 30 cm (12 inches) apart
- When you confirm the victim's location, leave the probe in place

Shoveling

In companion rescue, shoveling consumes the majority of the time during an avalanche rescue. The hardness of the debris depends on many factors, but companion rescuers will typically encounter soft debris, while organized rescuers will encounter more dense snow. Regardless of debris hardness, here are a few general principles that will make shoveling easier and faster.

- Lift snow as little as possible
- Move snow only once
- Keep your back straight
- Create enough space to care for the victim

Organized digging saves time and effort, and rescuers may employ either of two methods. Both methods work well and deciding which method to use is mostly a function of available shovelers.


Strategic Shoveling


V-Shaped Conveyor Belt.

Strategic Shoveling

Developed specifically for companion rescue, this method works very well when few (1–4) shovelers are available.

- Begin shoveling downhill of the probe, about 1.5 times the burial depth
- Dig a waist deep starter hole about one-wingspan wide
- Move into starter hole, dig down and forward toward the probe. (If two shovelers are available, work in tandem, side by side, about one wingspan apart)
- Throw snow to sides
- Additional shovlers can clear snow downhill and work to create a platform where primary shovelers can pile snow
- Use first body part to estimate position of head and chest

V-Shaped Conveyor Belt

This method works especially well in organized rescue when many shovelers are available.

- Begin digging downslope of subject as described above. On flat debris the length of the V will be about twice the burial depth. On a steep slope the length with be about equal to the burial depth
- Arrange shovelers in an inverted V, or a wedge-shaped pattern
- Lead shoveler at apex chops snow into blocks and scoops snow downslope
- Assisting shovelers use paddling-like motions to move snow further downslope, building up a wedge-shaped level platform
- Shovelers rotate clockwise about every 5 minutes
- Use first body part uncovered to estimate location of head and chest

Personal Equipment

All Alpine members accumulate a fairly extensive amount of personal equipment during the time they are active in mountain rescue. This does not mean, however, that a new member has to buy hundreds of dollars of equipment before becoming involved in missions and team activities. Initially, only basic mountaineering equipment, much of which most people already own, is needed. This includes: the ten essentials, good mountain boots, appropriate clothing, and a medium size backpack. This inventory can be expanded as personal funds permit and new skills are mastered.

Whether your pager goes off for a rescue at 02:00 a.m. or in the middle of a busy workday, it is hard to know exactly what to pack. Here is a checklist to help you avoid forgetting something essential. It is not necessarily a complete list; everyone's equipment is very personalized. But, it is a good start for developing your own list. Before you go out and buy a lot of new equipment, talk to other team members and see what works for them. Getting the right equipment takes years. Buy the necessities and things you can use for your own recreation first. Look for sales, choose well and you will have equipment that will be good for years. Also, once you are on the team, there are many manufactures that will offer team members discounted equipment and clothing.

Each piece of equipment should be chosen carefully to suit personal preference and needs. A great deal of valuable information concerning product quality and prices can be gained by talking to other team members, many of whom have had experience with many products. In general, the higher quality (higher priced) equipment is recommended due to the demanding nature of mountain rescue work.

Important Things to Remember:

- Know yourself! Know your personal needs for water, food and staying warm.
- If you do not have the proper equipment to go out, do not put yourself at risk by being unprepared.
- Dry, recheck and repack your equipment and vehicle after each mission. Don't wait until the pager goes off to assemble your equipment.

Below is a list of possible equipment a rescuer should own; again, work on getting basic mountaineering or basic survival gear before the more advanced (and less frequently used) equipment. Please refer to the current Field Procedures for a listing of required personal equipment and clothing.

The Ten Essentials

1. Map & Compass

A simple liquid-filled compass with declination adjustment and sighting device is best. Personal maps can be limited to Clear Creek County 7.5 minute quad maps, and an Arapahoe Forest Service map. The Trails Illustrated Topo Map #104 (Idaho Springs / Georgetown / Loveland Pass) is also highly recommended.

2. Headlamp & Spare Batteries

A headlamp provides hands free operation. Extra batteries and a spare bulb are also necessary (batteries can be either alkaline or Lithium, the bulb should be low wattage for maximum battery life).

3. Emergency Shelter

Bivouac sack, plastic tube tent, tarp, space blanket, or two large trash bags.

4. Appropriate Clothing

Personal clothing should include insulating layers, outerwear, warm hat, gloves, and extra socks. See additional information later in this document.

5. Sun Protection

Sun protection for primarily eyes and skin; Sunglasses or dark goggles and sun block are recommended.

6. Extra Food & Water

Each member should have food and water to last 48 hrs. Plan to have water, not ice in your pack in winter! (a 1-qt., wide-mouthed water bottle is recommended).

7. Waterproof Matches

Waterproof matches are best, but a waterproof container may suffice.

8. Firestarter

A candle, fire starter paste, or "canned heat" will provide a means for getting a fire started when conditions are less than optimal.

9. Pocket Knife

A Leather man or Swiss Army type knife is recommended. No Alpine member should ever have the need for a Bowie-style knife.

10. Personal First-Aid Kit

Recommended contents include: Aspirin or non-Aspirin pain reliever, antacid, Band-Aids, heavy absorbent pad, moleskin, needle, tweezers, razor blade, gauze, triangular bandage, tape, latex gloves, and safety pins.

Appropriate Clothing

Alpine Rescue Team prides itself on being a professional mountain rescue unit. This not only includes being prepared but also looking like a professional. Field active team members are issued a team jacket if available and are expected to look the part of a professional rescuer.

One of the ten essentials listed is appropriate clothing. This includes the clothes you wear into the field and extra clothes. Clothing protects you from wind and rain, insulates you from cold temperatures, shields the hot sun, wicks moisture away from your body, and protects you from minor abrasions and cuts.

Recommended General Clothing

- Quality Boots
- Gaiters
- Quality Socks (like Smart Wool) or liners and insulation layer
- Shorts
- Long Underwear (polypro, capilene)
- Warm Weather Shirt
- Long pants
- Insulation layer (sweater, pile, wool shirt -tops and bottoms)
- Waterproof/windproof layer (pants and parka)
- Hats (wool, rain, sun)
- Balaclava
- Mittens/Gloves / Liners

Layering

A common method used to dress is called layering. This method allows you to adjust very easily to changing weather conditions. Layering is your best defense against heat loss due to convection, conduction, radiation, and evaporation.

Dressing for the mountains is about creating a system. Layering is a way to dress to regulate your body temperature so that you are comfortable standing around mission base for hours or hauling a litter up a steep slope. It takes practice and, most important, each person has his or her own personal temperature comfort range. You must develop your own personal layering system.

Layering techniques may be applied to each part of the body. Layering techniques involve three basic layers of clothes.

1. **The Wicking Layer:** This inner layer acts to wick the moisture away from you to keep you dry. This is the long underwear layer. The weight of underwear may vary dependent on weather conditions and activity.

2. The **Insulation Layer:** This layer is the layer that insulates you from the cold. The number of garments you wear in this layer will vary. Generally, several lightweight insulating layers provide more opportunities for controlling temperature then one heavy one but thickness is what insulates.

3. The **Windproof/Waterproof Layer:** This layer breaks the wind and rain to keep you dry and produce convective and evaporative heat loss. Sometimes this layer over light clothing is sufficient when you are doing strenuous activities, or if the weather is mild.

Used correctly, layering is very effective. For varying weather conditions, the type and number of layers may be adjusted. As an example, for cold temperatures you will need to add more insulation or increase the thickness of the insulation layer. The trick is to vary these layers depending on the temperature and your level of activity. Your goal is to stay slightly cool and dry. Good Luck!

Clothing should be kept as clean and dry as possible. Avoid wet willows and mud bogs even though you are wearing waterproof pants and have freshly sealed boots. Do not allow yourself to get sweaty. Vent, or stop and strip off a layer. Wet clothing decreases insulation value and may increases evaporative cooling.

Clothing, the Name Game

Confused by all the different names for the new materials you find in outdoor gear? These materials can be categorized as waterproof/breathable, or liners.

- **Undergarments:** Coolmax, Thermax, Polypropylene, Capilene
- **Insulated Liners:** There are many synthetic liners. Most of them absorb very little moisture. In many cases less than 1%. Some of the popular names for these materials include; Dryline, Drylite,

Polyester Pile, Prima Loft, Polar Max, Synchilla, Polar plus, Polar Fleece and Polar Max.

- **Liners:** A wide variety of liners has been developed to reduce perspiration build up and radiated body heat.
- **Waterproof Coatings:** Also used in outerwear to make a garment waterproof. These coatings are applied to the material and often need to be re-applied. Examples are K-Kote, Zepel.
- **Waterproof/Breathable:** Used for outerwear to keep you dry, break the wind and allow body moisture to pass outward. Often a lining hung in the garment or attached to the material. Gore-tex, Entrant, Sympatex, Ultrex are just some examples.

The type of material varies by manufacturer. This part of the industry is changing quickly and each season there are new materials on the market.

Old Fabrics That Still Work

- **Wool:** Is a great insulator and has good wicking qualities.
- **Silk:** Has both insulation and wicking qualities.
- **Cotton:** Is not recommended for the field because it holds moisture.

Applying the Layering Technique to each part of the Body

Feet

Two layers of socks are recommended. The first is the wicking layer, the second is the main insulation, and the gap between them decreases the chance of getting a blister. The first layer is a thin sock, usually made of polypropylene or similar wicking material. The second layer is a thick pair of wool, wool blend or neoprene socks. Boots qualify as the third layer. The boots should be of a sturdy ankle-high mountaineering type with single piece split leather uppers. Gaiters are also a part of the third layer. These protect your legs against abrasion, and keep snow and pebbles out of your boots.

Legs & Torso

Again the layering is applied with a wicking layer closest to the skin. Good materials here are silk, polypropylene, capilene or other wicking synthetics. For the insulation layer the most common materials are polar plus, wool, pile, and down. Wool or a synthetic is the best for the summer also because it is the most durable (needed for willow bashing and rock climbing). The shell layer usually is made of a breathable weatherproof material such as Gore-Tex. Full zip pants, both for the insulation and shell layers, are very desirable. Pit zips for your torso insulation and shell layers are very useful for venting. Full front zips are the best for torso layers. Sweaters and anoraks are less desirable as they are less adjustable when conditions change.

Hands

Here the layering system consists of thin glove liners usually made of polypropylene or silk, and polar plus, down, or wool for the insulation layer. The shell layer usually is made of breathable weatherproof material such as Gore-Tex. Both the insulation and shell layers can be found in mitten and glove style.

Head

A thin balaclava is a good wicking layer (fits under the helmet). This layer is usually made of silk or polypropylene. A wool or synthetic material hat that covers the ears work best for an insulation layer. The hood from your shell parka completes this layering system.

Other Basic Equipment

Boots

Foot comfort and durability are of prime concern to the mountain rescuers who spend most of their time in rugged terrain and adverse conditions. Like clothing, boots have gone one step beyond the hob-nailed and kletter shoes of the past. However, rescuers are still looking for boots that protect their feet and provide ankle support. Lightweight boots are great for personal use but not appropriate for rescue type work.

Boots that hold up the best in the rugged terrain that we find ourselves in are of three types: Rough Trail boots, Off Trail boots, and Mountaineering boots.

- **Rough Trail Boots:** These boots are good for rough trails and carrying moderately heavy loads. These boots cover the ankle and are made of split or full leather. Some have a Gore-tex and leather upper. They also have a quarter to half-length shank.
- **Off Trail Boots:** These boots are made for off trail hiking and carrying heavy loads. They have a heavy-duty sole, come ankle high or above and are of full grain leather. They are very abrasion resistant and are easily waterproofed.
- **Mountaineering Boots:** Full shank boots in either plastic or leather. These boots tend to be particularly stiff and heavy. However, some of the newer lightweight plastic boots work well for year round rescue work.

Correct fit is very important in boots. Boots that fit correctly will bring you miles of pleasure. Here are a few tips.

1. Bring the socks you are going to wear to the store.
2. Plan to spend some time shopping for boots. Don't settle for the first pair your size without trying them on. Be patient!
3. Listen to your feet. Buy boots that feel good. Not too tight in the toes and snug in the heels, so they won't slip when traveling up and down hills. If you feel rubbing, pain or hot spots while you're in the store, odds are it won't go away.
4. Check to see what the policy of the store is regarding boots. Many have an unconditional guarantee on fit and will trade them in after as much as a year towards a different pair.
5. You may also want to consider upgraded foot beds, custom foot beds or orthotics.

Packs

Like boots, a good pack is an essential piece of gear for the mountain rescuer. The proper pack for rescue work is between 3000 and 4000 cubic inches. This size will give you enough room to carry your personal gear and some team equipment. It should be of rugged material, such as pack cloth or cordura. Some type of frame is recommended because of the weight you will have to carry. When fitting a pack, even with a day-to-day and half size pack, it is advisable to put weight in it. For testing, your personal gear will weigh from 15 to 30 pounds and a team rope will add another 20 plus pounds. Wearing your pack with the added weight will help you determine the fit and determine whether it will carry what you need it to carry. A detachable/expandable hood/pocket will allow you to increase the packs volume. Internal frame packs give you more ease of movement in rugged terrain. A larger pack often carries better than a smaller pack and gives you extra room to carry team gear.

For your first pack, it is better to buy a larger one (perhaps with compression straps) that you could use both in the summer and the winter (winter usually requires more equipment). Later, you can buy another smaller pack for summer. When buying your smaller pack, beware of those without some sort of internal frame. Without an internal frame, 20 - 40 plus pounds will end up on your shoulders, and that gets tiring after a couple hours.

Winter Travel Gear

No member is required to own winter travel gear such as snowshoes, skis, crampons, or ice axes. However, in order to be qualified to go into the field in winter conditions, each member must show his/her capability with at least some

of this equipment. Additionally, no team member is allowed in the field during winter operations without the following equipment.

- Shovel
- Probe Pole
- Avalanche Beacon

This equipment is available through the team, although you may want to eventually purchase your own. The team has a limited supply of snowshoes and ice axes, however new members should not count on using this equipment as more experienced members will likely be given priority usage of this gear. Since proficiency comes with usage, all members are encouraged to purchase and practice with their own equipment. New members are advised to first equip themselves for spring, summer, and fall missions. Later, as personal finances permit, and as advice from experienced members is obtained, the new member should obtain equipment for safe winter travel.

Team Uniform

(Optional) If available a team jacket will be issued to field active members. Members are also encouraged to often wear a bright, orange shirt with the team member name and team patches. These shirts distinguish us from "civilians" in the mission area and indicate a level of professionalism. Team members can also purchase team hats and shirts from the team store and patches to apply to regularly worn clothing. The team also has several logos available for embroidering on clothing.

Other Equipment

Following is a partial list of other equipment that you may want to have. These items are not always carried on missions. (Although some of these items are small and light enough that you may choose to keep them in your pack at all times.) However, they are useful to carry in your response vehicle for special conditions/missions and for out-of-county missions.

- Whistle - Plastic to attract attention from a lost subject or other field teams.
- Paper and Pencil - These are very useful for recording information about your subject and to make notes during a mission.
- Toilet paper (often known as the eleventh essential)
- Insect repellent
- Parachute cord

- Flagging tape
- Camera and film
- Handkerchief/Bandana
- Binoculars
- Water purification chemicals
- Down Jacket
- Extra socks
- Waterproof clothing (outerwear)
- Advanced First Aid Kit, including moleskin or second skin
- Snow Travel Equipment (skis and/or snowshoes);
- Avalanche Beacon
- Bivy Sack
- Plastic Mountaineering Boots
- Probe Ski Pole
- Probe Poles
- Stove and Fuel
- Candle lantern
- Ice Saw
- Down Booties
- Lip balm
- Extra prescription glasses
- Signaling mirror
- Sleeping Bag
- Tent
- Cooking Gear
- 70' – 100' of 8mm rope

Care, Transportation, and Organization of Gear

Your gear must be kept in a ready state, preferably in your car. Don't wait for the pager to go off to organize your gear. There are many ways which team members organize their gear in their cars from just throwing it into one big pile to have all of the equipment in color coded stuff sacks. Some members only have the basic gear in their packs, then once they find out their assignment they finish packing the addition gear required. It is a good idea to have all your gear organized in the car, packed in a couple of large duffel type bags so you can quickly change cars and ride with someone else.

When you are called out of county on a mission, a sleeping bag and pad should be taken along. When you fly out of county, a maximum of two bags is prudent. One of these bags is your standard pack. The other, a duffel-type bag, with extra clothes, food, sleeping bag, tent, stove and other equipment you feel necessary for the particular mission. Team members should try to minimize gear taken out of county. A tent and a stove are not needed for each member and can be shared. Bear in mind when taking this extra gear that a helicopter might take you in and not bring you out. You might have to carry this extra gear out. Usually a helicopter ride takes you to a "mission base area" where you may leave your extra gear. Your extra gear bag should be waterproof or wrapped in trash bags (the gear may end up outside in a big pile).

Recreating with your gear is very important. Just because you own it does not mean you know how to use it. When you do play with your gear, clean, repair and reorganize it as soon as you are done to be mission ready again.

Personal Equipment

Required Personal Clothing And Equipment

THE 10 ESSENTIALS

- Map and Compass
- Headlamp & Spare Batteries
- Emergency Shelter
- Appropriate Clothing
- Sun Protection
- Extra Food and Water
- Waterproof Matches
- Fire starter
- Pocket Knife
- Personal First aid Kit

ADDITIONAL CLOTHING & EQUIPMENT

- Adequate Hiking Boots
- Adequate Backpack
- Weatherproof Parka and Pants
- Insulating Layer
- Gloves or mittens for cold protection
- Insulated Head and Ear protection
- Long Underwear

TECHNICAL EQUIPMENT

- Team Approved Helmet (UIAA or other appropriate)
- Team Approved Harness (UIAA or other appropriate)
- Leather or approved synthetic gloves (used only with Alpine)
- Rescue Eight w/ Ears
- (2) Large Locking "D" Caribiners
- (4) Regular Locking Caribiners

PRUSIKS

Lengths may vary due to your height

#	Diameter	Size of loop	Running Length
1	6mm or 7mm	16 in	48 in
2	6mm or 7mm	20 in	53 in
1	6mm or 7mm	41 in	96 in

OTHER RECOMMENDED TECHNICAL EQUIPMENT – NOT REQUIRED

- (2) Personal Pulley's
- 5/8" Personal Anchor System (PAS)
- Belaying Device (ATC, Tube, Etc.)
- (2) Additional Large Locking "D" Caribiners
- (2) Additional Regular Locking Carabiners
- Runners (used for diaper slings, chest harness, etc.)
  These can either be 1 in tubular webbing or 5/8"Sewn Spectra Runners
  Factory runners are normally 24"or 48"

	Size of loop	Total Length
(2) 1" tubular webbing slings	58in	122in
(2) Factory sewn spectra runners'	48in	

Additional Prusik Loops - different color than above Prusiks – Based on your height, prusiks loops used for litter tie-ins may be longer or shorter than those listed below

#	Diameter	Size of loop	Total Length	Use
1	8-mm	41in	96 in	Litter tie-in
1	7-mm	13in	42 in	Adj. Prusik on tie-in

Team Equipment - Overview

Team equipment refers to those items most basic to the performance of field training's and missions, with the emphasis on the technical. Items not included would be those covered under another category, such as communications or medical.

The team equipment is only used for search and rescue operations and for scheduled trainings. Exceptions to this may be granted by the on-call Mission Leader. This includes other activities that may remove significant items from service or delay their availability for a mission. Any equipment to be checked out must first be cleared through the on-call Mission Leader. The on-call Mission Leader must also be notified when the equipment is returned and mission ready. Any equipment that is damaged or needs repairs should immediately be brought to the attention of the Mission Leader and the Equipment Director.

Each team member should know the operation, uses, weaknesses and limitations of all equipment which might be used in the course of a mission or training. The proper use of all team equipment will be taught during trainings.

Additional mission ready equipment is stored on the walls in the vehicle bays. Equipment in the equipment room is not considered mission ready.

There are specific locations within the individual vehicles for the various pieces of equipment, and sometimes, even within an individual compartment or pack. Every team member should be familiar with all the team equipment and where it is located.

Alpine also has a litter, sleeping bag, litter wheel, radio and helmet cached at the Mt. Evans Ranch in the event an evacuation is necessary from that location.

Team Vehicles

Team vehicles are to be driven only by members who have completed specific training requirements and are approved by the Vehicle Director. Each truck has a mobile radio and cellular telephone.

Rescue 1

Rescue 1 is the primary response vehicle containing the greatest variety of equipment. It is equipped with 4-wheel drive, a front mounted winch, and customized compartments for all of Alpine's rescue gear. This vehicle was custom-built for the team in 1998. This vehicle is not designed for off road use.

Rescue 2

Rescue 2 is the secondary response vehicle and is commonly used as our "out of county" vehicle. This vehicle was custom built for the team in 2002 and contains approximately 50% of the equipment as Rescue 1. It is also equipped with 4-wheel drive and a front mounted winch. This vehicle is appropriate for off road use.

Comm 4

Comm 4 is the command and communications vehicle. This vehicle was custom built for the team in 2002 and contains a computer networking system along with radio and phone systems used in the course of running a mission. This vehicle is usually called into service during a search after a primary vehicle has already been dispatched. Comm 4 is primarily used as the team's Command Post from which the mission leader can run a mission. It is also equipped with 4-wheel drive and a front mounted winch. This vehicle is not designed for off road use.

Snowmobiles and Trailers

The snowmobile trailers contain the team's snowmobiles, a rescue sled and other related winter gear. Only trained, designated drivers are permitted to operate the snowmobiles. Each of Alpine's snow machines has their own unique capabilities. Some are fast, powerful machines typically used to rapidly insert gear and personnel into the field. Others are used for hauling heavy loads. It is the responsibility of each driver to know the proper use of each machine. The use of personal protective equipment (Helmet, Gloves, Eye protection, etc.) is required.

ATV's and Trailer

ATV's are used in a manner similar to that of the snowmobiles, but usually during the summer season. Drivers of the ATV's must be properly trained. The use of personal protective equipment (Helmet, Gloves, Eye protection, etc.) is required.

Technical Equipment

Rope

Rope is Alpine's primary tool for technical rescues. Our team members and subjects lives depend on its proper care and use.

On both Rescue 1 and Rescue 2 there are 200' and 300' static ropes. Rescue 1 should carry nine 200' ropes, three of each color as well as two 300' ropes. Rescue 2 should carry six 200' ropes, two of each color as well as two 300' ropes. Rescue 1 has an additional 600' spool of static rope. Each vehicle also has a Third Man Pack that has a dynamic lead climbing rope.

Service-life of ropes is monitored closely. The date that a rope is placed into service is noted on a shrink-wrapped tag at the end of the rope. **Any rope older than five (5) years is to be retired, regardless of condition.** Each time a member of Alpine bags a rope; it should be inspected physically and visually for damage or excessive wear.

**If a rope is taken out of service for any reason, it must be replaced on the truck immediately and notification should be made to the Mission Leader and Equipment Director.*

Bash Pack

Each bash pack contains prepackaged technical rescue equipment used to rig our basic technical rope systems. The equipment in each bash kit is stored in properly marked red rope bags. Standard equipment in each kit will include; an anchor rope, webbing slings, carabiners, pulleys, prusik loops, brake tube, rigging plate and edge protection. Rescue 1 and Rescue 2 have two bash packs each, and two additional bash packs are hanging on the wall in the first bay. It is only to be used as a temporary replacement in the event a bash pack needs to be taken out of service.

Each bash pack contains a card in a side pouch that lists the contents and explains the proper order in which the equipment should be stored.

**Each bash pack should be visually and physically inspected each time it is used, and the Mission Leader and the Equipment Director should be notified if any piece of gear is found to be missing, damaged or unsafe. When a member repackages the Bash Pack, a J-Tag should be signed and attached to the pack by that member prior to placing the Bash Pack in service.*

Litter Wheel

The litter wheel is a large single wheel on an aluminum frame that mounts under the litter. The wheel takes the bulk of the weight of the litter and patient during a trail evacuation. Rescue 1 has a litter wheel on board and there are two spare litter wheels on the Comm 4 bay wall.

Litters

1. Titanium Litter – Alpine's litter of choice for vertical evacuations or long carry outs. These lightweight litters come in two sections and can be mounted to the litter wheel for easier and faster trail evacuations. There is one of these Titanium litters in each rescue vehicle. There are two spare Titanium litters stored on the wall at the shack.
2. TitaniuMAX Composite Shell Litter – Manufactured by Cascade Toboggan, this is primarily a winter evacuation litter. These lightweight litters come in two sections. There is one of these TitaniuMAX litters in each rescue vehicle.
3. SKED Litter- An orange plastic litter rolled up and stored in an orange bag. When the sides, head and foot flaps are folded around a patient, the plastic becomes semi-rigid. The SKED, by itself, does not provide adequate C-spine stability. Its primary advantages are its lightweight and small size. It is typically used in our high altitude missions prior to getting one of the other litters into the field. It will slide over snow, and can be X-rayed through, but tends to pinch the shoulders and can be uncomfortable if the patient is in it for long periods of time.

Winter Equipment

Snowshoes, Avalanche Beacons, Avalungs, Recco Avalanche Rescue System, Collapsible Probe Poles, 10' Probe Poles, Shovels, Flags, Ice Axes, Ice Screws, Avalanche Guide-on Cords, Wands, Snow Flukes, Pickets.

Water Rescue Equipment

Life Jackets, Throw Ropes, River Probe Poles

Equipment Readiness Program (J-Tags)

In order to insure the readiness of the team's equipment and vehicles, in 2006 the team instituted the "Equipment Readiness Program". Each time a vehicle or any equipment is used for a training or mission, they are inspected prior to being placed back in service.

For each vehicle there is a long form and a short form. A sample of the long form is located in the appendix section of the Blue Book.

The short form is too be filled out by the driver immediately after any vehicle returns from a mission or training. The short form will allow the driver to note any vehicle maintenance issues as well as damaged or missing equipment.

The long form for each vehicle is too be filled out during the bi-monthly inspection. Members are assigned to small groups that are responsible for the complete inspection of each vehicle and all the equipment located on it.

A J-tag is placed on specific equipment packs to confirm that the contents have been inspected and the pack is mission ready. A J-Tag is a piece of flagging that has the name of the pack, the date inspected and the initials of the inspecting member. Each time the pack is used, the current J-tag is removed to signify that the pack now needs to be inspected prior to being placed back in service. The long form for each vehicle lists the packs that require J-Tags.

Team Equipment

Definitions / Conversion Table

The equipment listed in Section 15 is what the team currently uses as of 01/01/07.

Every attempt was made to give accurate information about each piece of equipment. Specifications for each piece of equipment were found either through the manufacturer directly, retailer catalogs or websites.

In describing breaking strength you will see the letters LBF.

- LBF = Pounds Force

Equipment breaking strengths are rated in either Pounds Force (LBF) or KiloNewton's (kN)

- 1 kN = 225 LBF

1 Meter (m) = 3.28 Feet (ft)

- 50 m Rope = 164 ft
- 60 m Rope = 197 ft

1Kilogram (kg) = 2.2 Pounds (Lbs)

- 100 kg = 220 Lbs

Team Equipment - Ropes

Classic EZ Bend - 2011

- Manufacturer – PMI
- Use – Anchor Rope
- Breaking Strength – 9400 lbf
- Weight – 3.4 lbs/50 ft
- Diameter – ½”
- Length – 50 ft

Classic EZ Bend

- Manufacturer – PMI
- Use – All Technical Systems
- Breaking Strength – 6,050 lbf
- Weight -5.5 lbs/100 ft
- Diameter – 7/16”
- Lengths - 200, 300 and 600 ft
- Colors – Blue/Red/Yellow/ Orange

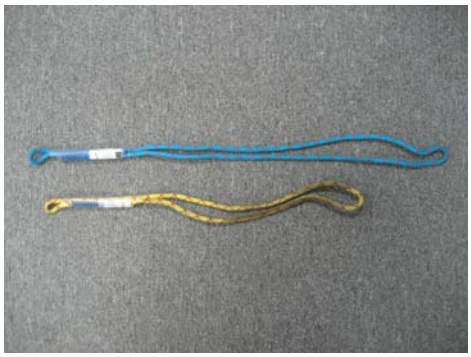
Dynamic Climbing Rope

- Brand - Beal
- Impact force – 7.4kN
- Fall Rating – 11 Falls
- Diameter – 10.5 mm
- Length – 60 m
- Stored in BD Slacker Rope bags

Team Equipment – Webbing and Cordage

1” Tubular Nylon Webbing

- Manufacturer - PMI
- Breaking Strength - 4000 lbf
- Weight – 1oz/3 ft
- Running Length
- Blue – 258 in
- Yellow – 140 in



7mm Accessory Cord Prusik Loop

- Manufacturer - PMI
- Use – Prusik Loops
- Breaking Strength - 3150 lbf
- Diameter – 7 mm
- Running Length
- Blue – 70 in
- Yellow – 60 in

8 mm Accessory Cord Adjustable Tie-Ins

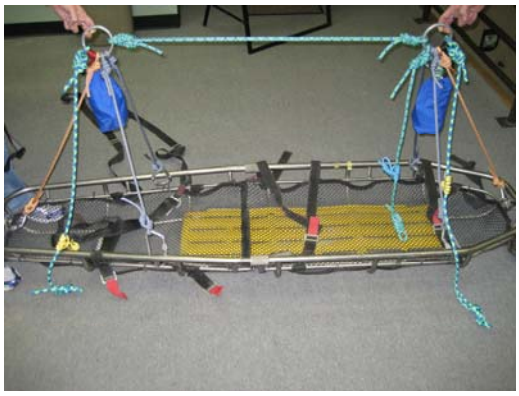
- Manufacturer – PMI
- Use – Adjustable Litter Tie-In for Scree evacuations
- Breaking Strength - 3150 lbf
- Long Tie-Ins
  - Black 8mm 168in
  - Blue 7mm 42 in
- Short Tie-Ins
  - Black 8mm 96in
  - Yellow 7mm 42in

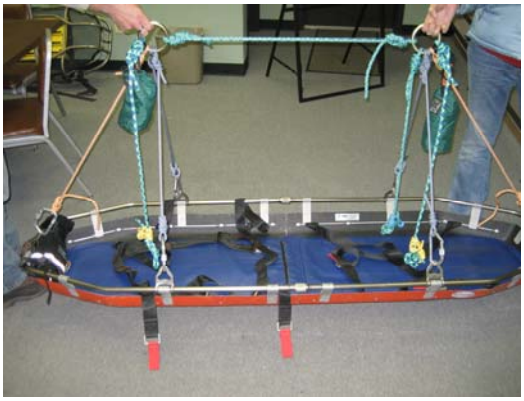
Litter Spider for Titanium Litter.

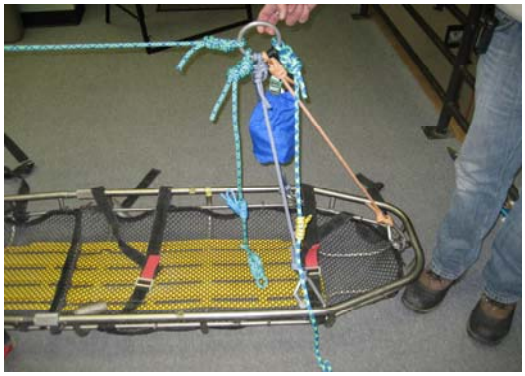
- Manufacturer – Alpine Rescue Team
- Horizontal webbing 90in
  9 mm dynamic rope
- Side rail spider legs 68in
  8 mm dynamic rope
- End rail (head)spider leg 68in
  8 mm dynamic rope
- End rail (foot)spider leg 74in
  8 mm dynamic rope
- Litter attendant -Main 93in
  9 mm dynamic rope
- Litter attendant - Adj 42in
  7 mm static cord
- Subject Tie-in – Main 86in
  9 mm dynamic rope
- Subject Tie-in – Adj 42in
  7 mm static cord

Litter Spider for Cascade Litter.

- Manufacturer – Alpine Rescue Team
- Horizontal webbing 86in
  9 mm dynamic rope
- Side rail spider legs 68in
  8 mm dynamic rope
- End rail spider legs 70in
  8 mm dynamic rope
- Litter attendant -Main 93in
  9 mm dynamic rope
- Litter attendant - Adj 42in
  7 mm static cord
- Subject Tie-in – Main 93in
  9 mm dynamic rope
- Subject Tie-in – Adj 42in
  7 mm static cord







Team Equipment – Carabiners / Other Hardware

Aluminum Large Locking D

- Manufacturer – SMC
- Breaking Strength – 8036 lbf
- Weight – 3.8 oz

NFPA Rigging Plate

- Manufacturer – SMC
- Breaking Strength – 12,000 lbf
- Weight – 11.4 oz
- Color – Red Anodized
- # of Holes -5 sm (each hole has a 2 carabiner capacity)

Steel O'Rings (Used on the Spiders)

- Manufacturer – PMI
- Breaking Strength – 10,000 lbf
- Weight – 9 oz

Team Equipment – Pulley's

Prusik Minding Pulley

- Manufacturer – SMC
- Breaking Strength – 8500 lbf
- Weight – 12.8 oz
- Bearing Type – Ball Bearing
- Color – Blue Anodized

Knot Passing (Kootenay)

- Manufacturer – Petzl
- Breaking Strength – 9000 lbf
- Weight – 3.5 oz
- Bearing Type – Oilite Bronze Bushing
- Color – Blue Anodized

Team Equipment – Brake Devices / Descenders

Alpine Brake Tube

- Manufacturer – Phil Luethy
- Breaking Strength – 10,000+ lbf
- # of Wraps – 2-4 (based on the load)

Rescue Eight w/ Ears

- Manufacturer – Various
- Breaking Strength – 5000+lbf
- Weight – 7 oz

Petzl "Rig" Descender

- Manufacturer – Petzl
- Compact self-braking descender
- Maximum Load – 200kg
- Weight – 380g
- Certification – NFPA1983

Team Equipment – Litters

Titan Ti Split-apart Titanium Litter

- Manufacturer – Traverse
- Breaking Strength – 2500 lbf
- Weight – 17 lbs.
- Length – 83 in

Split-apart 200 TitaniuMAX Cascade Litter

- Manufacturer – Cascade
- Breaking Strength – 2500 lbf
- Weight – 19.5 lbs.
- Length – 83 in
-

Sked Stretcher (SK 200)

- Manufacturer – Skedco
- Weight – 18 lbs.
- Length – 96 in
- Color - Orange

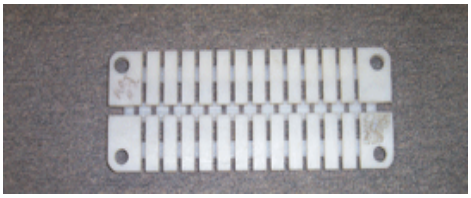
Litter Wheel

- Manufacturer – CMC Russ Anderson
- Weight – 30 lbs
- Width – 11 in
- Diameter – 21 in

Team Equipment – Edge Protection

Edge Rollers

- Manufacturer – SMC
- Weight – 3 lbs 3 oz
- Color – Red Anodized



Edge Protection

- Manufacturer – Phil Luethy
- Weight – 12 oz
- Material – UHMW Plastic
- Length – 18 in

Spiroll Rope Protector

- Material - Polyurethane
- Weight – 2.2 oz
- Length – 23.5 in

PMI Supermantle

- Material – Nylon/Canvas
- Length – 24 in

PMI Rope Pad

- Material - Canvas
- Size – 30 in x 34 in

Team Equipment – Climbing Gear

Team Climbing Rack

- Manufacturer – Various
- Camming Devices
- Hexes
- Wired Stoppers
- Runners
- Located in third man packs

Pick-off seat

- Manufacturer – PMI
- Located in third man packs

Chest Harness

- Manufacturer – Petzl
- Located in third man packs

Rock Bolt Kit / Drill

- Hilti Drill TE 2-A
- Spare Battery
- 9/16 Wrench
- Blow Tube
- 3/8 in. Bolts
- Nuts / Washers
- Hangers

Team Equipment – Avalanche Gear

Tracker 2 Avalanche Transceiver - 2011

- Manufacturer – BCA
- Located in both Rescue 1, Rescue 2, Snowmobiles, Avi Bash Packs
- "Search Strip Width" = 40m (Twice the radius of the effective range)

Avalung II

- Manufacturer – Black Diamond
- Issued to Individual members

Collapsible Probe Pole - 2012

- Manufacturer – BCA
- Model – SR 83
- Weight – 11oz
- Length – 3 Meters

Aluminum Shovel - 2012

- Manufacturer – BCA
- Model – B2 EXT
- Weight – 25.5oz
- Length (Extended) – 31 in

Beacon Pole

- Manufacturer – Alpine
- F-1 Beacon
- Located in rear of Rescue 1

Recco R9, V3 Detector - 2011

- Manufacturer – Recco
- Weight – 2 Lbs
- Located in the upper shelf compartment of the Command Center of Rescue 1
- The Recco must be plugged into the charging unit on Rescue 1
- Operating time – 2 Hrs
- Charging time – 2 Hrs
  (Red Light – charging)
  (Green Light – fully charged)
- Low battery alert – Pulsing Alarm
- Max power – Steady Blue LED
- Reduced power – Flashing Blue LED
- "Search Strip Width" = 20m
  (On foot – dry snow)
- "Search Strip Width" = 10m
  (On foot – wet snow)
- "Search Strip Width" = 40m
  (Helicopter – dry snow)

Rigid 12' Avalanche Probe Poles - 2011

- Manufacturer – Alpine
- Material – 6061-T6 aluminum
- Diameter – ½"
- Located in both covered trailers

Team Equipment – Snow/Ice Anchors

Pickets

- Manufacturer – SMC
- Weight – 13 oz – 21 0z
- Length – 24 in – 36 in

Snow Flukes

- Manufacturer – SMC
- Weight – 7.2 oz – 10.1 oz

Ice Screws

- Manufacturer – Black Diamond / Omega
- Breaking Strength – 2200 lbf – 2300 lbf
- Length – 13cm / 17cm / 22cm

Alpamayo Ice Axe

- Manufacturer – Black Diamond
- Length – 70cm

Team Equipment – Swift Water

Class V Personal Flotation Devices (PFD)

- Manufacturer – Sterns
- Sizes – Sm-Med / Med-Lg

Throw Ropes

- Manufacturer – Northwest River Supplies

Material - Polypropylene

- Breaking Strength – 3400 lbf
- Length – 75 ft
- Diameter – 3/8 in

Material - Spectra

- Braking Strength – 5000 lbf
- Length – 60 ft
- Diameter – 3/8 in

River Probe Poles

- Manufacturer – Alpine Rescue Team
- Length – 12 ft
- River Probes are not stored in the vehicles
- Probes are located downstairs on the west wall by Rescue 1

Team Equipment – Packs

Technical Bash Pack – The equipment is attached to each other in the following order. Two Bash Packs are located in both Rescue 1 and Rescue 2

(1) Anchor Rope *(Top)*
(1) Brake Tube & Carabiner
(4) Blue Webbing & Carabiner
(4) Yellow Webbing & Carabiner
(6) Blue Prusiks & Carabiner
(6) Yellow Prusiks & Carabiner
(4) Pulleys & (4) Carabiners
(1) Bear Paw & Carabiner
(2) Carabiners (*Spare*s)
(3) Edge Pro (*Bottom)*
(1) Edge Pro & Carabiner (*Outside*)
Total Carabiners: 13

Edge Protection

Brake Tube Pack

Located in Rescue 1 only
(2) Brake Tubes
(2) Aluminum Carabiners

Avi Bash Pack

Located in Rescue 1 and Rescue 2
(2) Tracker 2 Avalanche Beacons
(2) Collapsible Probe Poles
(25) Blue Flags - numbered
(25) Red Flags
(10) Checkered Flags
(1) Orange Flag Bag
(1) Yellow Notebook / Pen
(1) Roll Orange Flagging
(1) Disposable Camera

Avi Support Pack

Located in Rescue 1 and Rescue 2
(15) Checkered Flags
(10) Red Flags
(1) Orange Flag Bag
(4) Guide-on Cords

Highline / Technical Pack

Located in Rescue 1 only
(4) Blue Webbing
(4) Yellow Webbing
(6) Blue Prusiks
(6) Yellow Prusiks
(3) Pulleys
(10) Carabiners
(1) Bear Paw
(1) Anchor Rope

Vehicle Anchor Pack

Located in Rescue 1 only
(4) CMC Blue Anchor Straps
(4) Steel Carabiners
(4) Fire Hose Sections
(4) Adjustable Yellow Straps
(1) Bear Paw

Third Man Pack

Located in Rescue 1 and Rescue 2

(1) Brake Tube
(2) Webbing – 1 Blue, 1 Yellow
(2) Prusik – 1 Blue, 1 Yellow
(6) Lg. Locking Carabiners
(4) Extra 24" spectra runners
(1) Cordelette
(1) Bear Paw
(1) Pulley
(1) C-Collar
(1)Patient Helmet

(1) 50m Dynamic Climbing Rope – This rope is stored separately from the Third Man Pack in a BD Slacker Rope Bag

Climbing Rack

(7) Camalot's – various sizes
(5) Wired Hexes – various sizes
(5) Stoppers – various sizes
(6) 24" spectra runners w/ 12 non-locking carabiners
(4) Extra 24" spectra runners
(1) Nut Tool
(1) Gear Sling

(1) Chest Harness

(1) Pick-off Seat

(1) Petzl RIG

Team Equipment – Medical

Small Med Packs

Located in Rescue 1 and Rescue 2

Outside Compartment

- (1) Pocket Mask
- (3 pr) Latex Gloves
- (1 set) Oral Airways
- (1) Biohazard Bag

Main Compartment

- (1) 2" Tape Roll
- (1) 3" Tape Roll
- (5) 4x4 Gauze
- (2) 8x10 Dressing
- (2) Kerlix Rolls
- (1) B.P. Cuff
- (1) Stethoscope
- (1) SAM Splint
- (1) Trauma Shears
- (1) Triangular Bandage
- (1) Ace Bandage

Small Zip Compartment

- (1) O_2 Wrench
- (1) Pen
- (1) Pencil
- (1) Patient Recond Pad

Large Med Pack

Located in Rescue1 only

Main Compartment

- (1) KTD
- (1) Adult C-Collar
- (1) Ped C-Collar
- (6) Hot Packs

Side A

- (1) 2" Tape Roll
- (1) 3" Tape Roll
- (4) 4x4 Gauze
- (4) ABDs
- (4) Kerlix Rolls
- (1) Triangular Bandage
- (2) SAM Splints
- (2) Ace Bandages

Top Flap

- (1) Trauma Shears
- (6 pr) Gloves
- (1) Pocket Mask
- (1) Biohazard Bag
- (1) Facemask

Side B

- (1) Stethoscope
- (1) Adult B.P. Cuff
- (1) Ped B.P. Cuff
- (1 bottle) Baby Aspirin
- (1) Ring Cutter
- (1 Set) Patient Records
- (1 Set) Triage Tags

Airway Packs

Located in Rescue 1 and Rescue 2

Main Compartment

- (1) O_2 Tank
- (1) Suction Unit
- (1) Pocket Mask
- (1) Pulse Oximeter
- (1) Adult BVM
- (1) Ped BVM

Inside Flap

- (2) O_2 Non-rebreather
- (1) O_2 Regulator
- (1) O_2 Wrench
- (5) Oral Airways
- (4) Nasal Airways
- (2) Nasal Canulas

IV Warmer

Located in Rescue 1 and Rescue 2

Manufacture – Hot Sack

AED

Located in Rescue 1 only

Manufacture – Medtronic

Team Equipment – Navigation and Tracking

GPS Units - 2011

- Garmin Etrex Legend HCX
- Located in Rescue 1 & Rescue 2

APRS

- Automatic Position Reporting System
- Manufacture – Team Member - Bob Wagner
- 3 Units Located in Comm 4
- 2 Units located in Rescue 1
- 2 Units located in rescue2

Lap Top Computer

- Inspiron 9300
- Manufacture – Dell
- Located in Rescue 1
- Mapping Software
  - Topo
  - Ozi Explorer
  - Maptech Train Navigator

Team Equipment – Handheld Radios

- Kenwood TK – 290 (2009)
- VHF – Team Radios
- Located in Rescue 1, Rescue 2 and Comm 4. Also issued to individual Team Members

- Motorola MT 1000 (2006)
- UHF – Used to communicate with Evergreen Fire
- Located at Team Headquarters, Rescue 1 and Comm4

Motorola XTS 2500 (2010)

- 800 MHz handheld radios
- Used to communicate with Jefferson, Gilpin, Clear Creek County and Statewide.
- Handheld 800 MHz radio located at Team Headquarters and in Comm 4.
- All Mission Leaders issued an 800 MHz handheld radio.

Motorola XTS 3000 (2007/2008)

- 800 MHz mobile radios located in Rescue 1, Rescue 2 and Comm 4

Team Equipment – Helmets

Patient Helmet w/ Visor

- Manufacturer – Petzl
- Located with litters on Rescue 1 and Rescue 2

Snowmobile Helmets

- Manufacturer – BRP
- Model – Modular 2
- Stored in both Rescue 1 and Rescue 2 and/or in trailers with snow machines

ATV Helmets

- Manufacturer – Bieffe
- Summer Location – Stored in Rescue 1 and Rescue 2
- Winter Location – Stored in storage trailer with ATV's

Team Equipment – Testing - Safety

Dynamometer w/ Remote

- Manufacturer – Dillon
- Located in two different cases on Rescue 1

Portable Lightning Detector – SkyScan P5

- Manufacturer – SkyScan
- Units located in Rescue 1 and Rescue 2
- Batteries – (2) 9-volt
- Battery Life – 50 hours

Technical Systems

The following illustrations in Section 16 and 17 are for conceptual purposes only.

Because of limitations inherent to the software being used to create the illustrations, the following critical components of certain technical systems may not be shown.

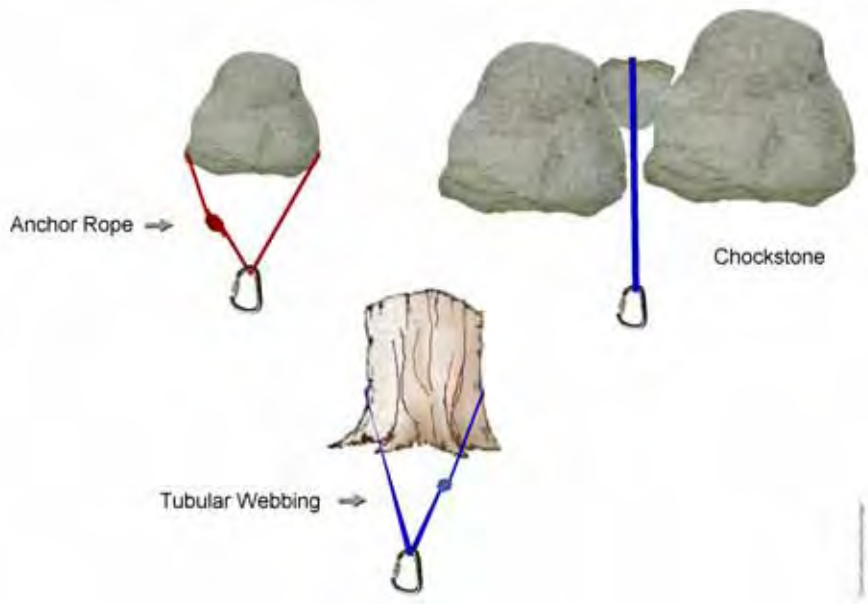
- Safety knots.
- The specific knots that Alpine uses.
- Rescuer personal safety gear – ie., helmets, packs and gloves.

The following issues shall also be noted regarding the illustrations within Section 16 and 17.

- Specific images within the illustrations may not be properly proportionate to each other.
- Team equipment specific to Alpine may not be available in the software. Every attempt was made to use graphic images of the equipment that best represents what Alpine currently uses.
- The specific colors that Alpine uses for equipment, rope, etc., may not be available in the software

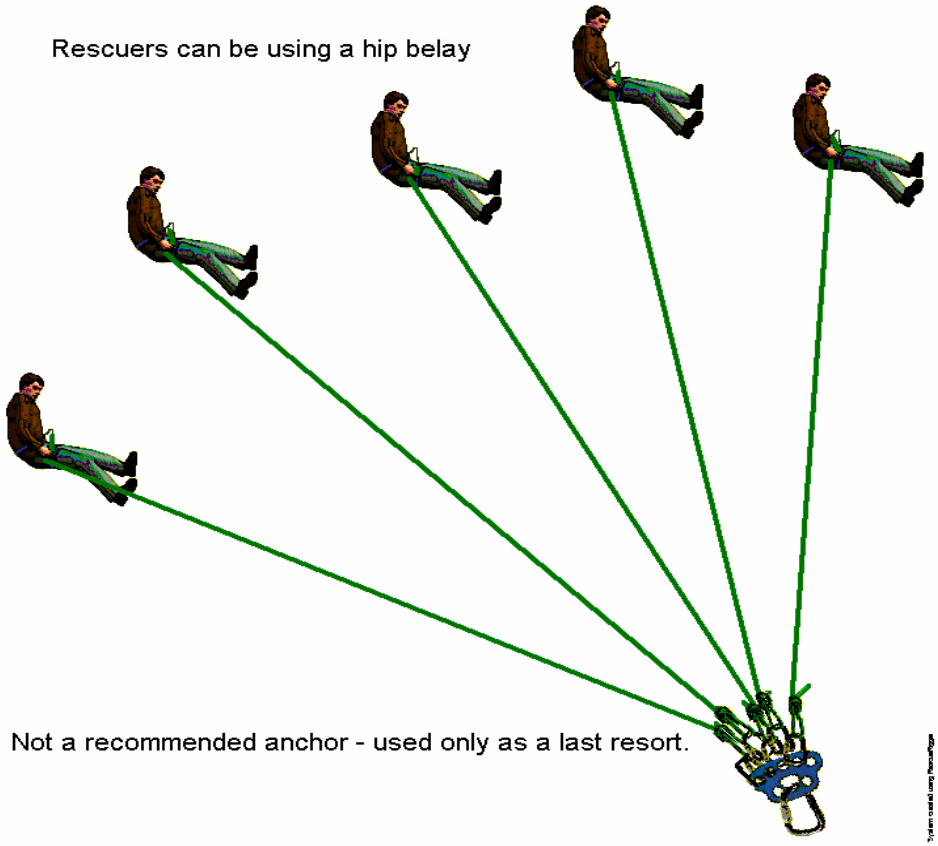
Technical Systems – Anchors

Natural Anchors



Artificial Anchors

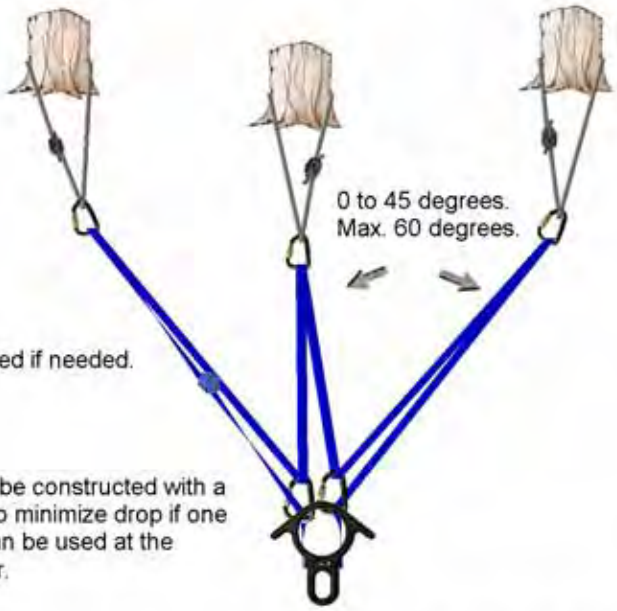
Human Anchors



Tensionless Anchors

Number of wraps around the tree will depend on the diameter of the tree and/or the load you expect. For heavier loads and smaller trees, you would have more wraps.

Load Distributing Anchors (LDA)



Anchors should be extended if needed.

The system is intended to be constructed with a 36" sewn spectra runner to minimize drop if one leg fails. Other webbing can be used at the discretion of the site leader.

The angles between the outer anchor points should be between 0 and 45 degrees. A smaller angle is preferred. The angle should never be over 60 degrees

A proper twist in the equalizing sling is essential to prevent failure of the complete system if one piece pulls.

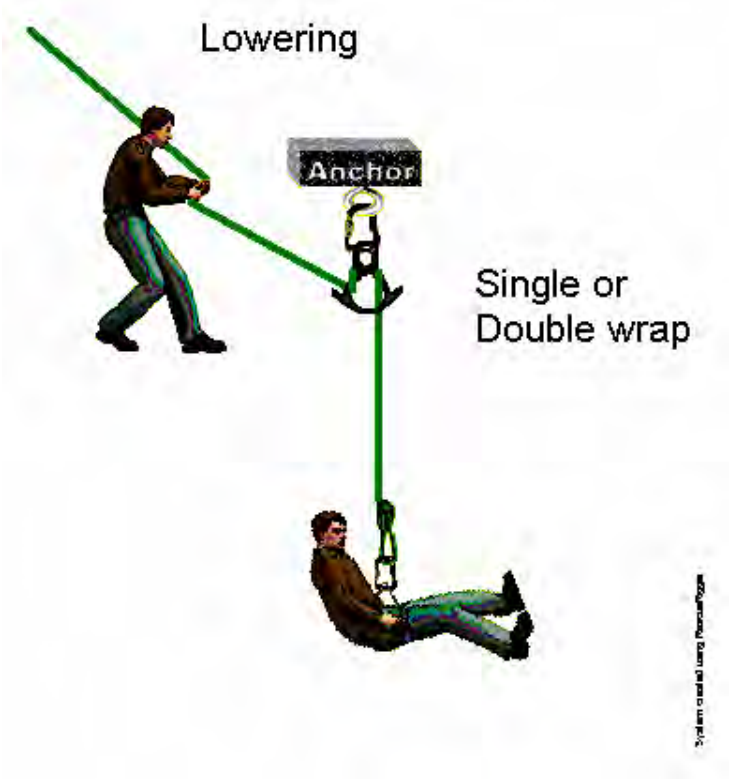
A common method for equalizing a load between two points involves using a sliding knot on a sling.

Technical Systems – Lowering Systems

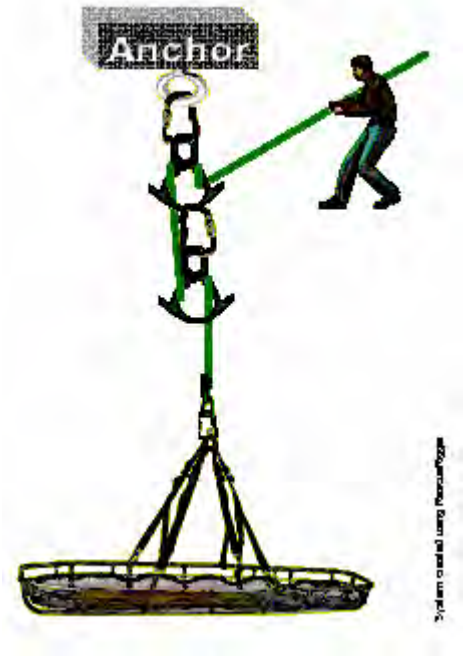
Brake Tube: Be sure you wrap the single rope or tandem ropes through the brake tube prior to attaching them to the litter and before attaching the brake tube to the anchor. If using two ropes it is recommended to use two different color ropes.

Locked Off Brake Tube: After locking off the brake tube as demonstrated below, be sure to tie off the rope back to the anchor. Do not leave the brake unattended when the system is under load.

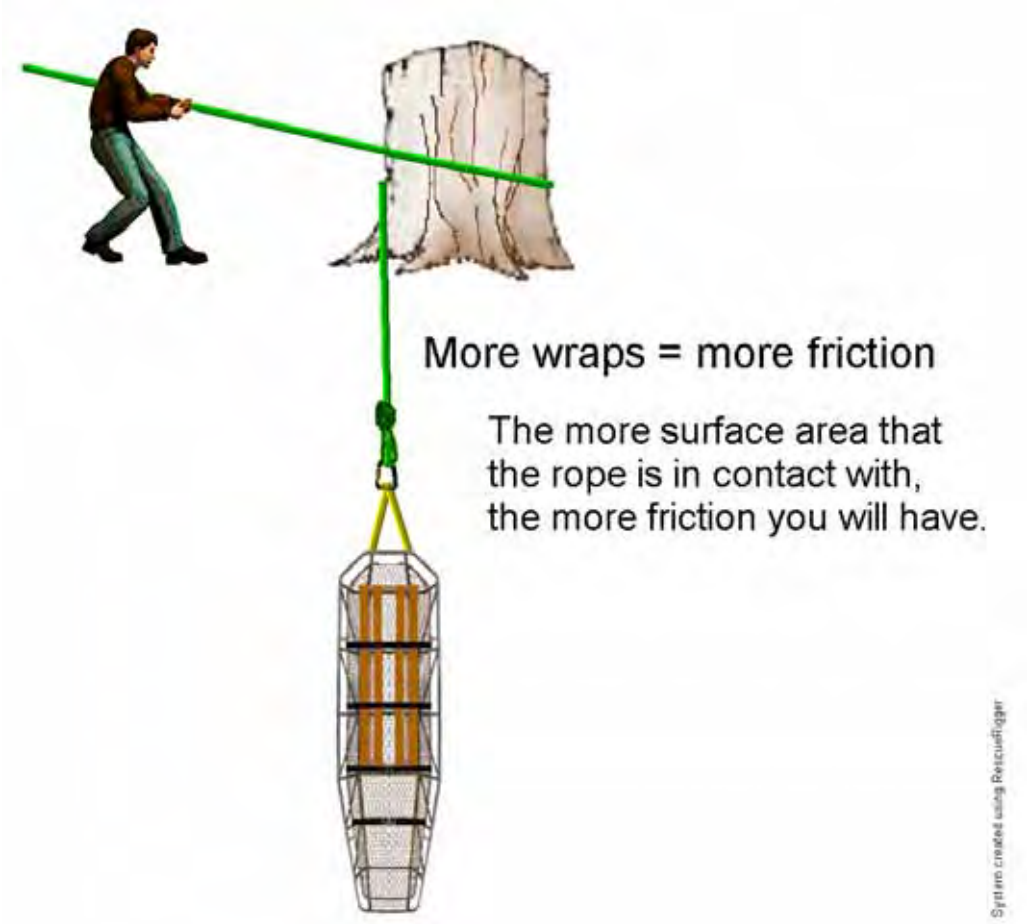
Rescue Eight:



Tandem Rescue Eights:

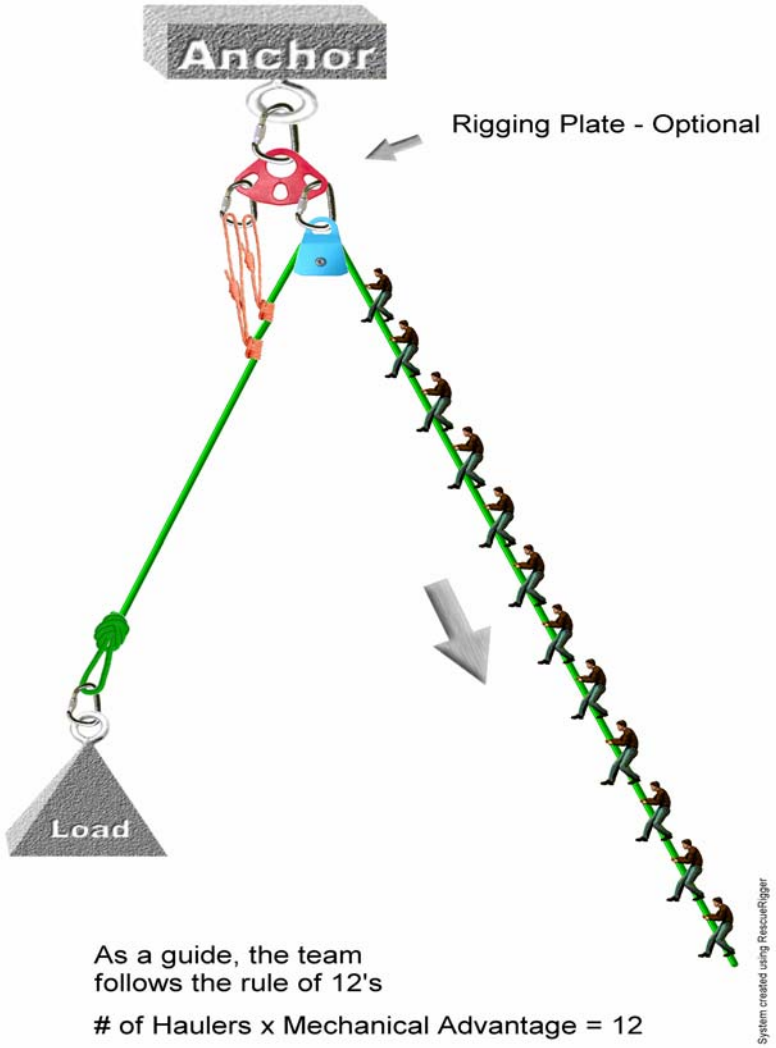


Tree Wrap:

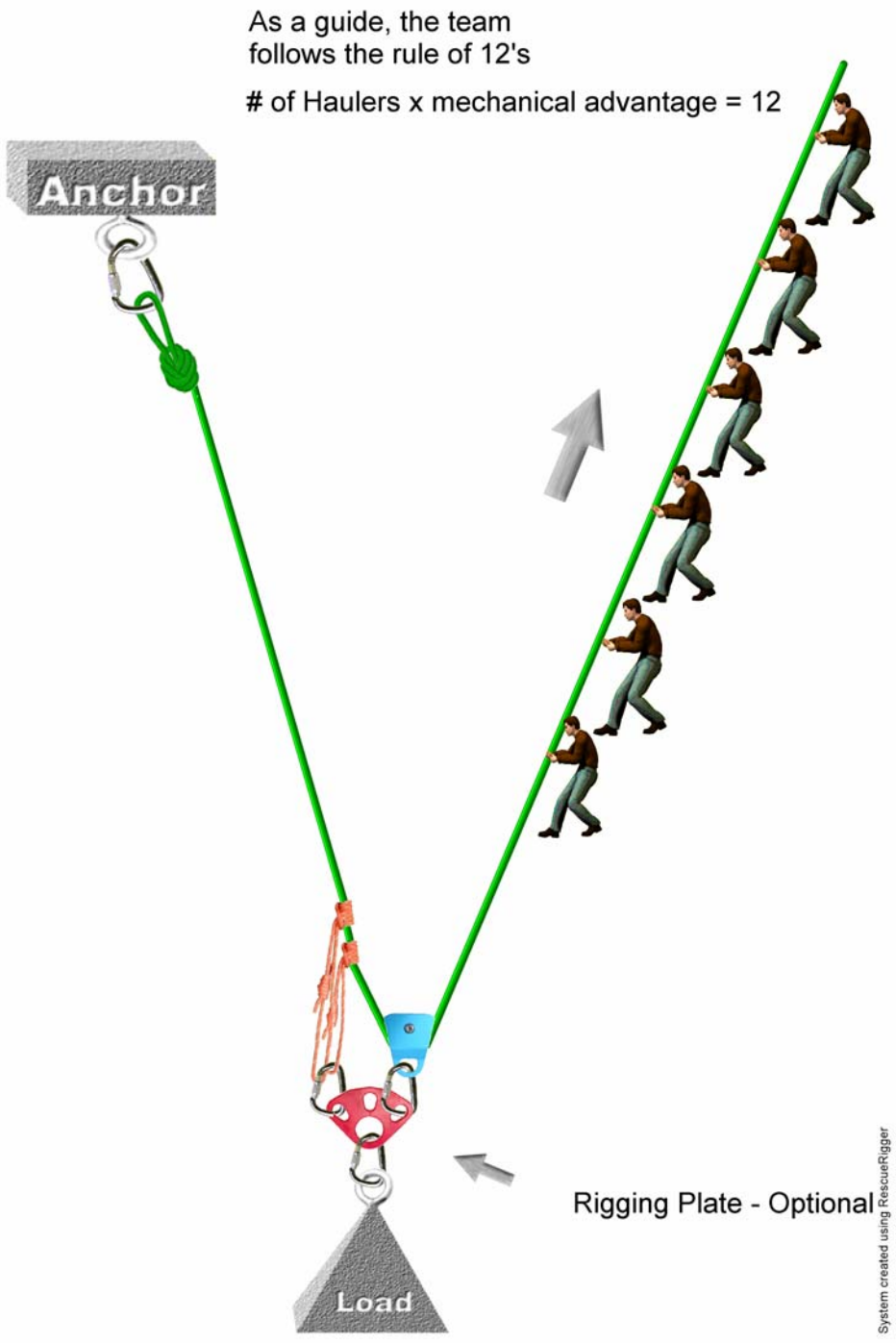


Technical Systems – Hauling Systems

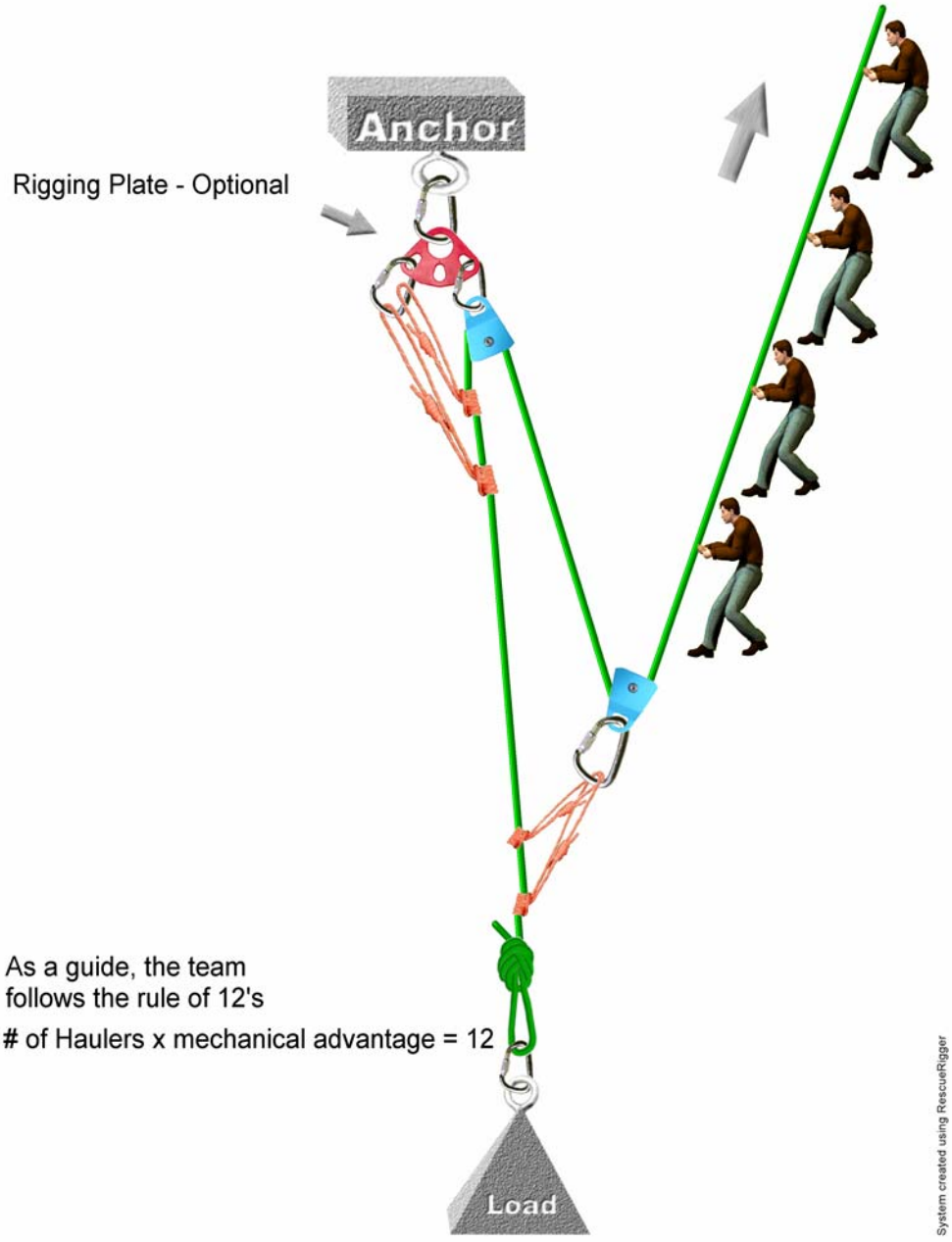
1:1 Inline with change of direction and w/tandem prusik ratchet at anchor



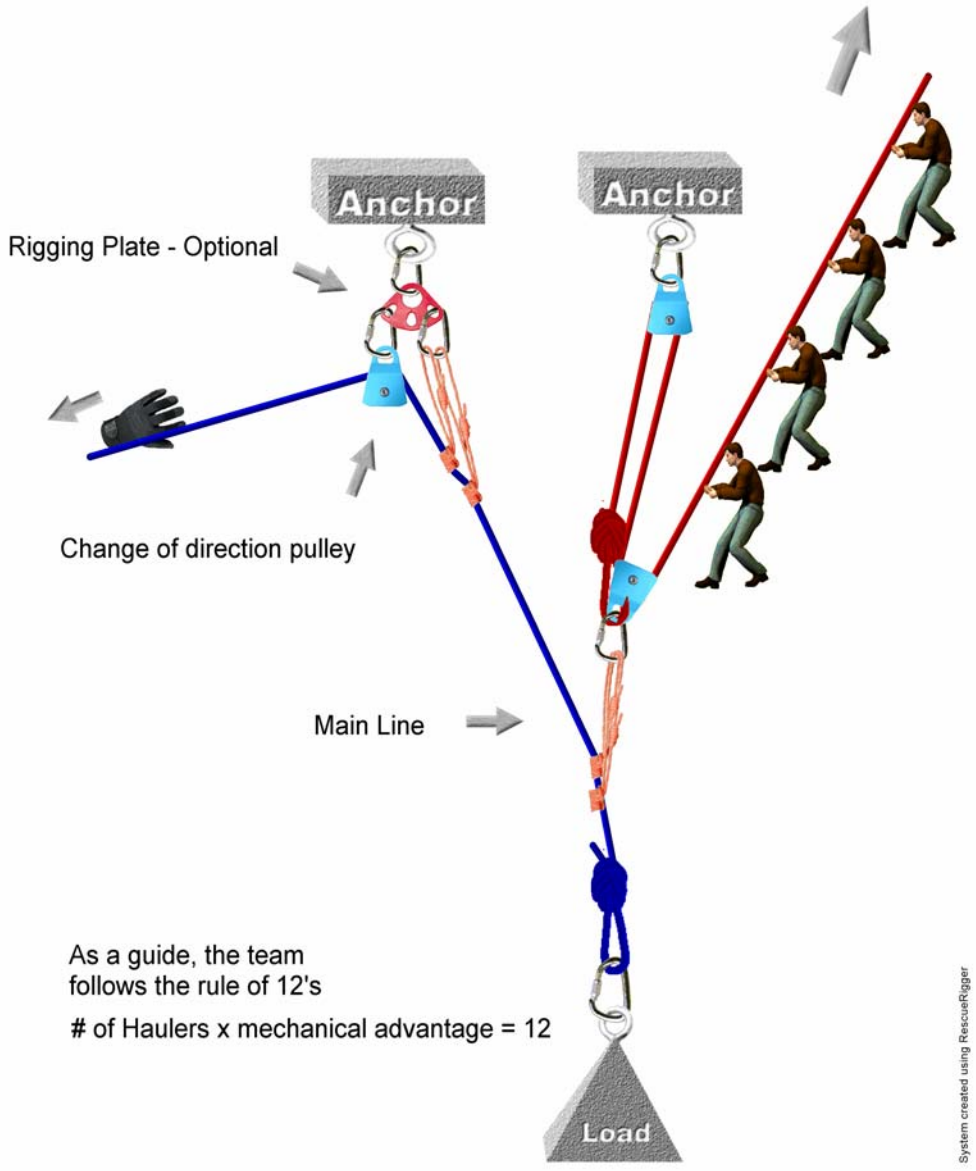
2:1 Inline w/tandem prusik ratchet



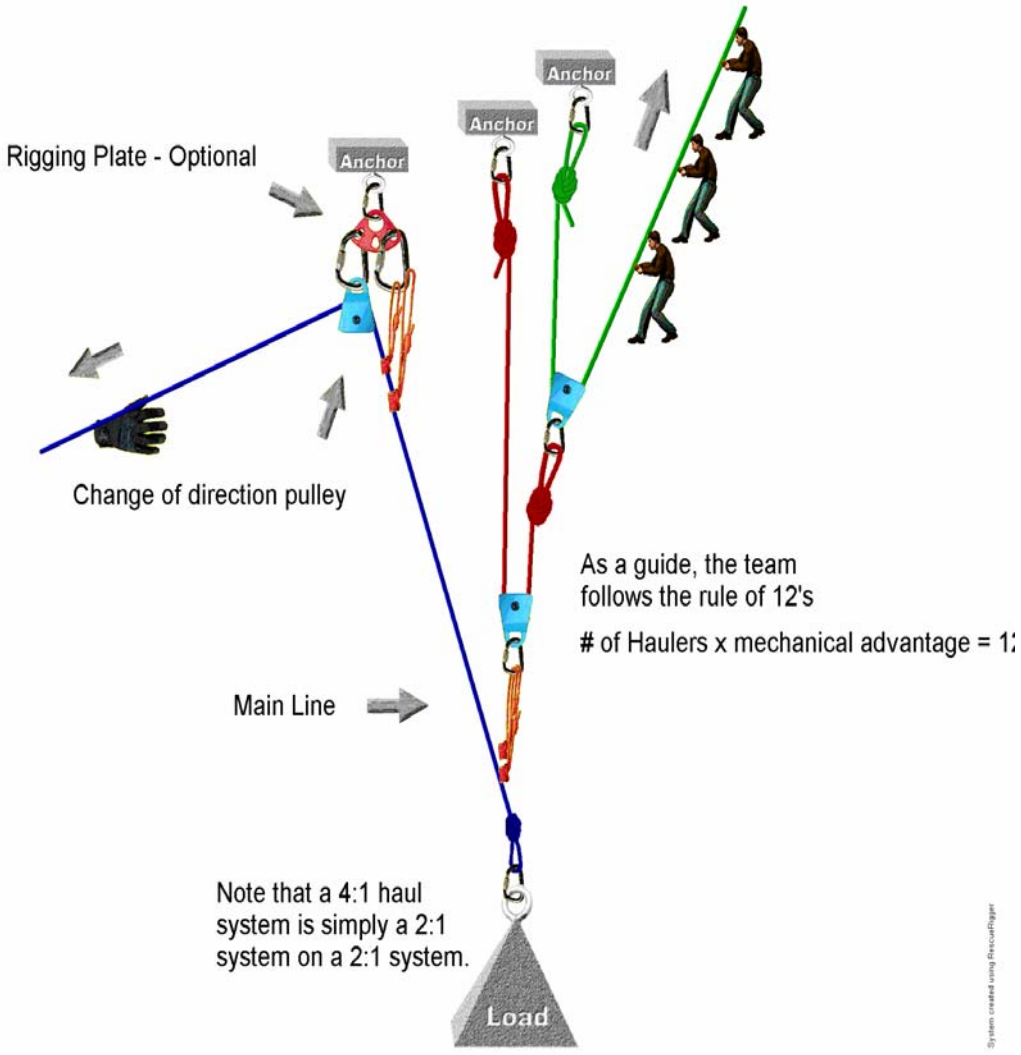
3:1 Inline w/tandem prusik ratchet and tandem haul prusiks



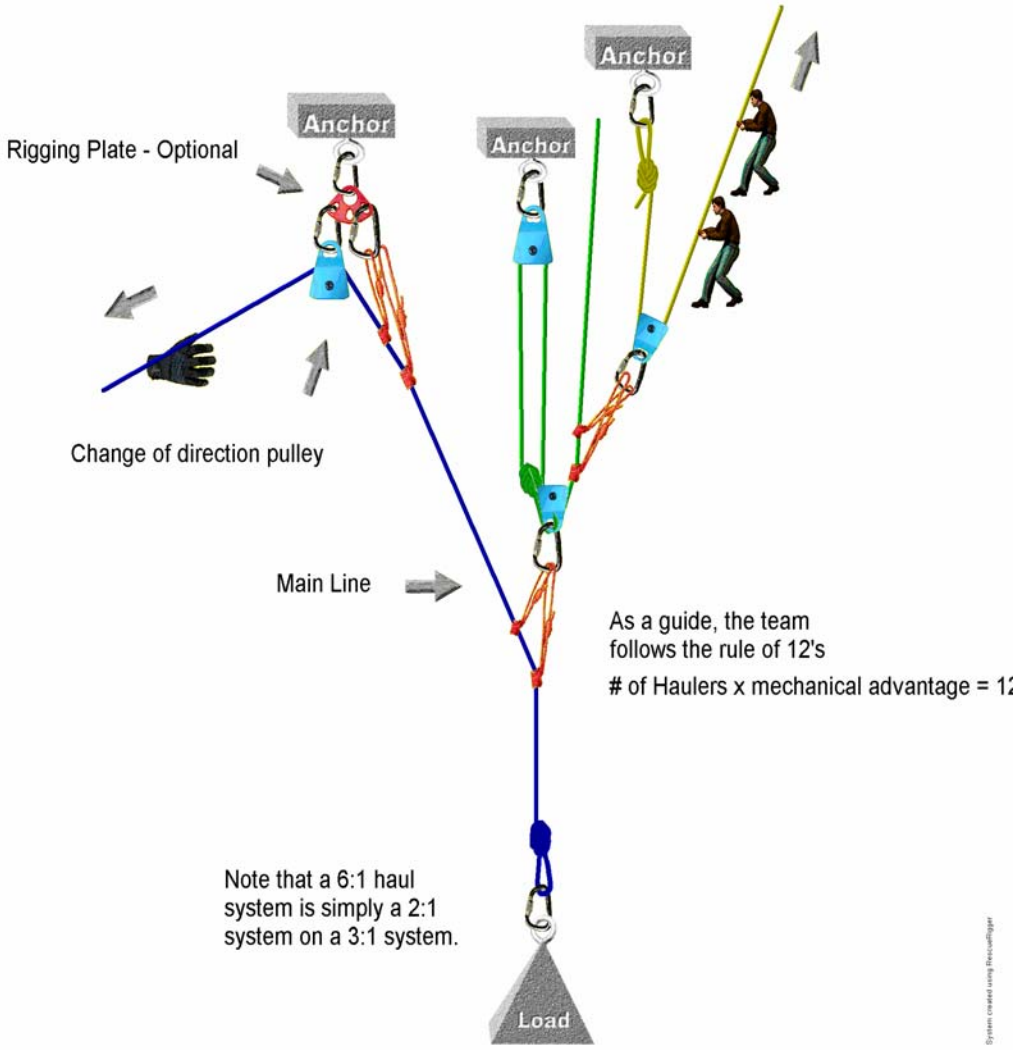
3:1 w/ Separate Main Line



4:1 w/ Separate Main line

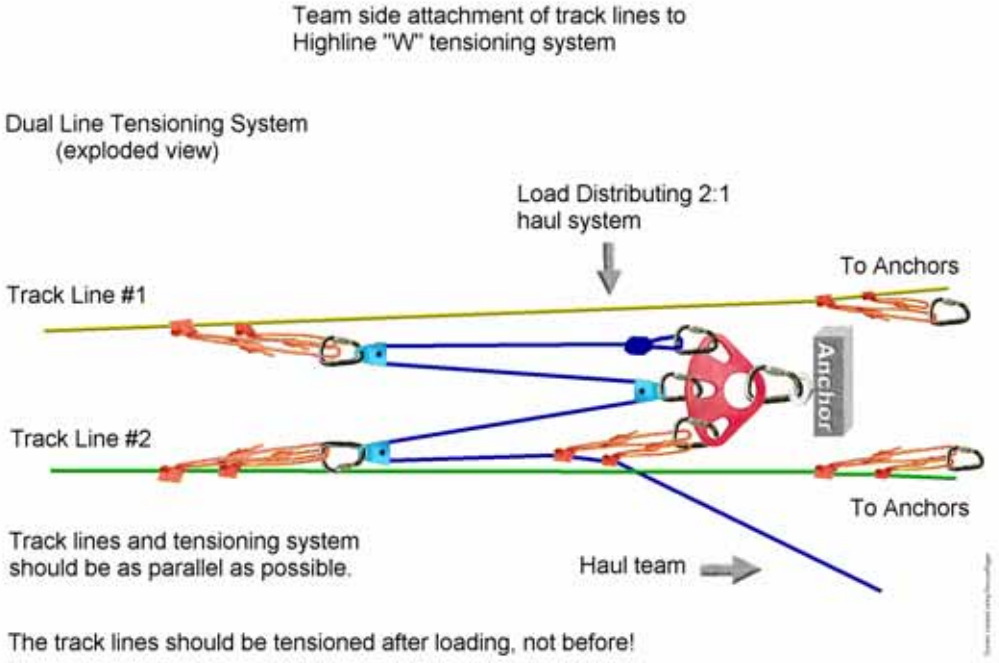


6:1 w/ Separate Main Line

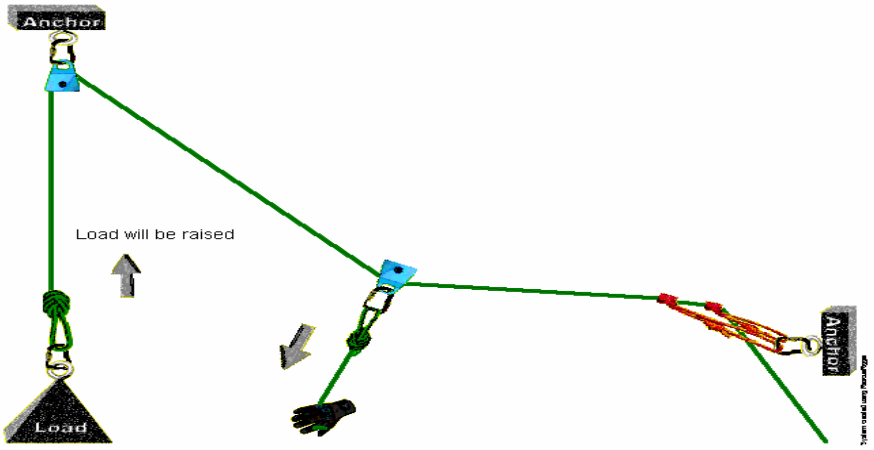


Technical Systems – Tensioning Systems

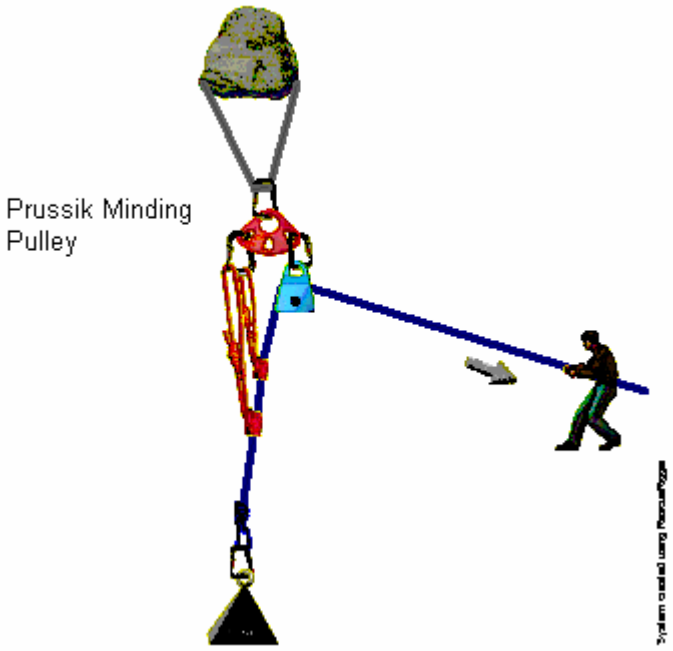
Highline “W” System



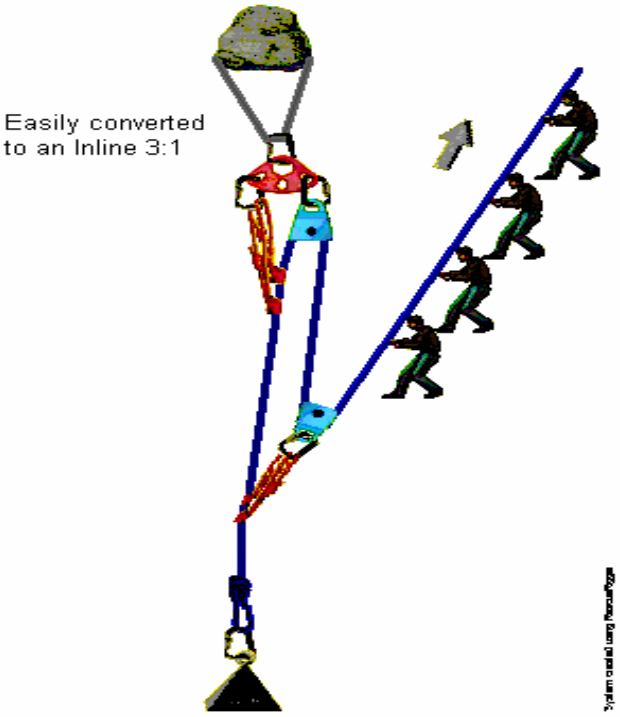
Deflection



Prusik Minding Pulley



Inline 3:1 Hauling System



Team Knots

Team Knots

GENERAL INFORMATION

All members must be proficient in tying the standard team knots.

Proficiency is defined as the ability to select the proper knot for the application, and to tie the knot correctly and quickly, even under adverse conditions such as darkness, cold, wearing gloves, etc. Proficiency also includes the ability to visually inspect a knot tied by others to determine if it is tied correctly.

Knots must be dressed. This means they are configured correctly, a perfect picture. An improperly configured knot may be considerably weaker than a dressed one.

Knots must be set. This means they are tightened and weighted before use. A loose knot can deform when loaded, and therefore be weakened or possibly fail.

Some knots require a safety knot to secure the loose ends. These knots are the Double Sheet Bend, High Strength Bowline, and the Figure Eight.

Knots should be frequently checked during use.

The relative strengths of knots are a highly debated topic. For simplicity and to help in evaluating the safety factors of our technical systems, we will assume that once a knot has been tied in a rope, it has reduced the rope strength to approximately 50% of its braking strength. If the rescue system or the load is such that this strength loss causes concern, you may want to reconsider what you are doing.

Being an expert at tying knots today does not mean you will be able to tie them correctly next week while under pressure, in the dark, during a snow storm, wearing gloves, etc.

If you fear tying knots, practice more!!!!!!

Many lives depend upon correctly tied knots. Practice often!!!!!!

HIGH STRENGTH BOWLINE

Creates a loop in the end of a rope.

Standard Team Applications

1. Used in a scree evacuation system to tie the main (load) line(s) directly into the head of the litter.
2. Used to tie a belay line directly into the climbing harness of a climber.

Notes

- The loose end must be secured with a safety knot - half of a double fisherman's knot. (barrel knot)
- The free (loose) end of the rope must come out on the inside of the loop, rather than on the outside, to form a much stronger knot.
- This knot is referred to as the Simplified High Strength Bowline in Mountain Search and Rescue Techniques.

Before safety knot has been tied

After Safety knot has been tied

FIGURE EIGHT ON A BIGHT

Creates a loop in the end of a rope (can also be used to create a loop in the middle of a rope).

Standard Team Applications

1. Used in a scree evacuation system to connect, using a carabiner, the main (load) line(s) into the bridle that is attached to the head of the litter.
2. Used for tying a tensionless anchor.
3. Used in a vertical evacuation system to connect, using carabiners, the main (load) lines into the litter spider.
4. Used as a midline knot to divide a rope into two lengths. For example, to create two rappel lines from one rope.

Notes

- The loose end must be secured with a safety knot - half of a double fisherman's knot.
- When used as an end of rope knot, the load-bearing strand of rope must be configured (dressed) to be on the outside of the knot.
- When used as a midline knot, the load (pull) must be directed in the same line as the long axis of the loop rather than perpendicular to it (referred to as a one-directional pull).
- When used as a midline knot, a safety knot is not required.

After safety knot has been tied

Before safety knot has been tied

DOUBLE SHEET BEND

Joins two ropes together.

Standard Team Applications

1. Used to tie the two ends of the anchor rope together to create a loop.
2. Used to tie two ropes together for multiple rope length systems.

Notes

- Each loose end must be secured with a safety knot - half of a double fisherman's knot.
- Easy to untie after being loaded.
- If used with different diameter ropes, then the larger diameter rope must form the bight (U shaped loop).

Before safety knot has been tied

After safety knot has been tied

DOUBLE FISHERMAN'S

Joins two ropes together.

Standard Team Applications

1. Used to tie the two ends of a rope together to create a prusik loop.

Notes

- Prusik loops are usually made from small diameter rope, 5mm to 8mm.
- This knot does not require safety knots.
- A very strong knot.
- Once loaded, this knot is extremely difficult to untie quickly.
- Rescue situations often require that knots be untied quickly so that ropes may be reused. Therefore, this knot SHALL NOT be used other than to create a prusik loop.
- Sometimes called a grapevine knot.

PRUSIK HITCH

Grips another rope.

Standard Team Applications

1. Used as a self-belay on fixed ropes.
2. Used as a handle on a rope to haul a load.
3. Used as a movable rope grip to ascend or descend a fixed rope.
4. Two prusiks (different lengths) in tandem are always used in the teams technical rescue systems. Examples - used as a rope grip for a haul system, for a safety backup system, for a ratchet system.

Notes

- Three wraps are required if a rescue load is being applied to the hitch.
- Diameter of team tandem prusiks for rescue loads – 7mm
- Diameter of adjustable prusiks for litter tie-ins – 8mm
- Prusiks tend to slip at 1200 lbf

- A minimum of two wraps are required if a personal load is being applied to the hitch.
- Diameter of prusiks for personal loads – 6-7mm

Tandem Prusiks
Three wraps – rescue loads

Two wraps – personal loads

BUTTERFLY

Creates a loop in the middle of a rope.

Standard Team Applications

1. Used as a handle on a rope to haul a load.
2. Used for tying into the middle of a rope for belayed snow travel.

Notes

- The load (pull) can be directed perpendicular to the long axis of the loop (referred to as a multi-directional pull).
- A safety knot is not required.

Front side

Back side

WATER KNOT

Joining two ends of webbing together.

Standard Team Applications

1. Used to tie the two ends of a piece of webbing together to create a loop or sling.

Notes

- Properly dressing this knot is important because it can become untied easily with certain stiff and slippery types of webbing.
- Team webbing will have both loose ends stitched professionally.
- If a Water Knot is tied in the field, each loose end must be at least 4 in long.
- If a Water Knot is tied in the field, it **must be loaded** with body weight and be approved by the Safety Officer before it is used.

Team webbing – loose ends stitched

Field tied water knot with a minimum of a 4 in tail on both sides

SAFTEY KNOT

Prevents the loose end of a rope from slipping through a knot.

Standard Team Applications

1. Used to secure the loose ends of the Double Sheet Bend, High Strength Bowline, and Figure Eight on a Bight knots.

Notes

- Half of a double fisherman's knot (sometimes called a Barrel Knot).
- Safety knots shall be snug to the main knot with approximately 2-3 inches of rope extending beyond the safety knot.

ADDITIONAL KNOTS

There are other knots that lend themselves exceptionally to mountaineering and mountain rescue.

These knots include but are not limited to the Figure Eight Retrace, a Munter Hitch and a Clove Hitch. Team members should be proficient with these knots as well, but may not be tested on them.

Munter Hitch

Clove Hitch

Knot Pass

Suggested Knot Pass Terminology

The following terminology should be used when a knot will not pass through the braking device in use.

System #1 Brakeman	"Knot Pass in __ ft."
Radio:	"Knot Pass in __ft., can you go off Belay?" (asking if you can go off belay at the distance specified. Also, only ask if you can go off belay if it is a low angle evac.)
*Litter:	"Affirmative" or "Negative"

*If the litter can go off belay, the team will set the litter down on the Litter Captains command. (It should be close to the distance specified by the Brakeman for the knot pass). The Braking Device will be unwrapped, and the knot moved forward. The Litter Team should anticipate the need to walk downhill a few feet to tension the system.

System #1 Brakeman:	"Stop for Knot Pass" (knot should be stopped 3-5 ft. before device)
Radio:	"Stop for Knot Pass" (A 2nd system should be set up if not in place– 2nd system should be safetied)
System #2 Brakeman:	"Belay On, Full Stop"
Radio:	"Down Slow on your Command"
Litter:	"Down Slow" (System #1 Brakeman Begins Lowering)
System #2 Brakeman:	"My Load"

System #1 Brakeman:	"Your Load"
Radio:	"Stop for Knot Pass" (If needed to stop the litter to pass the knot)
System #1 Brakeman:	"Belay On, Full Stop"
Radio:	"Down Slow on your Command"
Litter:	"Down Slow" (System #2 Brakeman begins lowering)
System #1 Brakeman:	"My Load"
System #2 Brakeman:	"Your Load" (Litter Continues Down)

Adopted 3/5/00

Technical Procedures

The following sections outline the technical procedures that Alpine members should use as a basis for our technical systems. It should be understood that situations might arise that require alternative methods to achieve the objective at hand. Any alternative methods will be implemented at the discretion of the Site Leader and Safety Officer on scene.

Use of personal technical equipment outlined in the following sections should follow the recommended use as stated by the manufacturer.

4:1 Safety Factor – The planned static load should not exceed ¼ of the breaking strength of any system element.

- When determining the safety factor for any system (a.k.a., finding the weakest point of a system), members should consider the following:
    - For soft goods in which a knot is incorporated (e.g., rope, webbing, cord, etc.) the team makes the assumption that the rated strength of the component is reduced by 50%.
    - For hard goods, members should use the published rated strength.

Technical Procedures – Communications

Good communication skills, both verbal and non-verbal, are critical to a safe and successful technical evacuation. There are several lines of communication that occur during a technical evacuation. For example, in a high angle rescue, lines of communication may exist between the third man and their brake person or belayer, between the third man and the site leader, between the third man and the litter attendants, and between the site leader and operations. It is important for these lines of communication to be clear and concise so that all parties understand exactly what it is that the other desires or needs.

For most field operations, the team typically uses portable handheld radios. When used properly, these portable radios greatly facilitate the ability to communicate with each other during a technical evacuation. Teams of members at the top, bottom, or involved mid-wall with the subject being rescued can normally communicate effectively using portable radios, even when such members are completely out of sight. However, the effective use of radios may be hampered by such things as wind (which can greatly interfere with both voice transmission into the microphone and reception through the speaker), radio/electronic interference, user error, or even mechanical failure. In such circumstances, it is critical to know and be familiar with other non-verbal communication techniques such as hand and rope signals.

When carrying handheld radios, ensure the mic is protected from unintentional transmissions.

Typical Communication Terminology:

Top – The radio identifier/designator for what is referred to as the active system at the top.

Multiple Anchors (systems) – If multiple systems are used number them sequentially and refer to them by number (Example – Anchor 2)

Bottom –The radio identifier/designator for what is referred to as the team at the bottom.

Litter – The radio identifier/designator for what is referred to as the team of litter attendants with the litter.

Site – The radio identifier/designator for the site leader.

Ops – The radio identifier/designator for the Operations Chief who is at the Command Post.

Safety – The radio identifier/designator for the designated Safety Officer (if one has been assigned)

Edge – The radio identifier/designator for the individuals responsible for rope edge protection.

Haul Team – The radio identifier/designator for the uphaul team.

Brake – A word used over the radio to signify a break or change in communication from whom you were previously talking.

Typical Verbal Words and Phrases – Technical Evacuations:

On Belay? – The question a rescuer or litter team asks their belayer or brake person before loading the system.

Belay On – The response the belayer or brake person gives to the rescuer, or litter team when the belay is set and ready to be used. During a mission when a litter has gone on belay, the following radio transmission should be given: "KXL315, Alpine Rescue Team on a mission. Evac in progress on channel (state which channel you are on). Please hold all radio traffic on this channel."

Tensioning the System – The statement made by the rescuer or litter team informing the belayer or brake person that they are loading the system. While the system is being tensioned, the belayer or brake person shall hold the belay at full STOP.

Down Slow – The command that the rescuer, or litter team tells the belayer or brake person that they want to be lowered.

Up Slow – The command that the rescuer, or litter team tells the belayer or brake person that they want to be raised.

Faster – The command that the rescuer, or litter team tells the belayer or brake person that they want to be lowered or raised faster.

Slower - The command that the rescuer, or litter team tells the belayer or brake person that they want to be lowered or raised slower.

Stop! – This command may be given by anyone involved in the technical evacuation. The belayer or brake person shall hold the belay on a full stop until otherwise directed.

Stop Why Stop? – The question the rescuer or litter team asks when it is not clear as to why a lowering or raising system has come to a stop.

Off Belay – The command the rescuer or litter team makes to the belayer or their brake person when the belay is no longer needed.

Belay Off – The statement the belayer or brake person makes to the rescuer or litter team when the belay is no longer being given. During a mission when a litter has gone off of belay, the following radio transmission should be given: "KXL315, Alpine Rescue Team on a mission. Evac is terminated on channel (state which channel you are on). All radio traffic may resume on this channel."

Typical Verbal Words and Phrases – Technical Climbing:

On Belay? – The question a climber asks their belayer before relying on the system.

Belay On – The response the belayer gives to the climber when the belay is set and ready to be used.

Up Rope – The command the climber states to their belayer when they desire the slack in their belay line to be taken up or pulled back.

Climbing – The statement the climber makes to their belayer when they begin to climb or move away from their belay.

Slack – The command the climber states to their belayer when they desire slack in their belay line.

Take – The command the climber states to their belayer when they desire that all slack be taken out of their belay line. This is usually requested when there is the likelihood of a fall or need for full STOP.

Falling! – The statement the climber makes to their belayer when falling.

Off Belay – The command the climber makes to their belayer when the belay is no longer needed.

Belay Off – The statement the belayer makes to the climber when the belay is no longer being given.

Typical Verbal Words and Phrases – Other:

Rock – The statement anyone can and shall make when rocks or other objects have been knocked loose and are falling down the slope on which the rescue is taking place. If possible, transmit over the radio.

Rope – The statement that an individual makes in the down-direction of where a rope is going to be thrown over an edge. BEFORE throwing the rope over the edge, the individual shall listen for an acknowledgement ("clear") from individuals below.

Typical Non-verbal Communication Methods

Hand signals for use with technical evacuations:

Belay On – thumbs up, arm held horizontally (as if hitchhiking)

On Belay – thumbs up, arm held horizontally (as if hitchhiking)

Off Belay – flat palm cuts across throat

Belay Off - flat palm cuts across throat

Up – arm pointing up towards the sky, circular motion at elbow like a helicopter "wind-up" signal

Up Faster/Slower – same motion as "up", though at an exaggerated pace either motioning faster or slower.

Down – arm pointing down to the ground, circular motion at elbow like stirring a large pot

Down Faster/Slower – same motion as "down", though at an exaggerated pace either motioning faster or slower.

Stop – any of the following hand signals are acceptable:

1. Closed fist with arm held directly above head
2. Arms crossed above head in an "X"
3. Arms waving above the head back and forth
4. ANY signal that is not clearly understood
5. ANY signal other than those listed above
6. ANY standard signal which is accompanied by a verbal command which does not correspond correctly to the signal

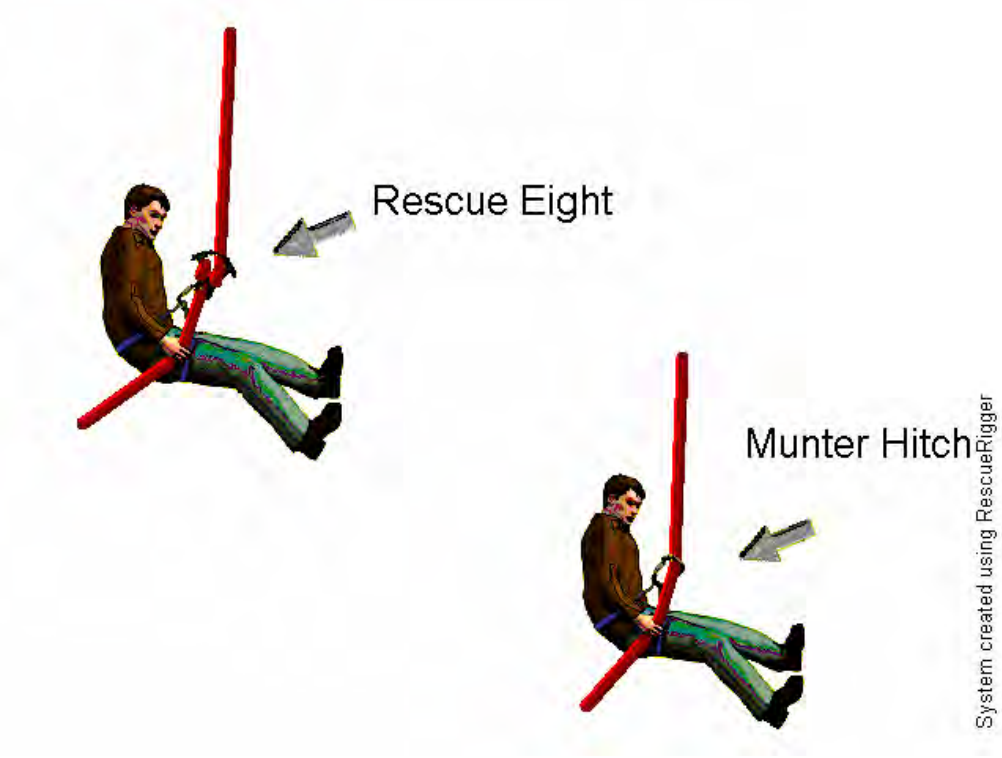
Rope Signals:

Commands can sometimes be transmitted by tugs on the rope or rope pulls; however, there is no universal or standard system. However, the following are some general guidelines regarding communication using rope pulls:

- Though hard to predict, if it is likely or even probable that rope signals will need to be utilized, the signals shall be decided upon and worked out between the climber or rescuer and the belayer or brake team BEFORE verbal communication is lost. In order to verify comprehension of the rope signals, it is recommended that both individuals repeat and observe the signals in each other's presence.
- Because of rope stretch and friction between the rope and the surfaces over which it is running, it is necessary to greatly exaggerate the rope pulls. A simple tug will seldom be felt at the other end.
- For an effective rope pull, take in all slack and, for each signal or pull, reach as far down the rope as possible, pull the rope as high as possible, holding it tight for a moment before releasing tension and repeating the action, if necessary.
- The most common, and arguably most important, rope signal for the "belay on" response is three or more rope pulls from the belayer or brake team above.

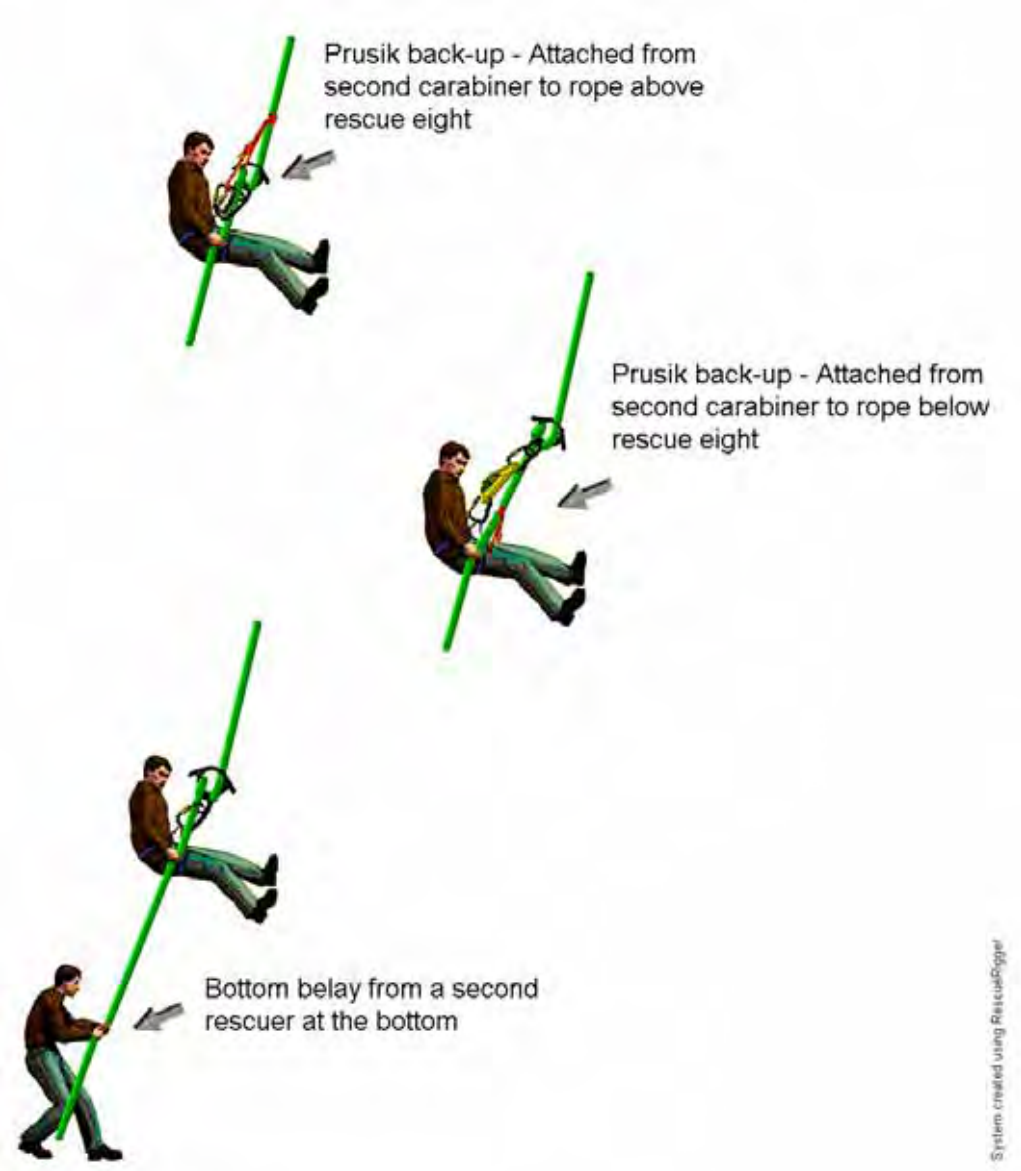
Technical Procedures – Personal Ascending / Descending

Descending – Devices without Back-up's

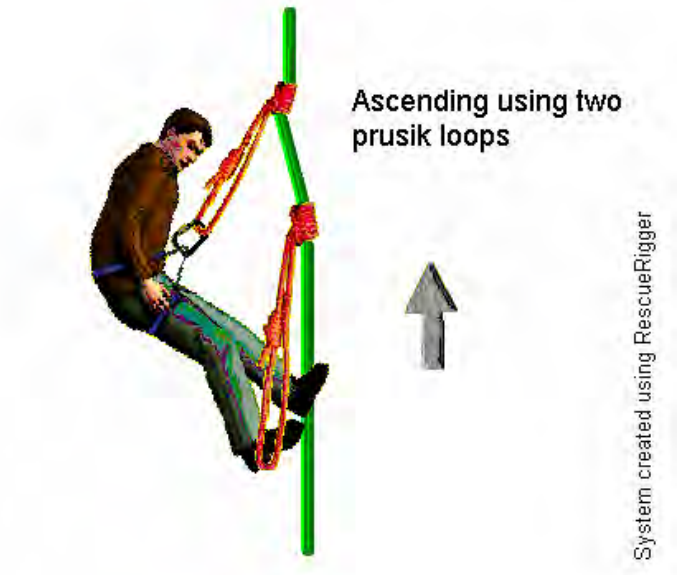


Team approved commercially manufactured personal rappel devices can also be used.

Descending - Back-up's



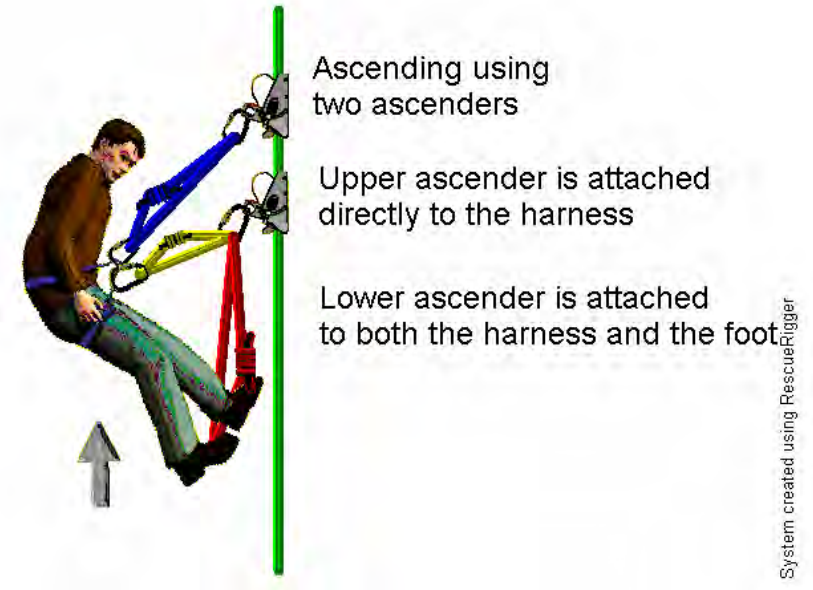
Ascending – prusiks



Ascending – ascenders

Two basic types of Ascenders: Only used for personal loads

- Rope grab ascenders
- Handled ascenders



Technical Procedures – Third Man / Pick-offs

Performing Third Man techniques is like a chess match. The key to a safe and efficient rescue is to always be thinking a few steps ahead. Always know what's next and be prepared for the surprises that always seem to present themselves. These techniques are best learned in a field session. Although techniques may vary, the rescuer should follow these three basic steps:

- Locate, access, secure subject
- Evaluate, treat, communicate
- Evacuate (lower or raise)

Site Evaluation

Scene Safety

Factors in developing your initial plan

- Rescuers abilities
- Rescuers available
- Equipment available
- Location of subject on the rock/ice face

Other factors to consider in developing your plan

- The necessity of a spotter
- Access to the top of the rock face
- Proper positioning of the rescuer above/below the subject
- Weather
- Time of day
- Medical condition of the subject
- Environmental dangers
- Condition (or absence) of subject's harness

Accessing the subject - Top-down – Rappelling to the subject

Advantages of rappelling to the subject

- Rescuer is self-reliant

- Additional resources not required
- Rope movement at edge minimized
- More control on your descent / positioning

Disadvantages of rappelling to the subject

- Difficult to descend multiple rope lengths
- Requires attaching the subject to the rescuer's personal rappel rope or lowering system
- Introduces additional safety concerns / 2nd body weight

Accessing the subject - Top-down – Being lowered to the subject

Advantages of being lowered to the subject

- Hands free
- Can add additional rope lengths to the system very easily
- Knot passes are done at the top
- Very simple system
- Subject is attached to your rope / 2nd body weight is handled by belayer on top
- Less decision-making
- Physical fitness/endurance may not become a factor
- Distributes the workload with the team on top
- System changes can be managed from the top
- Uphauls/Lowering's can be handled from the top

Disadvantages of being lowered to the subject

- Need at least one additional rescuer to be your belayer
- Rock fall danger increases due to rope moving at the edge
- All movement requires communication with the top

Accessing the subject – Bottom-Up – Climbing up to the subject

Advantages of climbing up to the subject

- Might be quicker to access patient – depends on their location
- May be the only option available to you
- Less rock fall

Disadvantages of climbing up to the subject

- Requires more equipment
- Need at least one additional rescuer to be your belayer
- Requires more skills from the rescuer
- Once you reach the subject an anchor must be constructed

Securing the subject to your system

- If lowered, either attach the subject to your rope or to a separate pick-off rope that you have brought down with you. After securing the subject to this pick-off rope, be sure to communicate with the rescuers at the top to go on belay with this pick-off rope
- If rescuer is lowered and brings a separate pick-off rope for the subject, it is recommended that you use two different color ropes
- When communicating with rescuers on top, each rope should be identified by both its color and its use
- If rappelling, attach the subject to your rappel rope or rappel device
- ** Do not attach subject to your harness

  Note: Attaching the subject to your lowering system will make it very difficult to move independent of the subject – especially during a litter load.

Equipment used when subject does not have a seat harness

(A **temporary** webbing sling girth-hitched to the subject under their armpits can be utilized while the rescuer is constructing a seat harness.)

- A sewn, manufactured seat harness
- Using ten to fifteen feet of 1" tubular webbing to construct a hasty harness
- Pickoff seat
- A rope (bowline on a coil)
- A commercial chest harness (to be used to keep subject upright) can also be added but should not be used as a sole means of attachment for moving the subject

Equipment used when subject has a seat harness and is being attached to the rescuer's system.

- Manufactured "Personal Anchor System (PAS)"
- Adjustable prusiks (same idea as our litter tie-ins used on scree and high angle evacs)
- Manufactured runners, either tubular webbing or spectra (these are not adjustable)
- Large locking D caribiners

Once the subject has been secured, the rescuer will perform a medical assessment that will determine what type of evacuation is needed and their role.

- Pickoff - Rescuer will lower the subject or both themselves and the subject to the bottom

- 3rd Man - Rescuer will stay with the subject and assist with the litter loading (if needed, a 4th man can be requested to assist with the litter loading)

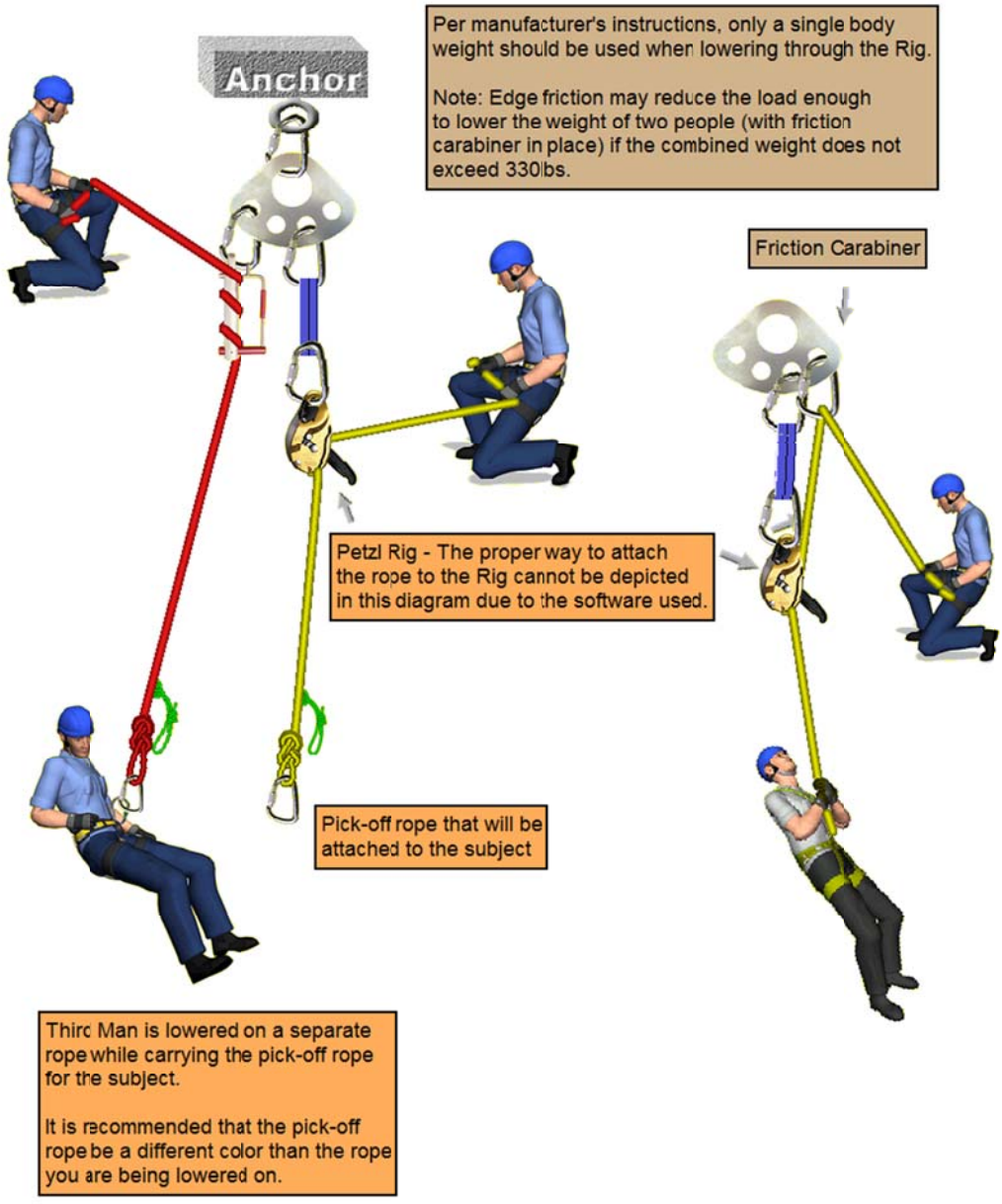
Unweighting the subject from their system

- Using the pick-off rope attached to the subject with rescuers on top performing the uphaul
- Uphaul of subject is performed by the rescuer
- Deflection technique

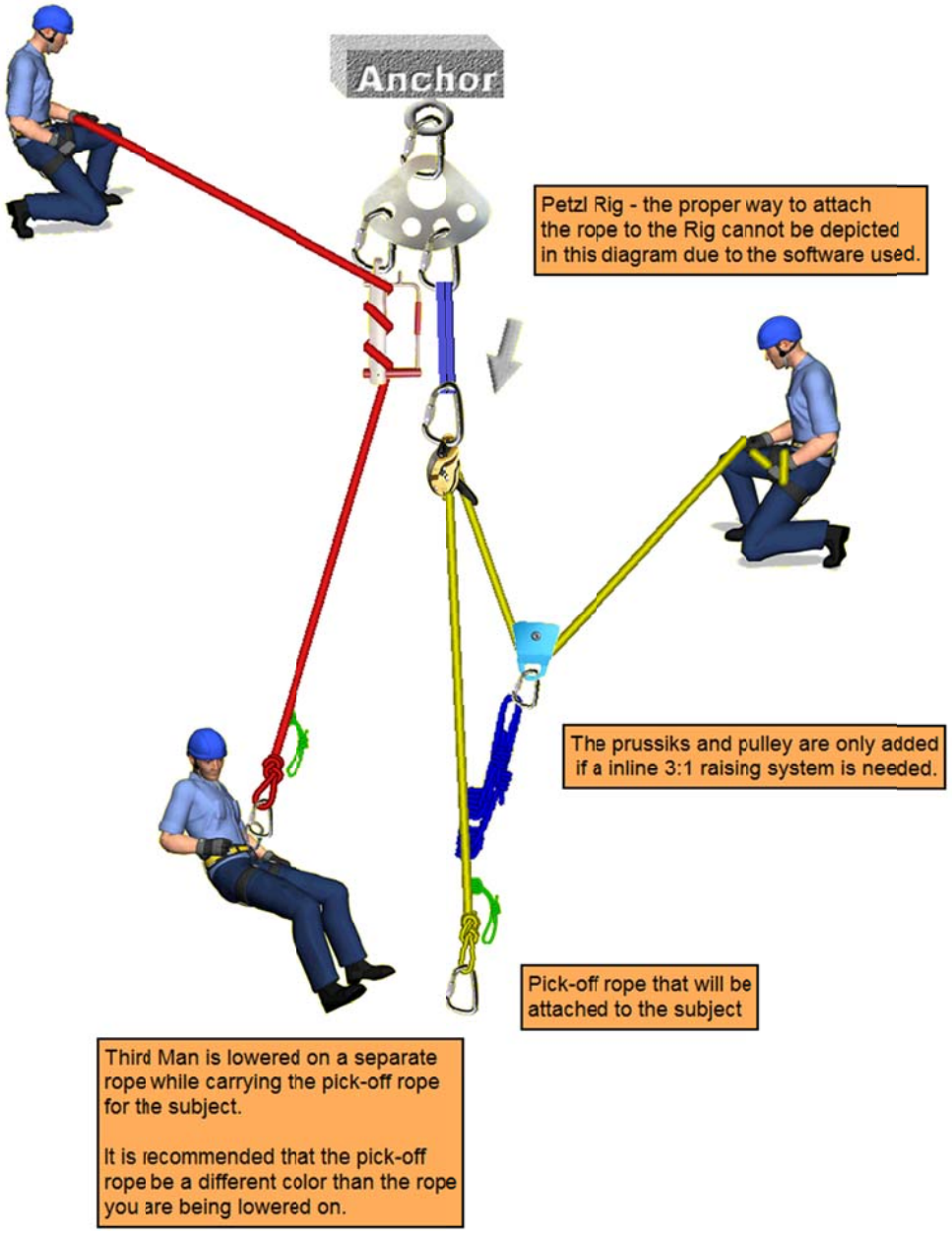
Other tips when performing a Pickoff

- When rappelling to your subject utilizing a safety prusik below your descending device, extend your lowering device out apx. 12" from your harness.
- If rappelling on a rescue eight, more friction can be added by a second wrap on the rescue eight with the rope. Gloves are needed
- When using a PAS, attach a carabiner to each end. If you want to adjust the length of the PAS by clipping intermediate loops, an additional carabiner is needed
- When working with a subject, don't be afraid to ask the subject to help out. Prior to performing a task, describe to the subject what you are going to do
- If your subject's harness has a belay loop and is properly attached and doubled back, it is acceptable to clip into it
- **If possible – always pre-rig your system before going over the edge!**

Third Man system – Being lowered to the subject



Third Man system – With 3:1 inline uphaul for the subject



Technical Procedures – Lowering - Scree

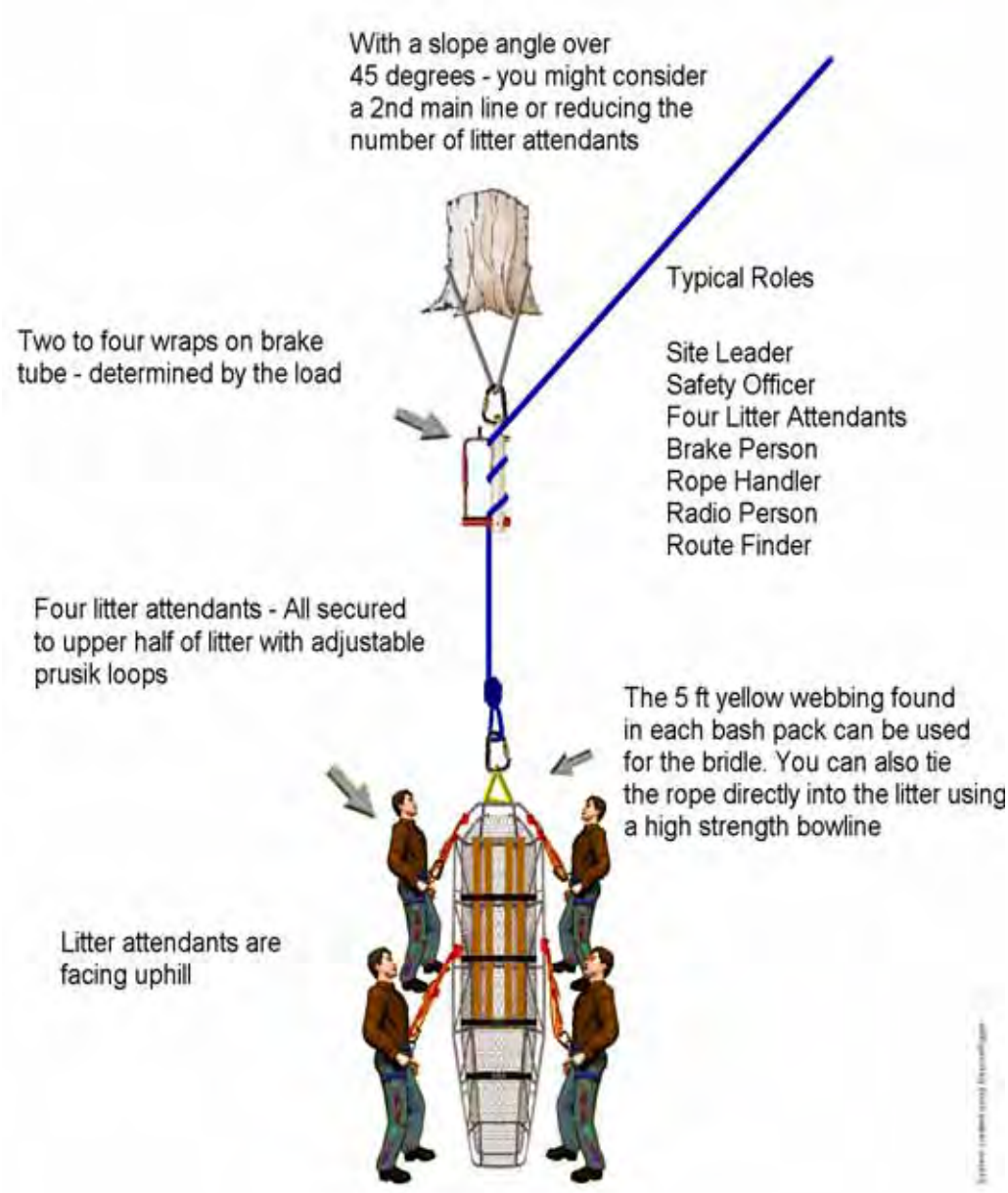
Standard Guidelines for Scree Evacuation

The purpose for illustrating the following technical system and its components is to eliminate possible confusion during trainings and missions. It should be understood that situations might arise that require alternative methods to achieve the objective at hand. Any alternative methods will be implemented at the discretion of the Site Leader and Safety Officer on scene.

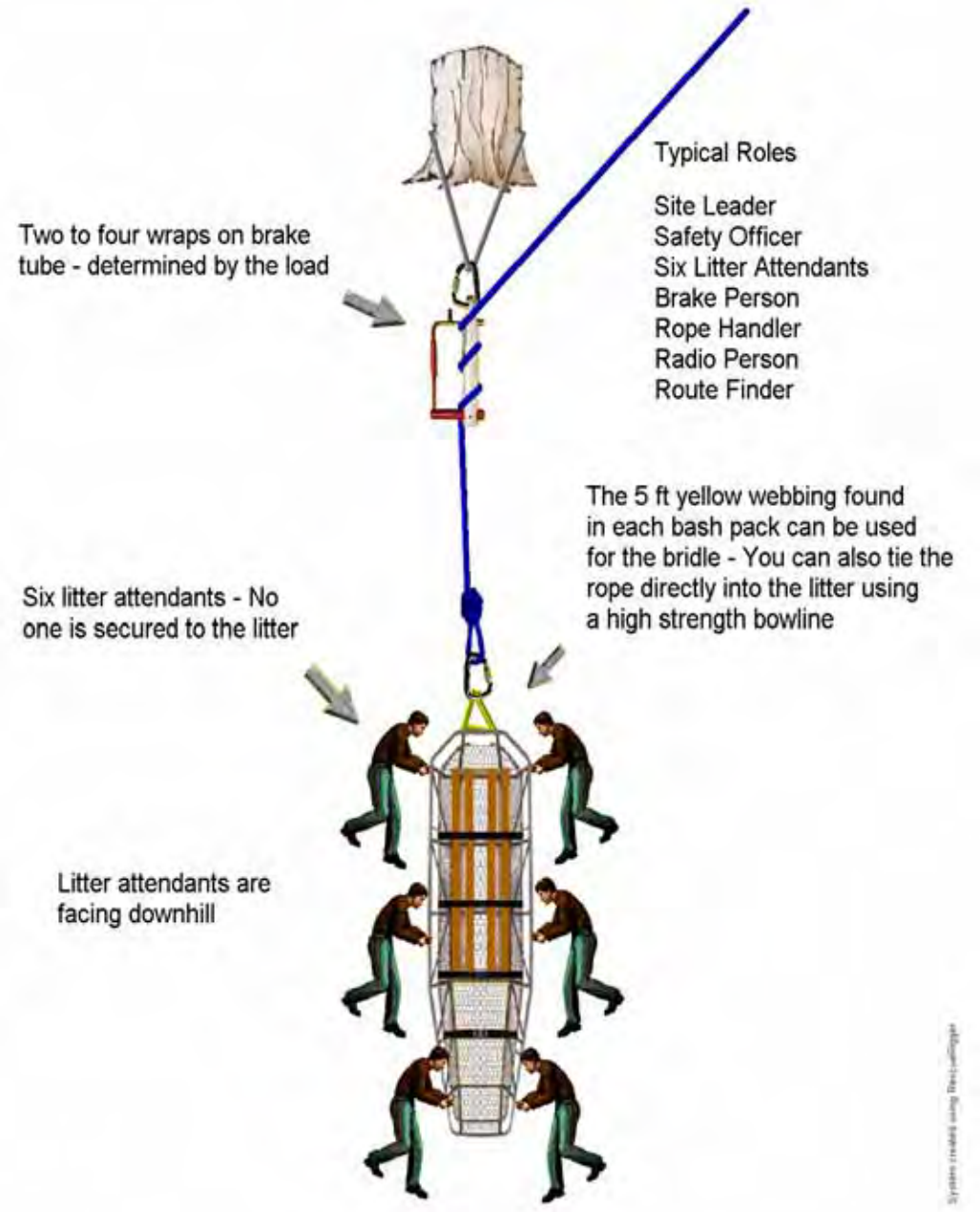
SCREE EVACUATION

- Anchor (suitable for rescue loads)
- Rescue brake system (brake tube)
- One or two main line ropes (this will depend on the steepness of slope)
- Safety system may be required (If required, you may back up the brake person with another person or you can use tandem prusiks that are secured to a second system - preferably using a second anchor)
- Main line(s) will be tied directly into the top of the litter or attached by a carabiner to a bridle
- 4 or 6 person litter crew (this will depend on the steepness of the slope)
- Litter crews of 6 people should not be tied directly into the litter.
- Litter crews of 4 or less people may be required to tie directly into the litter using adjustable prusik loops (this will depend on the steepness of the slope). All litter crew tie-ins should be secured to the upper half of the litter
- Appropriate protective equipment for the subject should be provided. Head and eye protection for subject should always be in place.
- Personal equipment for litter crew (helmet, pack, gloves, harness)
- A minimum of one litter crew member should have a radio
- One litter crew member should be designated as the litter captain
- Safety factor of 4:1
- One person should be designated as the Safety Officer
- When calculating system loads, assume the average fully equipped rescuer weighs 200 lbs.

Four (4) Person – Tie In



Six (6) Person – No Tie In



Technical Procedures – Lowering - High Angle

Standard Guidelines for High Angle Evacuation

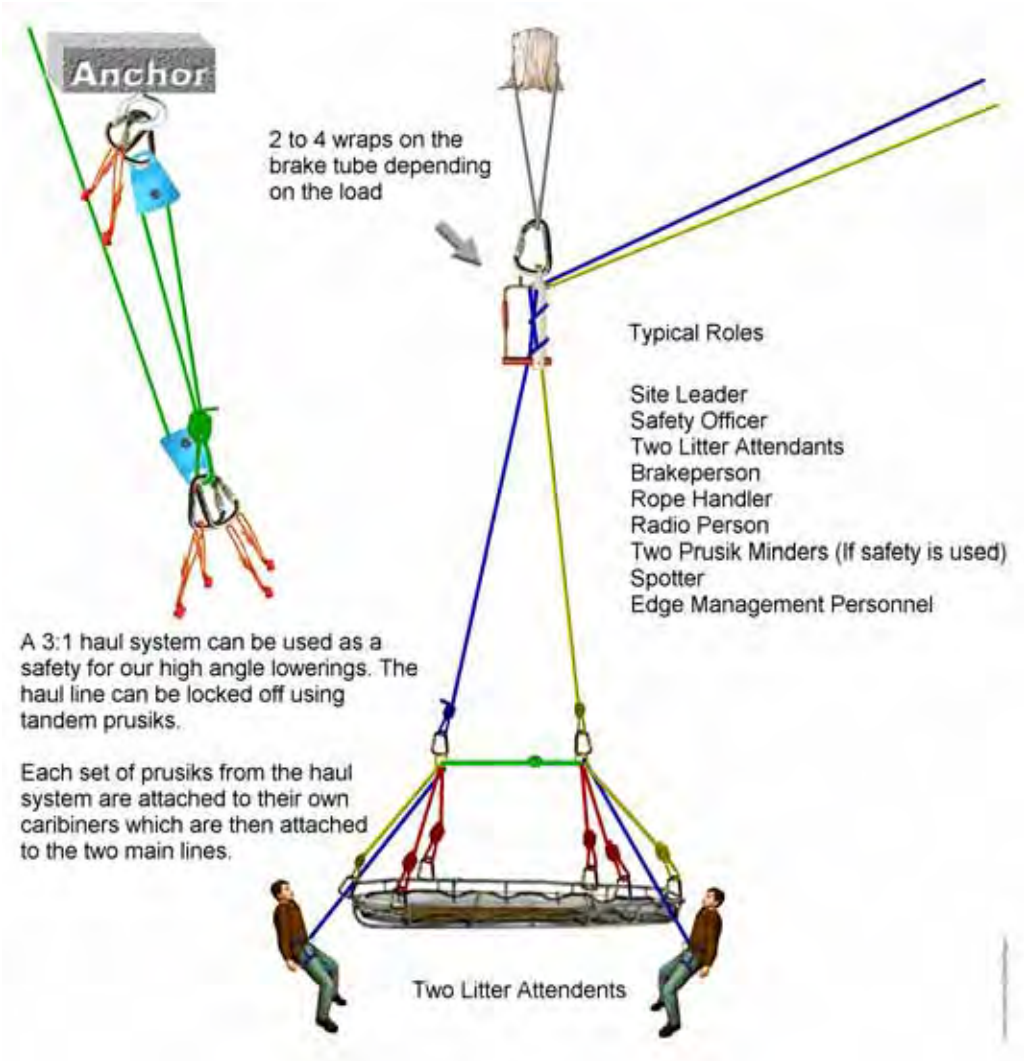
The purpose for illustrating the following technical system and its components is to eliminate possible confusion during trainings and missions. It should be understood that situations might arise that require alternative methods to achieve the objective at hand. Any alternative methods will be implemented at the discretion of the Site Leader and Safety Officer on scene.

HIGH ANGLE TECHNICAL EVACUATION

- Anchor (suitable for rescue loads)
- Rescue brake system (brake tube)
- Two main line ropes (if possible, use different color ropes)
- *Safety system may be required (If required, you may back up the brake person with another person or use a separate, 3:1 uphaul system locked off, preferably using a second anchor, secured to the main lines using tandem prusiks)
- A six-legged, two point attachment spider is used to connect the litter to the main lines.
- 2-person litter crew
- Litter crew will be tied directly into the two main rigging points of the litter spider (using adjustable prusik loops)
- Appropriate protective equipment for the subject should be provided. Head and eye protection for subject should always be in place.
- Personal equipment for litter crew (helmet, pack, gloves, harness)
- A minimum of one litter crew member should have a radio
- Safety factor of 4:1
- One person should be designated as the Safety Officer
- When calculating system loads, assume the average fully equipped rescuer weighs 200 lbs.

* When securing the safety system, the preference would be to find a second anchor (equal to or stronger than the primary anchor) but when not available, could be shared with the primary anchor. Our goal, when feasible, is to engineer out the single point, this being a point that, if it failed, would result in failure of the entire system.

High Angle Evacuation



Technical Procedures – Uphaul

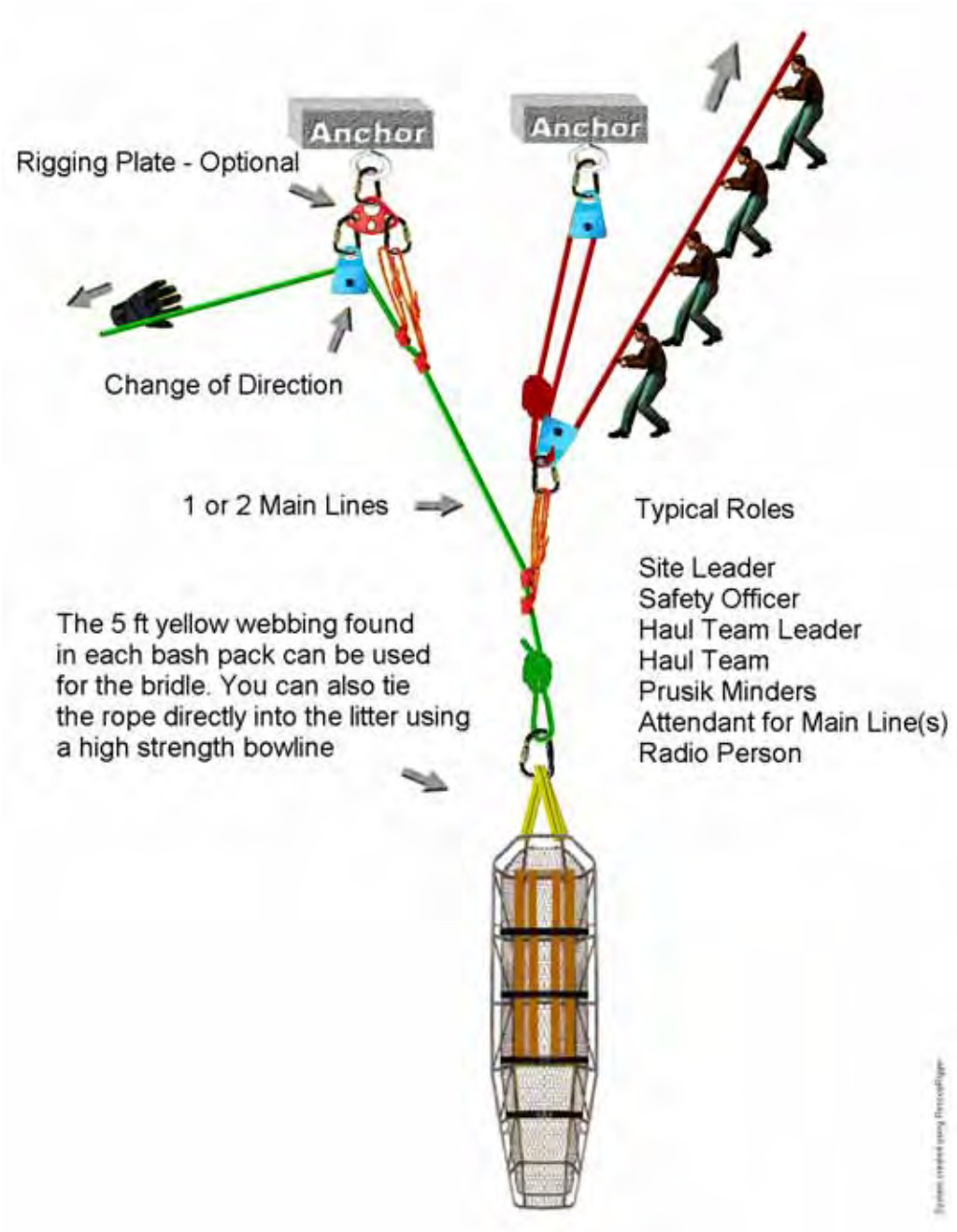
Standard Guidelines for Uphaul

The purpose for illustrating the following technical system and its components is to eliminate possible confusion during trainings and missions. It should be understood that situations might arise that require alternative methods to achieve the objective at hand. Any alternative methods will be implemented at the discretion of the Site Leader and Safety Officer on scene.

UPHAUL

- Anchor (suitable for rescue loads)
- A 3:1 uphaul system (using two pulleys and a separate haul line)
- One or two main line ropes (this will depend on the steepness of slope)
- Haul line is secured to the main line(s) using tandem prusiks
- Ratchet (utilizing tandem prusiks that are attached from the anchor to the main line(s). This will serve as the safety system.)
- One person should be designated as the haul team leader.
- Haul team leader should have a radio
- Haul team members should wear gloves
- Appropriate protective equipment for the subject should be provided. Head and eye protection for subject should always be in place.
- Safety factor of 4:1
- As a guide, the team follows the rule of 12's – (# of haulers x mechanical advantage = 12)
- One person should be designated as the Safety Officer.
- When calculating system loads, assume the average fully equipped rescuer weighs 200 lbs.

3:1 Haul System with separate Main Line(s)



Technical Procedures – Highline

Standard Guidelines for Highline

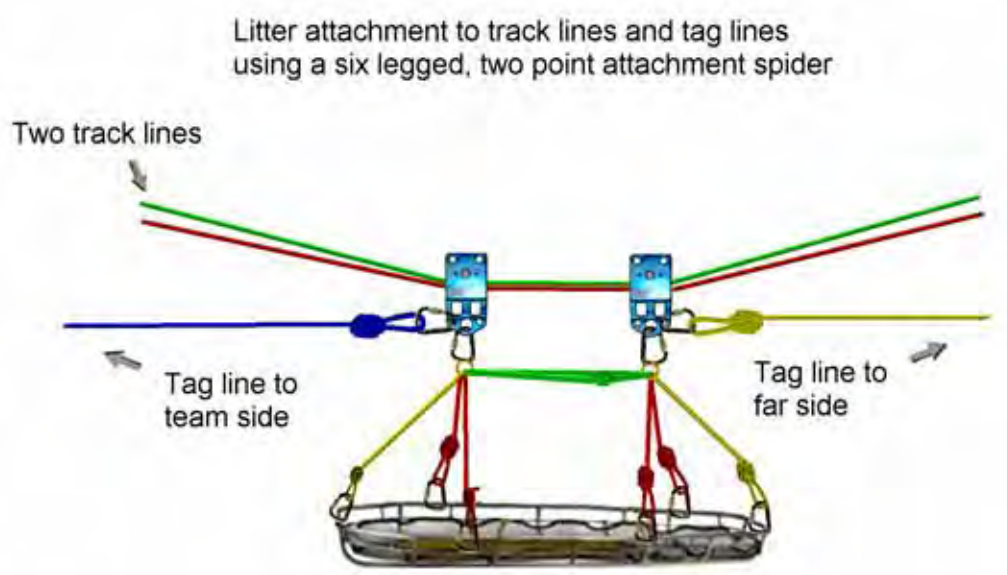
The purpose for illustrating the following technical system and its components is to eliminate possible confusion during trainings and missions. It should be understood that situations might arise that require alternative methods to achieve the objective at hand. Any alternative methods will be implemented at the discretion of the Site Leader and Safety Officer on scene.

HIGHLINE SYSTEM

- Anchor (suitable for rescue loads / back-tie if necessary)
- Two Main/Track line ropes
    - Track lines will have independent full strength tie-offs at the fixed end (i.e. Tensionless anchor).
    - Ideally, the track lines should be anchored low and suspended high.
    - Tensioning of the two track lines at the same time can be done by setting up the highline "W" tensioning system as illustrated on page three of this section.
- Taglines
    - Taglines will be attached directly to the pulleys (Kootenay type).
    - A prusik minding pulley with tandem prusiks can be used as a change of direction to facilitate movement of the litter.
    - If a mechanical advantage is needed to assist in the movement of the litter, the change of direction can be converted to an inline haul 3:1.
    - A braking device may be added to the tagline to assist, if deemed necessary in controlling the movement of the litter.
- Rescuer may accompany the litter if deemed necessary. Medical and safety needs of the patient should be serious enough to warrant the additional load to the system. The highline may require modification, or a second Highline established, to accommodate additional load.

HIGHLINE SYSTEM – CONT.

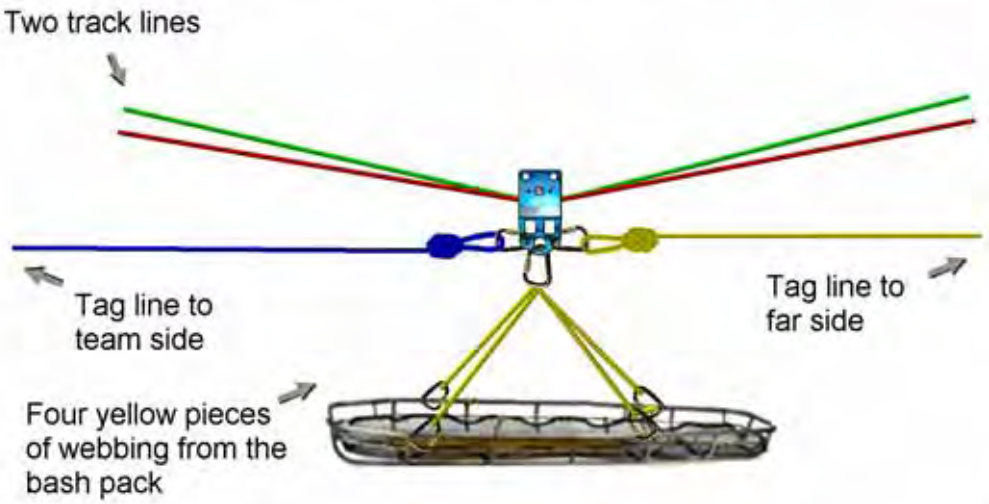
- A six-legged, two point attachment spider is used to connect the litter to the track lines.
- Patient should be secured to the spider using the patient tie-in loops from the main rigging point of the spider.
- Rescuer will be tied directly into the main rigging point of the litter spider.
- Minimum personal equipment for Rescuer on the litter (helmet, pack, gloves, harness).
- Appropriate protective equipment for the subject should be provided. Head and eye protection for the subject should always be in place.
- Safety factor of 4:1
- Appropriate Site and Safety considerations should be given to both ends of the highline system.
- When calculating system loads, assume the average fully equipped rescuer weighs 200 lbs.
- Highline system requires two bash kits and the highline kit.



Tag lines are used for moving the litter across the track lines. They are not used as a belay or back-up to the track lines.

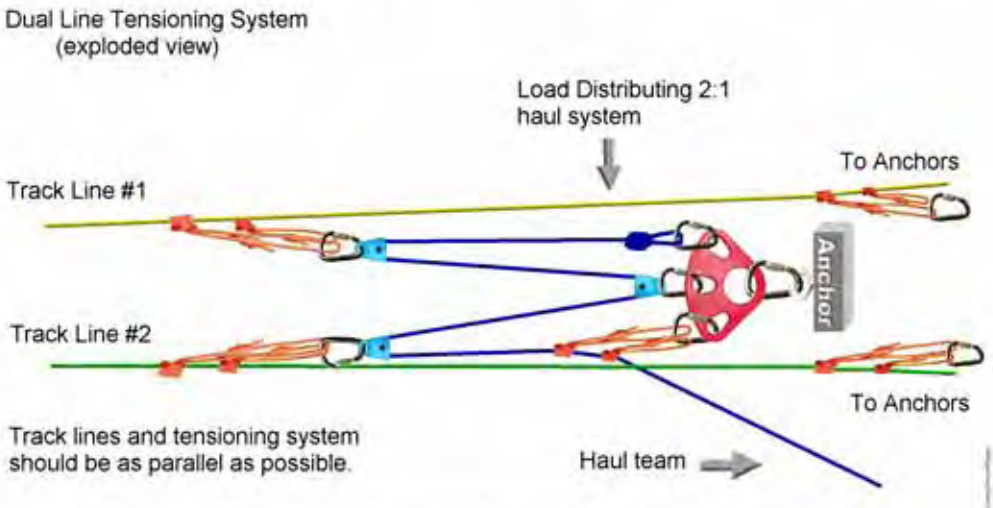
Litter attachment to track lines and tag lines
using a four legged, single point attachment spider

Gear to build this spider can be found in every bash pack



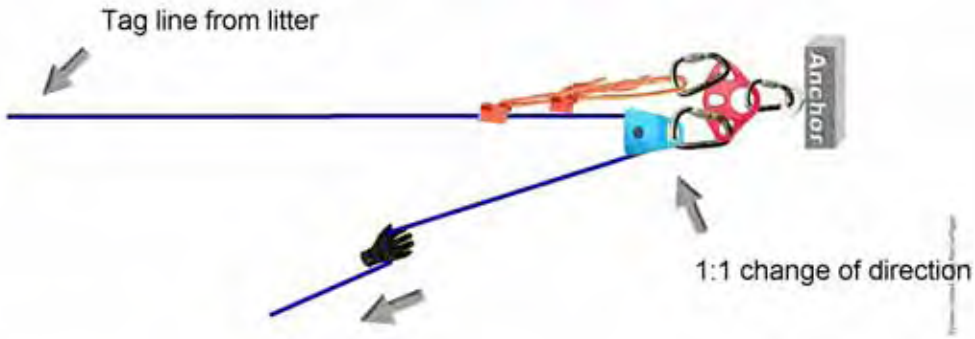
Tag Lines are used for moving the litter across the track lines.
They are not used as a belay or back-up to the track lines.

Team side attachment of track lines to
Highline "W" tensioning system

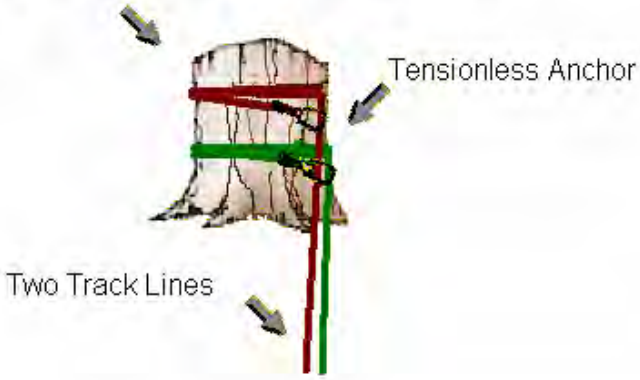


The track lines should be tensioned after loading, not before!

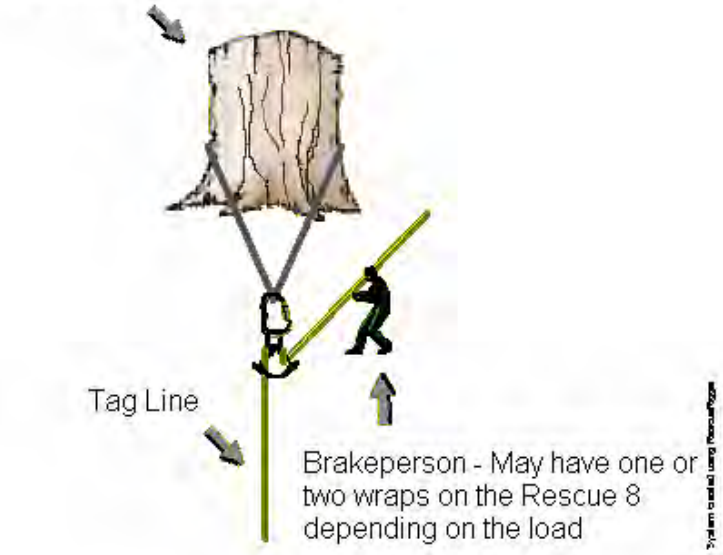
Team side attachment of Tag Line

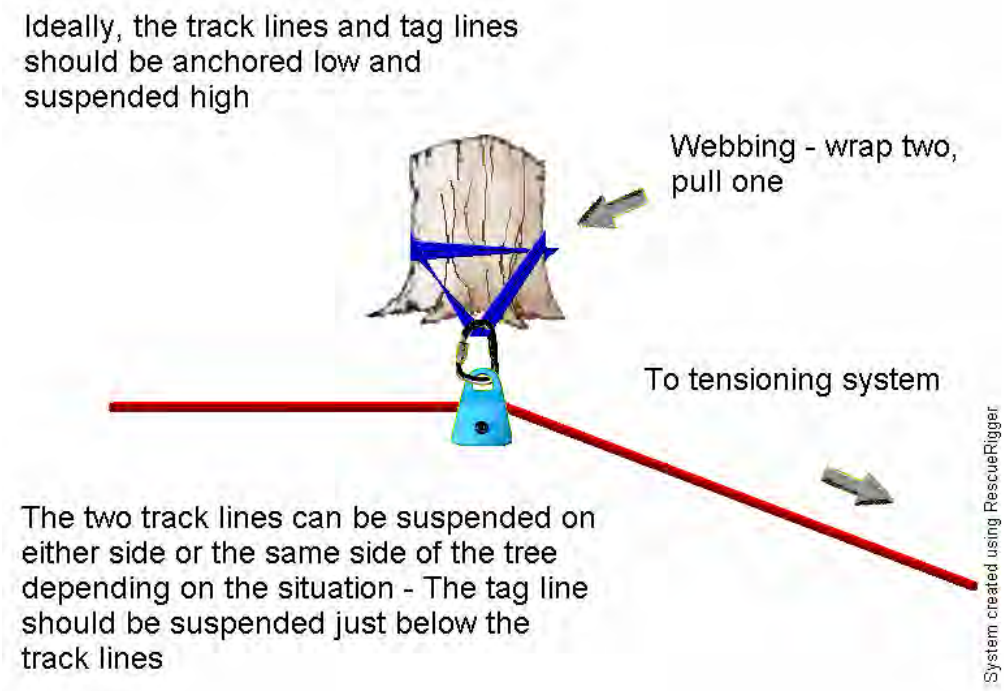


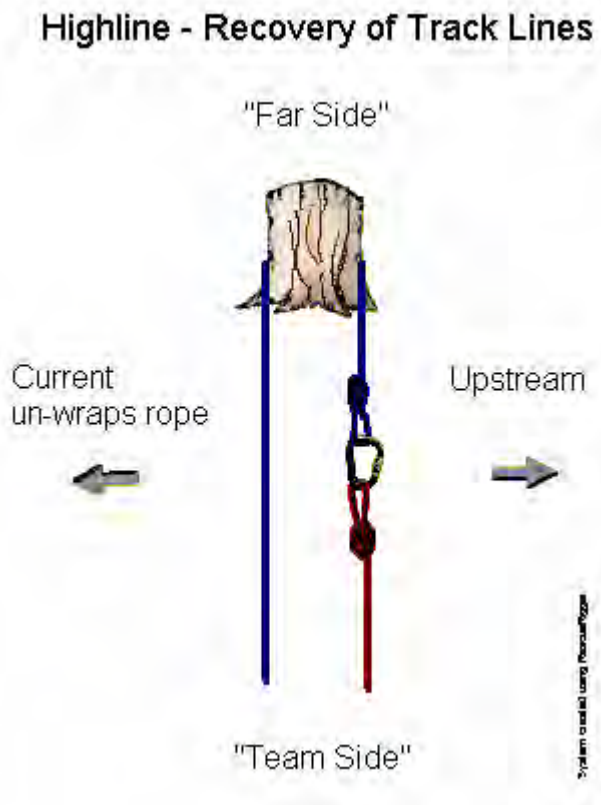
Far side attachment of both Track Lines



Far side attachment of Tag Line







Team Vehicles – Rescue 1

Compartment #1 – Command Center

Upper Shelf
Radio Harnesses
Laptop Computer
Beacons – Tracker 2 (10)
GPS Units – Etrex Legend (6)
(3) Pairs of Binoculars
ATV Helmets (Seasonal)
Snowmobile Helmets (Seasonal)
Recco Avalanche Rescue System
(Should always be plugged in)

Command Desk
Radios (6)
Batteries (6)
Cell Phone (fixed)
GPS (fixed)
VHF Radio (fixed)
(2) Spotlights

Command Desk (interior)

Digital Camera
Chemical Light Sticks
Pens/Pencils
Power Inverter
Radio Headset
Misc. Supplies
Spare Batteries

Compartment #1 - Command Center

Lower Shelf

Maps Spotting Scope Smoke Grenades

Compartment #2

Drivers Skis Sked Edge Rollers IC Vests Water Food Vehicle Anchor Pack Dynamometer / Remote Highline Pack Brake Tube Pack (4) Kootenay Pulleys Third Man Pack

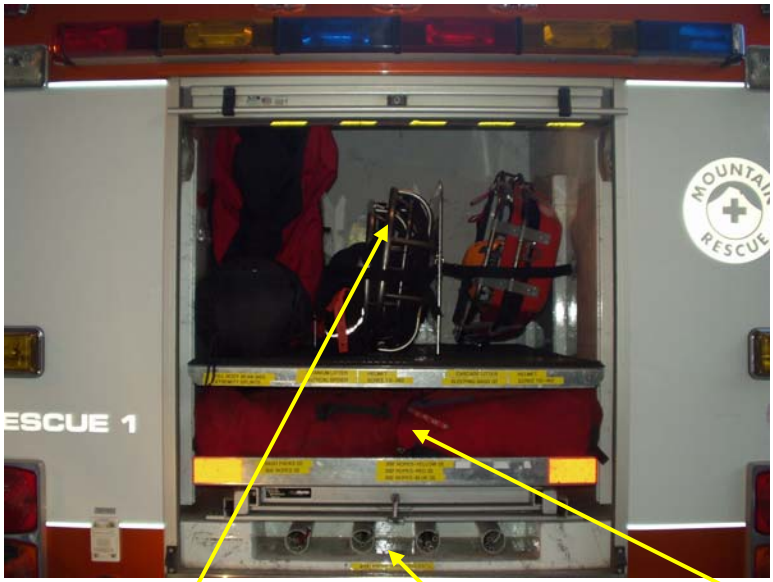
Compartment #3

Litter Wheel w/ Pack
Fire Extinguisher

Generator
Gas / Oil

Bolt Cutters
Extension Cord

Compartment #4 (rear)



Upper Tray

(2) Sleeping Bags
Titanium Litter / Litter tie-ins / Helmet / Spider
Cascade Litter / Litter tie-ins / Helmet
Full Bean Bag / Extremity Bean Bag

Below Lower Tray

Probe Poles

Lower Tray

Technical Bash Packs (2)
200’ Rope Yellow (3)
200’ Rope Red (3)
200’ Rope Blue (3)
300’ Rope (2)

Compartment #5

Upper Tray
Body Bag (2)

Middle Tray
600’ Rope on Spool
Traffic Cones (7)

Lower Tray
Vehicle Supplies
Vehicle Tools

Compartment #6

IV Warmer
Medical Gloves

Spare Avy supplies (seasonal)
(6) Small Med Kits

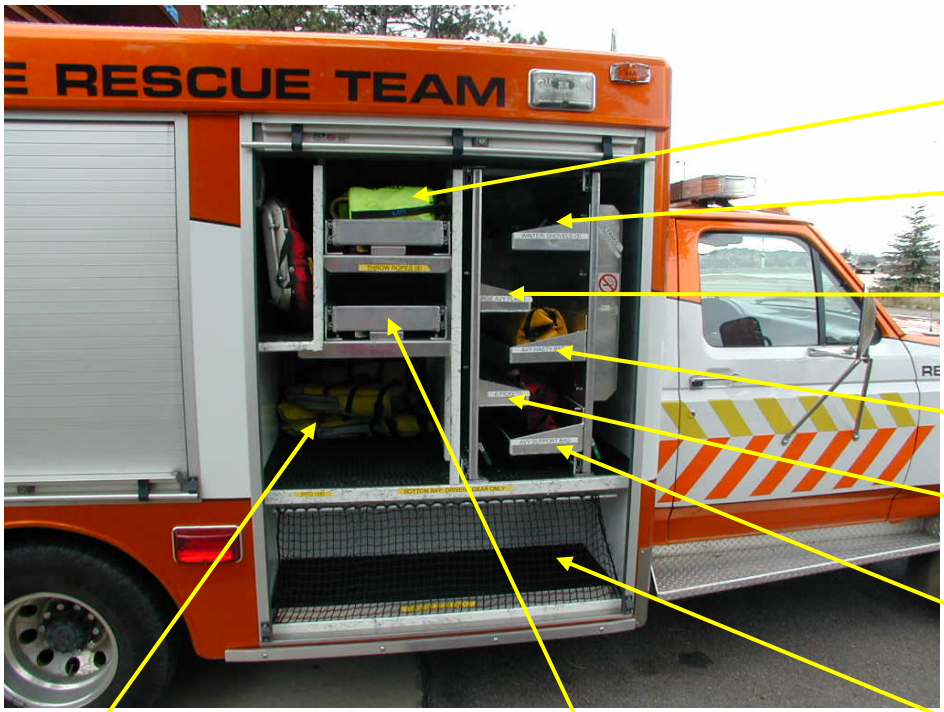
(9) Snowshoes

AED
Hot Packs
Spare “C” Collars

Lg. Med Pack
Airway Pack

(6) Ice Axes

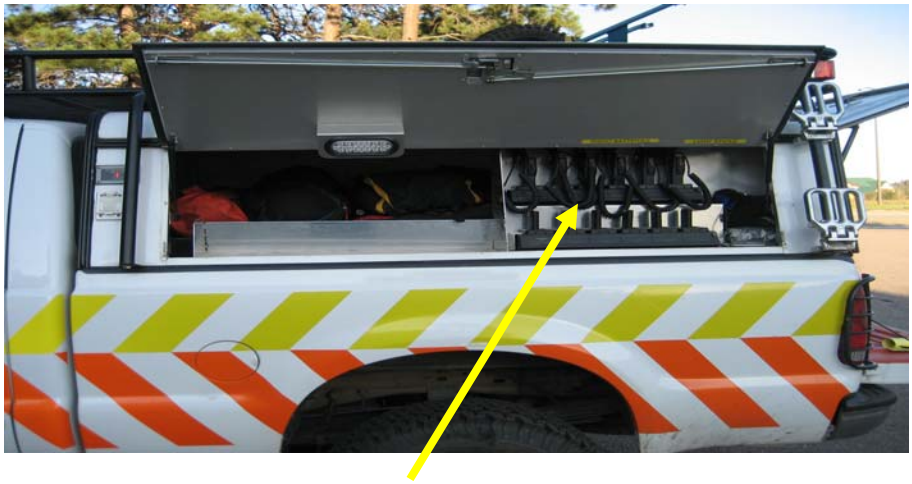
Compartment #7



Compartment #7 Pull-out Shelf

Team Vehicles – Rescue 2

Driver Side Compartment



(6) Radios
(6) Radio batteries in charger

Rear Compartment

Upper Tray
(2) Snow Shoes
Third man Pack
Ice Anchors (Seasonal)
Sked
Bean Bag/Sleeping Bag
Large Med Pack
Titanium Cascade Litter / Helmet
Titanium Litter / Spider / Helmet

Left & Right side of Lower Tray
(12) Snow Pickets (Seasonal)
(6) Snow Shovels
Cargo Net
2” Ball & Hitch
2 5/16” Ball & hitch

Lower Tray
Airway Pack
(4) Small Med Packs
(2) 200’ Rope Yellow
(2) 200’ Rope Red
(2) 200’ Rope Blue
(2) 300’ Rope
(2) Bash Packs
(4) Kootenay Pulleys

Passenger Side Compartment

(5) Tracker 2 Beacons (Seasonal)
(6) Avy Collapsible probes (Seasonal)
(5) Throw Ropes (Seasonal)
(1) Body Bag
Hot Packs
Avy Bash Pack
Avy Support Pack
(3) O2 Bottles / (2) O2 Regulators
(4) PFD's
Extra "C" Collars

Cab

(6) Radios / Radio Harnesses
IV Warmer
(6) Garmin GPS Units (4–Etrex Legend HCX)
Maps
Digital Camera
(3) Binoculars
Spotting Scope
Snowmobile / ATV Helmets (Seasonal)
Spotlight (Floor of Cab)

Roof Rack

Litter Wheel

Team Vehicles – Comm 4

Exterior Compartment #1

Retractable Awning

Upper Tray

(6) Folding Chairs
Folding Table
Ladder
Tire chains
Umbrella

Lower Tray

Propane Tank
(2) Extension Cords
Generator
Gas

Retractable Radio Antenna

Multiple Antenna Bar w/ Hand Crank

Interior

Secondary VHF Radio

800 Megahertz Digital Radio

UHF Radio (used for communication with Evergreen Fire)

800 Digital Handheld

(6) Team Handheld Radios

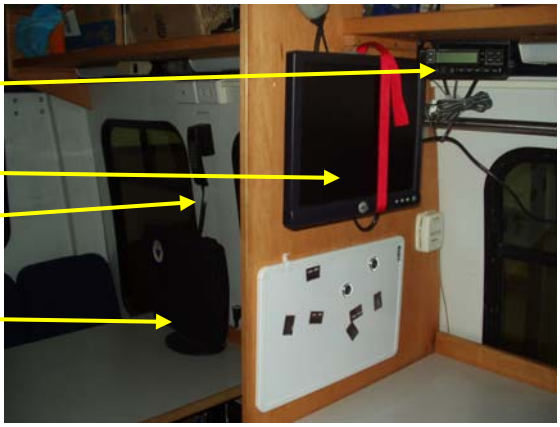
Cellular Phone

Main VHF Radio

Monitor 3

Analog Phone

Monitor 4



Monitor 1

Computer

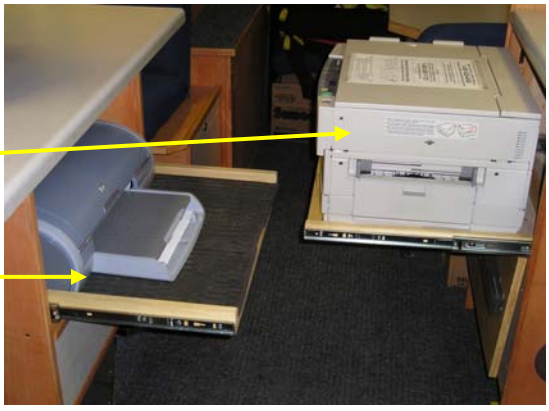
GPS

Ham VHF / UHF Radio

Monitor 2

Copy Machine

Printer



Team Vehicles – ATV's

Polaris Sportsman 550
(2008)

<u>Equipment on ATV'ss</u>
Tow Rope, Tools, Fix A Flat
Puncture Repair Kit, Tire Gauge, Registration

Polaris 6x6 Sportsman 500
(2006)

Polaris Sportsman 500
(2006)

<u>Equipment on ATV'ss</u>
Tow Rope, Tools, Fix A Flat
Puncture Repair Kit, Tire Gauge, Registration

Team Vehicles – Snowmobiles

(2) Artic Cat M-8 (2007, 2008)

Equipment on Snowmobile

Tool kit
Avalanche beacon
Snowshoes
Tow rope
Orange light sticks
Flagging tape
Spare key
Tie down straps
Snobunje Rattler

(2) Artic Cat Bearcat (2001, 2002)

Equipment on Snowmobile

Tool Kit
Avalanche beacon
Shovel
Snowshoes
Tow rope
Orange light sticks
Flagging tape
Spare key
Tie down straps
Snobunje Rattler

(2) Ski-doo Skandic Rotax 600 (2010)

Equipment on Snowmobile

Tool Kit
Avalanche beacon
Shovel
Snowshoes
Tow rope
Orange light sticks
Flagging tape
Spare key
Tie down straps
Troubleshooting chart
Snobunje Rattler

Luethy Sled – Stored in covered trailer - Designed in 2004 by Team member Phil Luethy

Rescue Sled – Stored in covered trailer – This sled was also designed by Team member Phil Luethy

Team Vehicles – Snowmobile Trailers

Storage of snowmobiles and related equipment in covered trailers.

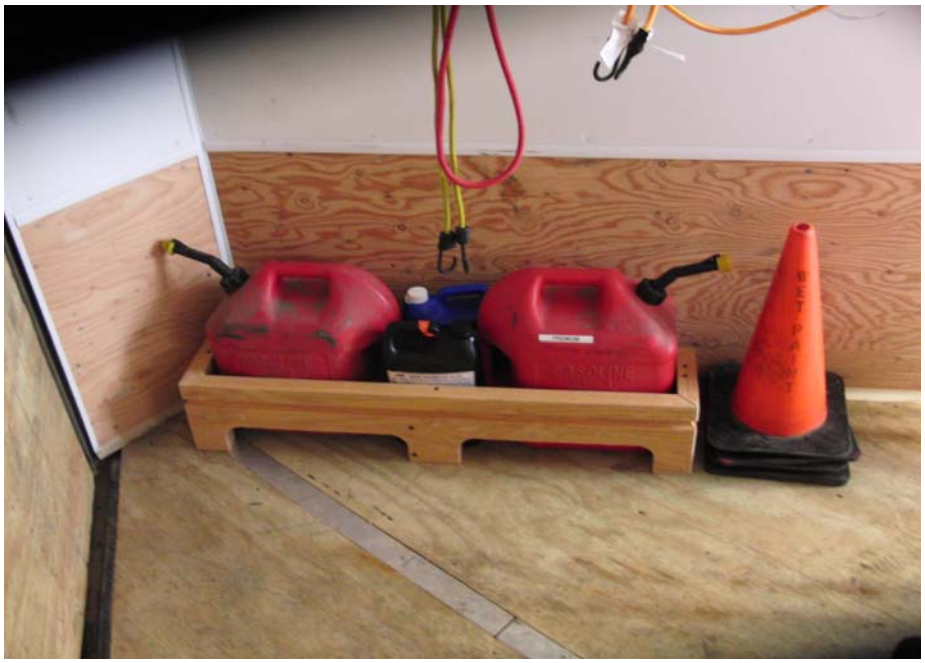
Skandic snowmobiles secured in the front using a double wrap through the "D" ring and the front bumper

M-8 snowmobiles secured in the rear - do not compress the suspension when securing them

Rescue Sled is stored with skis to the interior of the trailer with tails in the wood groves. Two horizontal straps used to secure it.

Luethy Sled is attached to hitch on wall. Skis need to be beyond the black plastic edge. Orange Litter secured to Luethy Sled frame using bungee loops.

M8's fuel, oil, antifreeze. Stored in the front of the trailer all together.



Skandic's fuel containers stored in the luggage compartment of each machine. Oil, antifreeze secured to rack.

2011 - Each enclosed trailer will have (20) 12’ rigid avalanche probe poles. All probe poles are secured to the ceiling of the trailers.

Team Vehicles – General Operation Guide

Before you drive

Use the following guidelines before driving team vehicles on a mission or training.

When you arrive at the shack

Contact the on-duty ML and verify the following:

- Location of command post.
- Any extra equipment such as maps, PFD's, etc.. that may be necessary for the mission.

Outside the vehicle

Before starting, walk around the vehicle and check for the following:

- Open compartments, door, and hood.
- Anything obstructing the vehicle.
- Disconnect the shore-line power.
- Verify the front 4WD hubs are locked/unlocked depending on your expected driving conditions.
- Visibly verify the tires are properly inflated.
- Check under the vehicle for any obstructions or leaks.

Starting the vehicle

Start the vehicle using the recommended procedure for the type of engine gasoline or diesel as outlined in the Owners Manual.

Keys

Each vehicle has two sets of keys. The spare sets of keys for each vehicle are located in the glove compartments. There is also a key to the equipment room on each set of spare keys.

Before you drive away

- Check the side mirrors and adjust if necessary. There may be significant blind spots on the passenger side.
- Check all compartment doors to be sure they are closed.
- Verify that you have enough fuel in the fuel tank.
- Place the vehicle in 2WD, 4HI or 4LOW depending on expected driving conditions. Also remember to lock/unlock the front hubs.
- If chains are required for driving conditions they should be applied to the front tires when in 4WD mode.

While you are en route

Use the following guidelines while driving a vehicle on a mission or training.

Switches, knobs and buttons

- Turn on the radio and be sure you are transmitting on MRA-1.
- The radio has pre-programmed Scan and should not be changed. Pressing the "Scan" button will activate and deactivate the scanning feature.

Radio protocols

- Notify the mission leader on MRA-1 that you are en route and whether you are responding emergent or non-emergent. (ie. Code 2 or Code 3)
- Notify the appropriate dispatch on the appropriate channel that you are in service and en route.

- Occasionally broadcast "KXL-315, Alpine Rescue Team on a mission." on MRA-1 if a mission is in progress.
- Upon arriving on scene, notify the appropriate dispatch center on the appropriate channel that you are on-scene (Code 1).

Cellular phone

- The cell phone allows for hands-free operation. Simply input the number and press the Send button to start a call. Pressing Send when the phone rings without lifting the receiver will activate hands-free operation on an incoming call.
- If you need to have a lengthy discussion, it is better to use the cell phone than the radio.

Emergency lights

A four position lever switch on the center console controls the emergency lights. Do not operate the lights for an extended period unless the vehicle is running. Each vehicle is switched in an identical manner.

OFF	Switch all the way to the left.
WARNING	First switch position to the right. Green light displays on the console. Used when parked in a traffic area. Turns on warning strobes on rear of vehicle.
EMERGENT (Night)	Second switch position from the left. Yellow light displays on the console. Used for emergent response during the night. Turns on all strobes except forward facing clear strobes.
EMERGENT (Day)	Far right switch position. Red light displays on the console. Used for emergent response during the day. Turns on all strobes.

Auxiliary lights

There are push on/off buttons on the center console to control external flood lights for the rear, left and right sides of the vehicle. These lights should not be used while driving.

Siren

- Normal siren operation should be in hands-free (HF) position on the dial switch on the console
- Turn power switch to ON position to activate siren system.
- Pressing the horn on the steering wheel once turns the siren on. Pressing it twice quickly turns it off.
- Pressing the horn once after the siren is on will cycle through three different tones. The normal tone is the Wail setting. Alternate tones should be used to help clear traffic if such traffic is not responding to the wail setting. Alternate tones should also be used when in close proximity to other emergency vehicles.
- Use the radio and PA settings on the dial switch as needed to turn on external vehicle speakers.
- Do not operate the siren for extended periods unless the vehicle is running.

When you arrive at the Command Post

Use the following guidelines when you arrive at the Command Post or training base.

- Do not turn the vehicle off immediately. Allow it to run for several minutes to cool down.
- If the Command Center radio is used, turn off the radio in the truck cab. Never use both radios at the same time.

After the mission

Use the following guidelines after a mission or training to get a team vehicle back to mission-ready status.

Fuel

- After a mission or training you need to evaluate whether you should refuel. To prevent fuel from becoming old and building up water, do not fill up the tanks unless you have less than ½ a tank of fuel.
- If you have less than ½ a tank of fuel, fill up.

- While refueling, check the fluid levels and fill up the tires if needed. Any other problems should be noted and given to the Vehicle Director ASAP. The on-call M.L. should be notified of any problems also.
- Fuel will adversely affect the paint and decals on the vehicle. If you spill fuel on the vehicle, you should clean the area with soapy water and rinse.

Refueling locations

- If possible you should always refuel Team Vehicles at the Clear Creek County barn off I-70 (exit 234) on the east of Downieville. There is a key to get you into the shop yard. There is a code on the dash to activate the fuel pumps. The keys to the County Barn are located in each truck.
- If a mission occurs east of the shack or anytime driving to Downieville isn't practical, the team has a charge account at Olde's Texaco in Evergreen.

Back at the shack

- If the engine is hot, allow it to idle for several minutes before turning it off.
- If the vehicle is in 4WD, unlock the hubs and switch back to 2WD.
- Be sure to use a spotter when backing Team vehicles into the garage. Be especially careful that the snowmobile trailers are pressed back against the rear of the garage and wheel chocks are in place before backing in.
- Turn off all electrical equipment in the cab and command compartments.
- Remove the keys from the ignition and leave on the driver side dash in plain view.
- Connect AC power to the shore line plug on the vehicle so that the radios in the truck will recharge.
- Fill out the mileage log located in the pouch on the driver side visor.
- Replace and refill all equipment used in the mission or training

Washing

- If using a pressure washer, do not bring the nozzle closer than 2 feet from the vehicle. The pressure from the water at close range will remove decals and chip the vehicle paint. Use a rag to remove stubborn dirt.
- Do not use liquid dish soap to wash the vehicle. Use soap designed for washing vehicles. Liquid dish soap strips wax from the paint.
- Wax the vehicle twice each year, once in the spring and once in the summer.

Team Vehicles – ATV Operator Guide

All Terrain Vehicles (ATV's)

At present, the team has four All Terrain Vehicles (ATV's). They are:

- 2008 Polaris Sportsman 550 (Red)
- 2008 Polaris Sportsman 550 (Black)
- 2006 Polaris 6x6 Sportsman 500
- 2006 Polaris Sportsman 500

Loading and unloading ATV's on the trailer:

The trailer has three removable ramps for loading from either side or the rear. Once the ATV's have been loaded onto the trailer, their parking brakes should be locked and the keys turned to the OFF position. Each ATV should be secured with four straps each to the welded tie-down points on the trailer. The ramps should be replaced where they belong on the trailer, and PROPERLY secured in place with the necessary pins. Each ramp is color coded.

Pre- Start up Checklist:

- Check fuel, oil and coolant levels
- Check tire pressure (Should be between 3-5 PSI)
- Check headlights

Starting the ATV's

- Be certain Fuel Selector Switch is in the ON position
- Turn key to On position
- Turn kill switch to On position
- Make certain transmission is in Neutral
- Choke if needed
- Depress green Start button

Safe Operation of the ATV

- ***ALWAYS WEAR A HELMET***
- Protective gear (Gloves, boots, eye protection) are strongly encouraged
- ***TIRES SHOULD NEVER BE INFLATED TO MORE THAN 5 PSI.*** Use the low pressure tire gauge in the rear compartment of each ATV.
- Though passengers are prohibited by the manufacturer, in reality, we occasionally must seat two people on an ATV. Be sure the passenger has on a helmet as well.
- When loading gear on an ATV, the load must be distributed equally and well-secured to prevent rollovers on uphill or side hill maneuvers. No more than 45 pounds should be loaded onto the front or back racks.
- If using the ATV for a period exceeding two hours, spare fuel must be carried with the vehicle.
- ***ALL RIDERS MUST BE CHECKED OUT BY THE ATV DIRECTOR OR HIS/ HER DESIGNEE BEFORE OPERATING TEAM ATV'S, OR ANY OTHER ATV OWNED BY PERSONS OTHER THAN REGULAR TEAM MEMBERS.***

General Information:

At least once a year, team members will have the opportunity to re-familiarize themselves with the machines by taking a training ride that should last for at least half an hour on moderately difficult terrain with gear strapped to the machine. Each member who has taken the check out ride will have an "X" on the call roster. Riders who demonstrate expert riding capabilities will be noted with the number "1" on the call roster, at the discretion of the ATV Director.
Any problems with the ATV's should be reported immediately to the ATV Director or the On-Call ML. EXTREME caution should be exercised when operating on a side hill to prevent rolling. Each machine is equipped with a tow strap, basic tools for repair, low pressure tire gauge and Fix- A- Flat.

Team Vehicles - Snowmobile Operator Guide

Snowmobiles

At present, the team has six Snowmobiles. They are:

- 2010 Ski-Doo Skandic 600
- 2010 Ski-Doo Skandic 600
- 2008 Arctic Cat M-8 800
- 2007 Arctic Cat M-8 800
- 2001 Arctic Cat Bearcat 550
- 2002 Arctic Cat Bearcat 550

Specifications:

2010 / 2010 Ski-Doo Skandic (600cc) - Two stroke, liquid cooled engines, electric or pull start, Digitally Encoded Security System, belt-driven 2 spd - automatic transmissions with reverse, hydraulic brakes, manual chokes, rear storage racks, under-seat storage compartments and trailer towing connections. Both have 2-up seating.

2007 / 2008 Arctic Cat M-8 (800cc) - Two stroke, liquid cooled engines, EFI, pull start, belt-driven automatic transmissions with reverse gear, hydraulic brakes, auto chokes, rear storage and trailer towing connections. Both are single seaters.

2001 / 2002 Arctic Cat Bearcats (550cc) - Two stroke, liquid cooled engines, electric or pull start, belt-driven automatic transmissions with reverse, hydraulic disc brakes, manual chokes, rear storage racks, under-seat storage compartments and trailer towing connections. Both have 2-up seating.

Equipment stored on each snowmobile may include but not be limited to: (depending on make/model and storage capacity)

- Tool kit
- Spare drive belt (stored under hood)

- Spare spark plugs (stored under hood or in tool kit)
- Avalanche beacon
- Shovel
- Snowshoes
- Tow rope (for pulling skiers)
- Orange light sticks (for night time trail marking)
- 1 set of ice picks (for self rescue from a frozen lake)
- Flagging tape (for daytime trail marking)
- Spare key
- Tie down straps
- Troubleshooting repair chart
- Snobunje Rattler (Extrication device -not on all Snowmobiles)

Additional winter transport equipment

Rescue Sled – Collapsible metal sled on skis, stored in one of the Hallmark trailers and pulled behind the snowmobiles for transporting team equipment.

Luethy Sled – Plastic-type litter attached by a frame system to a set of skis. Stored in one of the Hallmark trailers and pulled behind the snowmobiles for transporting a subject and/or rescuer.

ALL RIDERS MUST BE CHECKED OUT BY THE SNOWMOBILE DIRECTOR OR THEIR DESIGNEE BEFORE OPERATING TEAM SNOWMOBILES OR ANY OTHER SNOWMOBILES ON TEAM MISSIONS/TRAININGS

General Information

Winter weather in the mountains of Colorado can be brutal and unforgiving. Your preparation and knowledge may make the difference between a successful mission and a disaster. The team relies heavily upon our snowmobiles during the winter months and it is unlikely that you will be able to avoid their use as an active field member. Please always remember that as an Alpine member, you will be viewed as a professional by the public, regardless of your experience, and you should conduct yourself accordingly.

Your equipment - Your responsibility
Each time you enter the field you are required to bring the following equipment:

- Your pack (which should include appropriate clothing and survival items anticipating the worst conditions)

- A team radio/spare batteries (even for short trips)
- Avalanche gear (beacon, shovel, probe, ice ax and Avalung)
- Snow shoes or skis (as an alternative method to travel)
- Helmet

Safety Basics

- Ride within your ability
- Follow driving rules that you would use in your car - Don't drive too fast; Don't follow too close; Stay on the right side; Pass on the left; Be considerate; Drive defensively
- Don't ride alone
- Wear your helmet and eye protection

Primary snowmobile controls

- Kill switch
- Ignition and/or manual pull start cord
- Choke and/or primer
- Throttle
- Brake/Parking brake
- Light switch
- Reverse handle
- Equipment compartment

Pre-ride checklist

- Check oil and gas levels - secure hood
- Check throttle and brake levers
- Check lights (front and rear)
- Secure personal gear
- Secure any towed gear (sled or toboggan)
- Check track unstuck and steering free and clear

Refueling

- Machine should be turned off
- Use proper fuel for machine (non-ethanol premium unleaded)
- Machines should be fueled in open ventilated area/No smoking

Starting snowmobiles

- Check kill switch (switch should be in up position to start)
- Choke to start cold engine
- Pump gas primer if applicable (cold start only)
- Turn key for electric start/Pull manual start cord if not or if battery is dead

- Once started, close choke
- Release parking brake if locked (important to prevent fire danger)

Unloading trailers

- Trailer must be secured to truck hitch and truck should be off and in park
- Remove snowmobile cover, tie downs and ski cross bar if installed
- Open/put in place forward or aft ramps as appropriate
- Drive snowmobile from trailer until clear of trailer

Loading trailers

- Trailer must be secured to truck hitch and truck should be off and in park
- Open/put in place, aft ramp of trailer
- Carefully drive snowmobile onto trailer bed
- Secure snowmobile to trailer with crossbar through skis and with tie downs to trailer as appropriate
- Place cover on snowmobile on Triton trailer, starting at the front
- Covers are usually not required for snowmobiles in Hallmark trailers

Riding guidelines

- Ride and park single file
- Climb and descend steep hills with a straight approach - don't lock brakes on descent
- Be alert for obstacles, wildlife and other backcountry users and steer clear of them
- Use appropriate riding positions (sitting, posting) for the terrain
- When riding in groups, you are responsible for the rider behind you - look back often, keeping him in sight
- Keep hands on the steering handles and feet off of the ground
- Lean into turns
- Stay on established packed trails when possible
- Shift weight to uphill side of slope when traversing side hills
- If collision is inevitable - throw yourself away from the object of impact
- If riding at night - be able to stop within the distance of your headlights
- Be aware of avalanche proned slopes - Cross danger zones one rider at a time
- Use extra caution and reduce speeds when approaching hill crests
- Be especially aware of gates and fencing for obvious reasons
- When crossing pavement or snowless areas dismount and walk beside snowmobile to reduce wear of skags and track
- Keep hands and feet clear of the track when engine is running
- Become familiar with hand signals and use them appropriately

- Check stowed gear often, especially on rough terrain
- Stay off of frozen bodies of water unless your are familiar with ice depths and conditions
- Leave key in ignition at all times - Don't leave machine idling for extended periods
- Flag your direction of travel at trail intersections - Don't rely on following your own tracks out
- Know rules of the road - yield accordingly
- Don't park or stop in blind spots (below hill crests and corners)
- If you become airborne, keep skis straight on impact
- Never deliberately stop facing uphill
- When breaking trail, following riders to lead rider should attempt to widen trail for returned trip

Riding positions

- Sitting - Safest on level areas
- Kneeling - effective on side hills
- Standing (knees should be slightly bent) - useful in deep snow and on hill climbs, also allows better visibility, but less overall control
- Posting - effective on rough terrain

Riding with passengers

- Don't take passengers unless you are an experienced rider
- Instruct passengers to lean properly and place hands and feet in proper positions
- Ask passengers to dismount and walk pass trail hazards
- Inform passengers how to signal the driver to stop
- Remember that your maneuverability will be diminished when carrying a passenger
- Very small children should ride in front of driver

Getting unstuck

- Try placing the machine in reverse gear unless you are facing uphill on a slope
- Try to lift the machine back on to the hard-packed trail if possible - lifting from the rear of the machine is generally easiest - this may take several movements
- If necessary break a trail in front of the direction of travel and clear loose snow from the track area
- If you are stuck ascending a hill, dismount and turn the machine around being careful not to roll the machine (position yourself upslope)

- If you have a second team member available having him/her pull on the ski tip while you are driving out may help - Be sure they stand to the side and clear of your direction of travel

Emergency maintenance/Trouble-shooting

- Changing drive belt - signals to change belt - Throttle depressed but machine doesn't move or machine moves slowly
- Machine won't start - see trouble shooting guide in seat compartment
- Changing spark plug when fouled - engine turns over but won't start
- Emergency pull strap located in tool kit if manual pull cord breaks
- Towing - remove drive belt - securing tow strap to spindle, not ski loop
- If abandoning snowmobile mark location with GPS setting and flagging
- Report any damage, noises, excessive smoke to director immediately

Patient Transport with Snowmobiles

Use only approved equipment designed specifically for transporting patients.

This equipment should have rigid stationary bars and a safety chain to attach to the snowmobile. Reflectors and an attached safety flag are also recommended.

Snowmobiles used for towing must be installed with proper towing connections.

Only experienced drivers should attempt to operate the snowmobile while towing.

Allow extra distance for braking and turning while towing a Sled/Toboggan.

Avoid sudden stops or quick accelerations. Look back often. Learn and use hand signals to communicate with other members of the transport team as engine noise may prevent verbal communication.

Reduce speeds when towing, especially on rough terrain to avoid further injury to the patient. Be aware that the snowmobile will have less maneuverability while towing a Sled/Toboggan.

Patient should be placed on a litter prior to transportation to facilitate loading and unloading from the Sled/Toboggan. Choose terrain that is level for loading and unloading. The snowmobile engine should be turned off.

Provide sufficient protection to the patient from the elements to reduce the risk of hypothermia. Wind chill factors and frostbite to exposed skin surfaces should be considered while transporting patient.

A medical technician may accompany the patient during transport. He/she should ideally be in constant communication with the driver. He/she should remain seated. It is recommended that no other passengers be allowed to ride in the Sled/Toboggan.

Predetermine transportation route and don't deviate from it. Travel only on packed trails and avoid steep inclines and side hilling. Ascend and descend hills with a straight approach. Snowmobile and Sled/Toboggan should be faced in the desired direction of travel prior to loading the patient. Avoid the need for backing or disconnecting the Sled/Toboggan.

An additional snowmobile and driver should accompany the transporting team. He/she should follow behind the Sled/Toboggan in single file. Transporting team should always carry a radio, winter survival gear, snow shoes, and a GPS locator.

If traveling in backcountry avalanche prone areas, personal equipment should also include a beacon, shovel, probe pole and Avalung breathing device. Patient should also be fitted with a beacon. The beacon needs to be checked for a transmitting signal.

Loose gear such as oxygen bottles or packs should be stowed and secured within the sled/toboggan to prevent shifting.

Helmets and eye protection should be worn by both the driver and medical technician.

When parking the snowmobile, apply the locking hand brake. The engine should not be running if the driver is not in the seat.

If the snowmobile and Sled/Toboggan become stuck in deep snow, it is likely that the Sled/Toboggan will need to be detached from the snowmobile. If this is necessary, use extreme caution in maintaining control of the Sled/Toboggan. If the patient is able to be moved, it may facilitate the procedure by removing him/her from the toboggan.

Reference Material

Mountain Rescue Techniques

Mountain Search & Rescue Techniques, R. May
An older main reference (M.S.R.T.) in Alpine's training manual.

The Freedom *of the* Hills, The Mountaineers
A classic reference – New 7th edition.

Wilderness Search and Rescue, Tim Setnicka
A classic and main reference (W.S.R.) in Alpine's training manual.

High Angle Rescue Techniques, Vines / Hudson
An updated textbook for technical rope work. Great diagrams and photographs.

Search and Rescue Fundamentals (3rd ed.), Cooper, LaValla, Stoffel
This may become our basic manual in the future. A great reference.

CMC Rope Rescue Manual, Smith / Frank
Known for its step-by-step diagrams of haul and lowering systems. Teaches the single point litter attachment method of belaying a vertical litter.

On Rope, Padgett / Smith
Another excellent technical rope work textbook. It is slanted towards the vertical caver, but many techniques are used in mountain rescue work.

Ropes, Knots and Slings, Walt Wheelock
Somewhat outdated text, but great knot diagrams.

Knots for Climbers, Craig Luebben
A good reference for personal climbing knots as well as knots used by the team.

Personal Climbing Techniques

Basic Rock Craft, Royal Robbins
An inexpensive classic for the beginner climber.

Advanced Rock Craft, Royal Robbins
The next step for the climber. Includes lead climbing.

Climbing Anchors, John Long
Great diagrams, good reference for the technical climber.

More Climbing Anchors, John Long / Bob Gaines
Great diagrams, good reference for the technical climber.

Self-Rescue, David Fasulo
Great diagrams, good reference for the technical climber.

Wilderness Emergency Care

Wilderness Medical Society, Edited by William W. Forgey, M.D.
2nd Edition. Practice guidelines for wilderness emergency care.

Medicine for Mountaineering, James A. Wilkerson, M.D.
3rd Edition. Detailed reference for backcountry emergencies.

Wilderness Medicine, Edited by Paul S. Auerbach, M.D.
The bible for dealing with all wilderness emergencies.

Medicine for the Outdoors, Paul S. Auerbach, M.D.
A guide for emergency medical procedures and first aid.

Basic Rescue & Emergency Care, A.A.O.S.
Includes detailed ICS, medical, urban rescue~ water rescue, confined space and rescue tools.

Snow Travel Techniques

Glacier Travel and Crevasse Rescue, Andy Selters / The Mountaineers
Great reference for snow travel, expedition skills and crevasse rescue techniques.

Search Techniques

Fundamentals of Mantracking, Taylor/Cooper
An easy reading textbook by "the master". You will develop a new appreciation and awareness for tracking, along with all of the basic skills. All searchers should read this at least once.

Be Expert in Man and Compass, K. Jeilstrom
A great introduction to orienteering. Easy to understand.

Alpine Rescue Team

Blue Book

Part 6 – Appendix

Blue Book Revision Summary Sheet
Alpine – MM Education Fund
Alpine – SAR Education Fund
Avalanche Rescue Checklist
Avi Map – Berthoud Pass
Avi Map – Loveland Pass
Board of Directors / Job Roster
Check Request Form
Communications - 800 MHZ Overview
Communications - 800 MHZ Procedures
`
Communications - Cell 911 Procedures
Communications - Comm 4 APRS Procedures
Communications - Ham Radio Frequencies
Communications - PLB
Communications - Radio Relay Points
Insurance Information
Map to the Shack
Radio Numbers
Rescue 1 Long Form
Rocky Mountain Regional By-Laws
Rocky Mountain Regional Guidelines
Rocky Mountain Regional Policies
Rocky Mountain Regional A/R Exercise Worksheet
Team Assignment Checklist
Team Awards

ALPINE RESCUE TEAM

BLUE BOOK REVISION SUMMARY SHEET

Part 1: History and Team Structure

Article/Sec	Date	Addition, Deletion or Change
Sec 5	01/01/07	Changes to Regional Team information
Sec 3	03/01/08	Changed *"Principle"* to *"Code"* Reworded this section
Sec 4	07/01/08	Addition of information about new Shed
Sec 2	12/31/10	Introduction section updated
Sec 4	12/31/10	Shack section updated
Sec 3	12/31/10	Orientation section updated
Sec 3	06/28/11	Orientation section updated
Sec 3	02/08/12	Orientation section updated

Part 2: By-Laws and Appendices

Article/Sec	Date	Addition, Deletion or Change
4.17	10/08/03	Addition: *Excepting Rank Representative positions*, a vacancy shall be filled only if more than four months remain in the annual term of the Board at the time the vacancy occurs unless otherwise determined by the Board of Directors.
5.5	03/08/06	Deletion: *"A vacancy shall be filled only if more than four months remain in the annual term of the officer at the time the vacancy occurs unless otherwise determined by the Board of Directors. An officer elected to fill a vacancy shall serve for the unexpired term of his or her predecessor in office".*
1.4.5	03/08/06	Changed: *"Snowmobiles"* to *"(OHV) Off Highway Vehicles"*
3.11	04/12/06	Changed *"have been suspended"* to *"are currently under suspension"*
3.1.1a	12/12/07	Changed *"shall either be employed or"* to *"currently or shall have been in the past"*
3.1.7	12/12/07	Added new Section – Dual Membership
3.2	12/12/07	Added second sentence to his section
3.3	12/12/07	Changed *"designated leader"* to *"acting Mission Leader"*
3.9	12/12/07	Deleted last sentence
3.10	12/12/07	Deleted word *"affirmative"*. Added second sentence to section
4.6	12/12/07	Added *"two members of the board"* and *"vote of Board of Directors"*
Appendix III	12/12/07	Reworded this section, added Alpine insignia image
Appendix IV	12/12/07	Reworded this section, added MRA insignia image
Appendix II	02/13/08	Reworded entire section
XV	02/13/08	Changed word *"Principles"* to *"Code"*
4.3	02/13/08	Reworded entire section
3.14	06/10/09	Added *"These services may include administrative (non-field) duties during a Team training and/or operation"*
4.3	06/10/09	Reworded entire section
5.1	06/10/09	Changed word *"corporation"* to *"Team"* and deleted last sentence.
5.7	06/10/09	Added *"be a qualified rescue member and shall"*
5.7	06/10/09	Added *"In recommending promotions to the Board of Directors, the Field Director shall consider input from the rank representatives"*

Appendix I	06/10/09	Changes to the Guidelines of Proficiency in the following sections – 1.1.6/ 1.1.10/1.1.12/1.1.14/1.1.15/1.2.6/1.2.7/1.2.8/1.2.9/1.3.4/1.3.8/1.4.2/1.4.3/ 1.4.6/2.1.2/2.1.3/2.1.4/2.1.5/2.1.6/2.1.7/2.2.2/2.2.4/2.3.1/2.3.2/2.3.3/2.4.3/2.4.5

Part 3: Administrative Policies

Article/Sec	Date	Addition, Deletion or Change
Sec 1	02/09/05	Changes to General Policy
Sec 2	02/09/05	Changes to Check Signing Policy
Sec 3	02/09/05	Changes to Criteria of Membership Policy
Sec 11	02/09/05	Added new *"Team Blue Book"* Policy
Sec 1	06/08/05	Changes to General Policies – Dues
Sec 12	03/08/06	Added new *"Nextel Account"* Policy
Sec 4	09/13/06	Deleted entire Policy
Sec 1	12/13/06	Changes to General Policy – Dues
Sec 9	12/13/06	Changed name of policy to "*Team Representative Expense*"
Sec 11	12/13/06	Changes to Team Blue Book Policy
Sec 12	12/13/06	Changes to Nextel Account Policy
Sec 3	02/13/08	Deleted "*Criteria of Membership"* Policy
Sec 3	02/13/08	Added new "*Membership*" Policy
Sec 1	02/13/08	Deleted entire *"Alcohol and Drugs"* section
Sec 1	02/13/08	Added last sentence to *"Dues"section.*
Sec 1	02/13/08	Deleted *"Marketing Media"* section
Sec 1	02/13/08	Deleted *"Climbing Wall – see rules"* from shack section
Sec 4	02/13/08	Added new *"Associate Member Program"* Policy
Sec 7	02/13/08	Changes to Pro-Purchase Policy
Sec 10	02/13/08	Changes to Team Jackets Policy
Sec 11	09/10/08	Changes to Blue Book Policy
Sec 13	09/10/08	Added new *"Outreach Program"* Policy
Sec 14	08/12/09	Added new *"Donations"* Policy
Sec 7	11/11/09	Added new language *"unless authorized by the vendor"*
Sec 5	08/10/11	Deleted *"Mission-Media Guidelines"* Policy
Sec 6	08/10/11	Deleted *"PIO"* Policy
Sec 5	08/10/11	Added new *"Public Information"* Policy
Sec 12	12/14/11	Deleted *"Nextel Account"* Policy
Sec 11	12/14/11	Changes to Blue Book Policy
Sec 3	02/08/12	Changes to Membership Policy

Part 4: Field Procedures

Article/Sec	Date	Addition, Deletion or Change
Sec 9	06/01/05	Added new *"C-spine Immobilization"* Procedure
Sec 10	03/08/06	Added new *"Snowmobile Skill Classification"* Procedure
Sec 2	04/12/06	Changed *"Attendance Requirements" to "Attendance Guidelines"*
Sec 3	08/08/07	Changes to Emergency Vehicle Procedure
Sec 6	01/14/09	Changes to Probation Period Procedure
Sec 11	01/14/09	Added new *"Sanctioned Team Training Events"* Procedure
Sec 2	01/14/09	Changes to Attendance Procedure. Renamed "Participation Requirements"
Sec 1	05/18/09	Changes to General Procedure

Sec 2	05/18/09	Changes to Participation Requirements Procedure
Sec 3	05/18/09	Changes to Emergency Vehicle Procedure
Sec 4	05/18/09	Changes to PM Evaluation Procedure
Sec 5	05/18/09	Changes to Membership Procedure
Sec 6	05/18/09	Changes to Probation Period Procedure
Sec 8	03/10/10	Deleted *"Qualified Rescue Rank Promotions"* Procedure
Sec 7	12/31/10	Renamed *"Mission Leader Requirements"* and updated
Sec 11	12/31/10	Renamed *"Team Training Events"* and updated
Sec 2	12/14/11	Renamed *"Attendance Requirements"* and updated
Sec 6	12/14/11	Changes to Probation Period Procedure
Sec 8	12/14/11	Added new *"Mission Recording"* Procedure
Sec 7	12/14/11	Changes to Mission Leader Requirements Procedure
Sec 4	02/08/12	Changes to PM Evaluation Procedure

Part 5: Training Guidelines

Article/Sec	Date	Addition, Deletion or Change
Sec 18.1 Page 1	04/13/05	Added Recco to list of equipment in Rescue 1
Sec 18.1 Page 3	04/13/05	Changed name of Technical Bash Kits to Technical Bash Packs
Sec 18.1 Page 4	04/13/05	Deleted Avy Rescue Pack – no longer in Rescue 1
Sec 18.1 Page 5	04/13/05	Changed name of Avy Bash kit & Support kit to Avy Bash Pack and Avy Support Pack
Sec 18.2 Page 1	04/13/05	Changed name of Bask Kits to Bash Packs
Sec 18.2 Page 2	04/13/05	Changed name of Avy Bash kit & Support kit to Avy Bash Pack and Avy Support Pack
Sec 15.9 Page 1	04/13/05	Added additional descriptions for the two beacons used by the team
Sec 15.9 Page 2	04/13/05	Added Recco Avalanche Rescue System to Snow Equip descriptions
Sec 15.12	04/13/05	New sections - Technical Bash Packs / Avy Bash Packs / Avy Support Packs
Sec 2	01/01/07	Grammatical changes to section
Sec 5	01/01/07	Addition of new radio frequencies
Sec 6	01/01/07	Grammatical changes to section
Sec 9	01/01/07	Addition of APRS information
Sec 13.1	01/01/07	Grammatical changes to section
Sec 13.2	01/01/07	Personal Equipment list updated
Sec 14	01/01/07	Team Equipment Overview section updated
Sec 15.1 – Sec 15.17	01/01/07	All sections updated / New sections - Sec 15.12 to 15.17
Sec 18.1 – Sec 18.4	01/01/07	All four vehicle sections updated.
Sec 19.1	01/01/07	Grammatical changes to section
Sec 14	03/01/08	Team Equipment Overview section updated
Sec 15.2	03/01/08	Webbing & Cordage section updated
Sec 15.6	03/01/08	Litters section updated
Sec 15.8	03/01/08	Climbing Gear section updated
Sec 15.9	03/01/08	Avalanche Gear section updated
Sec 15.12	03/01/08	Packs section updated
Sec 18.1	03/01/08	Team Vehicles – Rescue 1 updated
Sec 18.2	03/01/08	Team Vehicles – Rescue 2 updated
Sec 18.3	03/01/08	Team Vehicles – Comm 4 updated
Sec 18.5	03/01/08	Team Vehicles – Snowmobiles updated
Sec 15.15	12/31/08`	Team Equipment- Radios updated
Sec 5	12/31/08	Communications section updated
Sec 18.2	12/31/08	Team Vehicles – Rescue 2 updated
Sec 18.3	12/31/08	Team Vehicles – Comm 4 updated
Sec 18.4	12/31/08	Team Vehicles – ATV's updated
Sec 18.5	12/31/08	Team Vehicles – Snowmobiles updated

Sec 19.2	12/31/08	Team Vehicles – ATV Operator Guide
Sec 19.3	12/31/08	Team Vehicles – Snowmobile Operator Guide
Sec 18.5	11/01/09	Team Vehicles – Snowmobiles updated
Sec 9	12/31/10	GPS section updated
Sec 12	12/31/10	Avalanche Beacon section updated
Sec 15.1	12/31/10	Ropes section updated
Sec 15.2	12/31/10	New photos of Spider and commercial Prusik loops
Sec 15.5	12/31/10	Addition of Petzl "Rig" to this section
Sec 15.6	12/31/10	New litter photo
Sec 15.7	12/31/10	Edge Protection section updated
Sec 15.8	12/31/10	Climbing Gear section updated
Sec 15.9	12/31/10	Avalanche Gear section updated
Sec 15.12	12/31/10	Packs section updated
Sec 15.14	12/31/10	Navigation section updated
Sec 15.15	12/31/10	Radios section updated
Sec 15.17	12/31/10	Testing – Safety section updated
Sec 16.5	12/31/10	Team Knots section updated
Sec 17.3	12/31/10	Third Man/Pick-off section updated – new diagrams also
Sec 18.2	12/31/10	Rescue 2 section updated
Sec 18.3	12/31/10	Comm 4 section updated
Sec 18.5	12/31/10	Snowmobile section updated
Sec 19.3	12/31/10	Snowmobile Operator guide updated
Sec 4	02/25/11	Updated Page 1, paragraph 7 & Page 2, paragraph 6
Sec 2	08/10/11	Updated Page 6, paragraph 2
Sec 15.1	12/14/11	Ropes section updated / new photos
Sec 15.2	12/14/11	Webbing & Cordage updated /new photos
Sec 15.9	12/14/11	Avalanche Gear updated / new photos
Sec 15.14	12/14/11	Navigation section updated / new photos
Sec 15.15	12/14/11	Radios section updated / new photos
Sec 15.16	12/14/11	Helmets section updated / new photos
Sec 18.5	12/14/11	Snowmobile section updated / new photos
Sec 15.9	02/08/12	Avalanche Gear updated/new photos
Sec 18.1	02/08/12	Rescue 1 section updated/new photos
Sec 18.2	02.08/12	Rescue 2 section updated/new photos

Part 6: Appendix

Article/Sec	Date	Addition, Deletion or Change
Check Request Form	04/25/05	New Check Request Form
Radio Numbers	04/12/06	Radio Numbers updated
Team Awards	04/12/06	Team Awards updated
Berthoud Pass Map	04/12/06	Added new "*Berthoud Pass Avalanche Map*"
Loveland Pass Map	04/12/06	Added new "*Loveland Pass Avalanche Map*"
MRA Regional Policies	12/08/06	New Rocky Mountain Regional Accreditation Policies
Radio Numbers	12/31/06	Radio Numbers updated
BOD / Job Roster	12/31/06	2007 BOD /Job Roster updated
Team Awards	12/31/06	Team Awards updated
Rescue 1 Long Form	12/31/06	Added new "*Rescue 1 Long Form*"
BOD / Job Roster	12/31/07	2008 BOD /Job Roster updated
Team Awards	12/31/07	Team Awards updated
Radio Numbers	12/31/07	Radio Numbers updated
Check Request Form	12/31/07	Check Request Form updated
MRA Regional Policies	03/01/08	Grammatical changes

SAR Education Fund	03/01/08	Deleted the words *"field active"* in eligibility section
BOD / Job Roster	12/31/08	2009 BOD /Job Roster updated
Team Awards	12/31/08	Team Awards updated
MRA Regional Policies	12/31/08	Regional Accreditation Policies updated
Comm-800 MHZ Overvi.	12/31/08	Added new *"Communications – 800 MHZ Overview document"*
Comm-800 MHZ Proced.	12/31/08	Added new *"Communications – 800 MHZ Procedures document"*
Comm-911 Cell	12/31/08	Added new *"Communications – Cell 911 Procedures document"*
Comm-Comm 4/APRS	12/31/08	Added new *"Communications – Comm 4/APRS Procedures document"*
Comm-PLB	12/31/08	Added new *"Communications – PLB Procedures document"*
Comm-Radio Relay Pts.	12/31/08	Added new *"Communications – Radio Relay Points document"*
Comm-Ham Radio Freq.	12/31/08	Added new *"Communications – Ham Radio Frequencies document"*
Check Request Form	02/12/09	Check Request Form updated
Team Awards	12/05/09	Team Awards updated
MRA Regional Policies	12/05/09	Regional Accreditation Policies updated
MRA Regional Guidelines	12/05/09	Added *"Regional Accreditation Guidelines"*
BOD / Job Roster	03/10/10	2010 BOD / Job Roster updated
Avalanche Checklist	04/14/10	New Avalanche Checklist added
Team Assign. Checklist	04/14/10	New Team assignment Checklist added
Radio Numbers	12/31/10	Radio Numbers updated
MRA Regional Policies	12/31/10	Regional Policies updated
MRA Regional Guidelines	12/31/10	Regional A/R Exercise Guidelines updated
MRA A/R Worksheet	12/31/10	A/R Exercise Worksheet updated
Team Awards	12/31/10	Team Awards updated
Comm-800 MHZ Overvi.	12/31/10	Communications – 800 MHZ Overview document updated
Comm-800 MHZ Proced.	12/31/10	Communications – 800 MHZ Procedures document updated
BOD / Job Roster	12/31/10	2011 BOD / Job Roster updated
BOD / Job Roster	02/25/11	2011 BOD / Job Roster updated
MRA Regional Bylaws	05/21/11	New Regional Bylaws
Radio Numbers	10/07/11	Radio Numbers updated
Team Awards	12/14/11	Team Awards updated
BOD / Job Roster	12/14/11	2012 BOD / Job Roster updated
BOD / Job Roster	02/08/12	2012 BOD / Job Roster updated

MISSION MANAGEMENT EDUCATION FUND

History Behind the Mission Management Education Fund (MMEF)

The Mission Management Education Fund ("MMEF") was created in December of 1992. For the first 11 years that the fund was in existence it was known as the J. Hunter Holloway Memorial Fund. In late 2003 the team's Board of Directors elected to rename the fund to more accurately describe the intended purpose of the fund. At the same time the Board made significant modifications in the manner in which the fund was administered to better full fill the needs of the team.

Although the fund has been given a new name, the foundation remains the same. The fund was created in memory of Mr. J. Hunter Holloway who lost his life in a tragic automobile accident on April 30, 1992 at the age of 58. A long time member of the team, Hunter joined Alpine in 1974 and held the rank of Qualified Rescue Member and Mission Leader at the time of his death. During his tenure with the team Hunter was devoted to making Alpine one of the most recognized and respected search and rescue teams in the country.

Hunter's dedication to search and rescue extended far beyond his commitment to Alpine. Hunter was recognized nationally for his many contributions toward the promotion and development of the SAR community. He was a past President of the Colorado Search and Rescue Board, a past President of the National Mountain Rescue Association and a former board member of the National Association for Search and Rescue. Hunter was instrumental in the founding of the State of Colorado Division of Wildlife Search and Rescue Fund and served on the Fund's advisory board from its inception.

Hunter is best remembered within Alpine for his unselfish commitment to helping others learn the skills of search and rescue and understanding, and then living, the philosophy behind a team like Alpine. He was especially dedicated in helping team members develop into leaders within the search and rescue community so that they might further the work that was so important in his life.

Purpose of the Fund

The purpose of the MMEF shall be to provide financial assistance to the members of Alpine Rescue Team for education and leadership training in the area of mission management. Priority will be given to search related education and in particular the Managing the Search Function class offered through the Colorado Search and Rescue Board or a program comparable in content.

Administration of the Fund

The MMEF shall be administered by a committee (the "Committee") consisting of the Support, Rescue and Qualified Rescue Rank Representatives, the President and the Field Director. The Committee shall make recommendations for disbursements from the fund to the Board of Directors. Any such recommendation made by the Committee shall require a majority affirmative vote of the Committee. Final approval of all disbursements shall rest with the Board of Directors.

Funding of the MMEF

The fund shall have a base balance of Six Thousand Dollars ($6,000.00) [1]. The base balance shall be invested in a manner recommended by the Treasurer and approved by the Board of Directors. Each year the team shall have a line item expense for the MMEF for Two Hundred Dollars ($200.00) to be used along with any interest earned on the investment of the base balance to accomplish the purpose of the fund as set forth above. The Board of Directors shall have the option in any given year to increase the annual contribution to the fund or to not contribute money to the fund at all if the Board believes the MMEF has adequate resources or if the team has other financial obligations that take priority.

Eligible Participants

Any current field active member of the team with the rank of S-1 or higher may apply for assistance under the fund. The MMEF Committee and Board of Directors shall have the authority to make case-by-case exceptions for team members holding a rank below S-1. Team members who wish to apply for participation in the fund shall submit a completed MMEF Application Form to the Committee for consideration. A copy of the form is attached hereto as Exhibit "A".

Stipulations

The percentage of financial assistance awarded to an approved applicant shall be at the sole discretion of the MMEF Committee and the Board of Directors. Although not mandatory it is the intent that the fund would pay between 50% and 100% of the financial assistance requested.

The Board of Directors shall have the authority at any time to appropriate all or any portion of the monies in the MMEF (including the base balance) for any team related financial emergency. The goal is to preserve the right of the team to combine financial resources when the need exists to protect the overall welfare of the team.

The MMEF Committee and the Board of Directors shall have the authority to impose any stipulations, restrictions and / or special requirements they deem appropriate on any approved application for assistance.

[1] The amount of $6,000.00 was selected as the base balance of the fund because it represents the total amount of contributions that were received by the team in memory of Hunter at the time of his death.

Exhibit "A"

MISSION MANAGEMENT EDUCATION FUND APPLICATION FORM

Applicant:_____

Rank:_____

Class Which Applicant Wishes to Attend:_____

Location of Class:_____

Brief Description of Class Agenda:

Itemized Cost of Class:_____

Total Amount of Financial Assistance Requested:_____

Briefly Describe What You Expect to Gain By Attending The Class:

_____ _____

Applicant's Signature Date

MMEF Committee Recommendation:

Board of Director's Approval:

SAR EDUCATION FUND

History Behind the SAR Education Fund (SEF)

The SAR Education Fund ("SEF") was created by the Board of Directors in October of 2004.The fund was created in memory of Mr. Gordon Stucker, one of the 9 original founding members of the team, who passed away on August 12, 1998 at the age of 74.

Gordon's tenure with the team was relatively short in years but the contributions attributable to this individual are unequalled. Gordon became associated with Alpine in 1960 just as the team was just beginning to form. As a member of the renowned 10th Mountain Division in Camp Hale, Colorado, Gordon was asked to help train the team in the different aspects of mountain rescue. It was a task that Gordon took to heart. Gordon served as the team's first Team Captain, a position on the team now known as Field Director, and held that position for four of the first five years that the team was in existence.

Gordon's contributions did not end with his field expertise. Gordon was one of nine Charter Members who in February of 1960 developed the original Team By-Laws. It was through the efforts of Gordon and these same individuals that on April 20th, 1960 that the team was officially incorporated under the name of Alpine Rescue Team. Gordon served on the team's first Board of Directors according to the names listed on the team's official Articles of Incorporation.

Shortly before Gordon left the team he and another of the original nine Charter Members, a gentleman by the name of Albert G. Lambert, worked together to develop the teams initial Standard of Proficiency for team members. Their original work, which was done in 1965, remained as written until 1975 when the Standards were revised for the first time. In 1994 they were revised a second time and the name was changed to the Guidelines of Proficiency which is the current working document for the team.

Gordon Stucker had a tremendous influence on the development and success of the team in both the field and administrative arenas. Gordon was best known for his motto *"Never take your commitments lightly"*. Today the team honors Gordon with an annual award given in his name each December to the most deserving prospective member joining the team – The Gordon Stucker Memorial Award

Purpose of the Fund

The purpose of the SEF shall be to provide financial assistance to the members of Alpine Rescue Team for education in the area of mountain search and rescue. Qualifying activities shall be determined by the Committee and the Board of Directors based on the best interests of the team and the members receiving such assistance.

Administration of the Fund

The SEF shall be administered by a Committee (the "Committee") consisting of the Support, Rescue and Qualified Rescue Rank Representatives, the President and the Field Director. The Committee shall make recommendations for disbursements from the fund to the Board of Directors. Any such recommendation made by the Committee shall require a majority affirmative vote of the Committee. Final approval of all disbursements shall rest with the Board of Directors.

Funding of the SEF

The fund shall have a base balance of Four Thousand Dollars ($4,000.00) [1]. The base balance shall be invested in a manner recommended by the Treasurer and approved by the Board of Directors. Each year the team shall have a line item expense for the SEF fund for Eight Hundred Dollars ($800.00) to be used along with any interest earned on the investment of the base balance to accomplish the purpose of the fund as set forth above. The Board of Directors shall have the option in any given year to increase the annual contribution to the fund or to not contribute money to the fund at all if the Board believes the SEF has adequate resources or if the team has other financial obligations that take priority.

Eligible Participants

Any current member of the team may apply for assistance under the fund. Team members who wish to apply for participation in the fund shall submit a completed SEF Application Form to the Committee for consideration. A copy of the form is attached hereto as Exhibit "A".

Stipulations

The percentage of financial assistance awarded to an approved applicant shall be at the sole discretion of the SEF Committee and the Board of Directors. Although not mandatory it is the intent that the fund would pay up to a maximum of 50% of the cost of the educational event for which financial assistance is being requested.

The Board of Directors shall have the authority at any time to appropriate all or any portion of the monies in the SEF (including the base balance) for any team related financial emergency. The goal is to preserve the right of the team to combine financial resources when the need exists to protect the overall welfare of the team.

The SEF Committee and the Board of Directors shall have the authority to impose any stipulations, restrictions and / or special requirements they deem appropriate on any approved application for assistance.

[1] The amount of $4,000.00 was selected as the base balance of the fund because it represents the total amount of contributions that were received by the team in memory of Gordon at the time of his death.

Exhibit "A"

SAR EDUCATION FUND APPLICATION FORM

Applicant:_____

Rank:_____

Class Which Applicant Wishes to Attend:_____

Location of Class:_____

Brief Description of Class Agenda:

Itemized Cost of Class:_____

Total Amount of Financial Assistance Requested:_____

Briefly Describe What You Expect to Gain By Attending The Class:

_____ _____

Applicant's Signature Date

SEF Committee Recommendation:

Board of Director's Approval:

Quick Guides

What are they

The following sheets provide a quick summary to the processes and steps necessary to effect avalanche rescue and to aid in some radio communications. These are not "official" Alpine Rescue Team procedures or protocols, only my attempt to help us (including me) do our jobs. Special thanks goes to a number of Team members for their suggestions and reviews, including (I am sure I have forgotten others, sorry.):

Dan Hamm	Rich Solosky
Loui McCurly	Jerry Petrilli
Mark Nelson	Woody

Each page of this PDF file has four separate sheets that can be cut out. After printing your pages you might chose to laminate the sheets or simply stuff them into your field book. You might consider printing each page on a different color of paper to more easily reference the information.

Please feel free to use these and adapt them to your own needs; however, I ask that you do not use them for any commercial gain.

Page 1

Sheet 1 deals with gathering simple and basic information relevant to the first team(s) headed to an avalanche accident site. A victim's full name is not necessary to know, a first name is good enough. More important details include pack (or jacket) color, travel mode (skis, snowshoes, snowmobile, etc), rescue gear carried.

Sheet 2, Danger Assessment, is a simple Risk / Benefit analysis. The Hazards to Rescuers section should be clear. If not, noticing/marking conditions on the right side of this section means the hazard is already bad or increasing. On the Risk to Rescuers section recognizing the left-side choices are good things to reduce rescuers' risks. Should a rescue intervention occur Benefit to Victim describes simply the value of the rescue effort. At this point the Mission Leader and / or Immediate Search Team Leader must decide if the danger is acceptable or not.

Sheet 3 lists what the first team ought to take or consider taking to the accident site.

Sheet 4 is aimed more toward the helicopter carried Avalanche Deployment Team, but this guide can be used by any team traveling to the accident site.

At a Wednesday night training (3/17/2010) these sheets were printed on blue paper.

Page 2
Sheets 1 through 4 are all about *what*, *when*, and *how* the immediate (formerly called hasty) search goes about its effort.

At the Wednesday night training (3/17/2010) these sheets were printed on salmon paper.

Page 3
These sheets are year-round, discipline neutral guides aimed to help all and especially field team leaders. Sheet 1 gives guidance to field team leaders and team members and can be used for any and all assignments. Sheet 2 is a simple way to communicate information to Ops after finding a subject. The first column – a SOAP note – deals with evaluating a found subject. All of this information is critical for the field team leader and medical specialist; however, not all this information is relevant for Ops. Operations does need to know the subject's MRA status, location, and a short story, but Ops does not need to know the subject's SAMPLE history or vital signs. (If they do, they can ask.) The second column is how the structure of your message should be organized when communicated to Ops.

Sheets 3 and 4 are self explanatory.

At the Wednesday night training (3/17/2010) these sheets were printed on yellow paper.

If you have any questions, or comments please let me know.

Thank you,
Dale Atkins
303.579.7292
March 18, 2010

Updated January 10, 2011 – radio numbers

Alpine Rescue Team

INCIDENTS AND SUBJECTS

Reporting Party _____

cell _____ location _____

in party _____ # injured, need transport _____

still buried _____ # dead _____

Date/time of accident _____

Location _____

_____

Activity ☐ ski ☐ snowboard ☐ snowmobile ☐ walk ☐ snowshoe ☐ technical climb ☐ other _____

Action ☐ ascent ☐ descent ☐ traverse

1) name _____ travel mode _____

pack (color) _____ ☐ beacon ☐ recco ☐ avalung

2) name _____ travel mode _____

pack (color) _____ ☐ beacon ☐ recco ☐ avalung

3) name _____ travel mode _____

pack (color) _____ ☐ beacon ☐ recco ☐ avalung

Notes _____

_____

_____

_____

ALWAYS GET INPUT FROM THE TEAM

Alpine Rescue Team

AVALANCHE DANGER ASSESSMENT

Hazards to Rescuers

Trigger? ☐ *human* (☐ *additional triggers*) ☐ *natural*

Adding stress (load)? ☐ *no* ☐ *snowfall* ☐ *blowing snow*

Reducing strength? ☐ *no* ☐ *thaw* ☐ *rain*

Terrain? ☐ *simple* ☐ *challenging* ☐ *complex*

Visibility? ☐ *good* ☐ *fair* ☐ *poor* ☐ *obscured*

Trail? ☐ *easy* ☐ *challenging* ☐ *technical* ☐ *none*

Route affected by avalanches? ☐ *no* ☐ *yes* ☐ *unknown*

Accident site threatened? ☐ *no* ☐ *adjacent slopes* ☐ *hang fire* ☐ *shared runout* ☐ *multiple start zones*

Risks to Rescuers

Experience? ☐ *considerable* ☐ *some* ☐ *little*

Communications? ☐ *direct* ☐ *relay* ☐ *none*

Precautions? ☐ *beacon, probe & shovel* ☐ *avalung* ☐ *airbag* ☐ *radio* ☐ *other*

Benefits to Victim

☐ *High: life threatening, critical*

☐ *Medium: not life threatening but could be, unstable*

☐ *Low: not life threatening, stable*

☐ *Recovery: deceased*

DANGER? ☐ *acceptable* ☐ *not acceptable*

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Alpine Rescue Team

IMMEDIATE SEARCH – GEAR LIST

Personal Equipment

- ☐ beacon, collapsible probe, shovel
- ☐ radio
- ☐ personal gear appropriate for conditions
- ☐ food and water

Team Equipment

- ☐ RECCO detector
- ☐ rescue dog
- ☐ airway med kit
- ☐ avy bash pack (red)
- ☐ avy support pack (yellow)
- ☐ GPS, map and compass
- ☐ small pruning saw
- ☐ note pad (scribe)
- ☐ digital camera
- ☐ spare clothing for victim(s)
- ☐ spare beacons for victim(s) and/or party
- ☐ shelter
- ☐ _____

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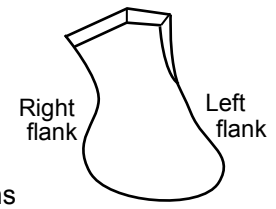
Alpine Rescue Team

AVALANCHE DEPLOYMENT

Fly, Drive or Walk

- ☐ Beacon check
- ☐ Locate and confirm landmarks _____
  _____
- ☐ Assess or Mark Over-Land Routes
  - ☐ in ☐ out
- ☐ Scene Size-Up
  - ☐ hazard evaluation – dangerous areas
  - ☐ safe areas ☐ triggers ☐ weather

  SAFE / NOT SAFE ?
- ☐ Avalanche Dimensions
  - ☐ type and trigger _____
  - ☐ vertical fall and width _____
  - ☐ debris length and width _____
  - ☐ number of debris areas _____
- ☐ Air Search
  - ☐ clues
  - ☐ victims
  - ☐ others
- ☐ Formulate a plan
- ☐ Communicate with Operations
- ☐ With pilot select LZ



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Alpine Rescue Team

ON-SITE IMMEDIATE SEARCH

Safety

- ☐ beacon check of all rescuers
- ☐ assess/reassess hazards and risks
- ☐ identify safe zones and escape routes
- ☐ identify equipment cache / staging area
- ☐ consider avalanche guard

Site Actions

- ☐ if public already searching, get control of the scene
- ☐ care for unburied / injured victims
- ☐ identify and mark Last Seen Area(s)
- ☐ identify potential problems
- ☐ with team formulate search plan
  - ☐ assign jobs ☐ complete jobs
- ☐ track efforts
- ☐ communicate plan to Command / Operations
- ☐ reassess plan with new information
- ☐ integrate new rescuers into the effort
- ☐ anticipate changing conditions – people, equipment, weather, darkness, and avalanche
- ☐ yield to Site Leader when he/she arrives

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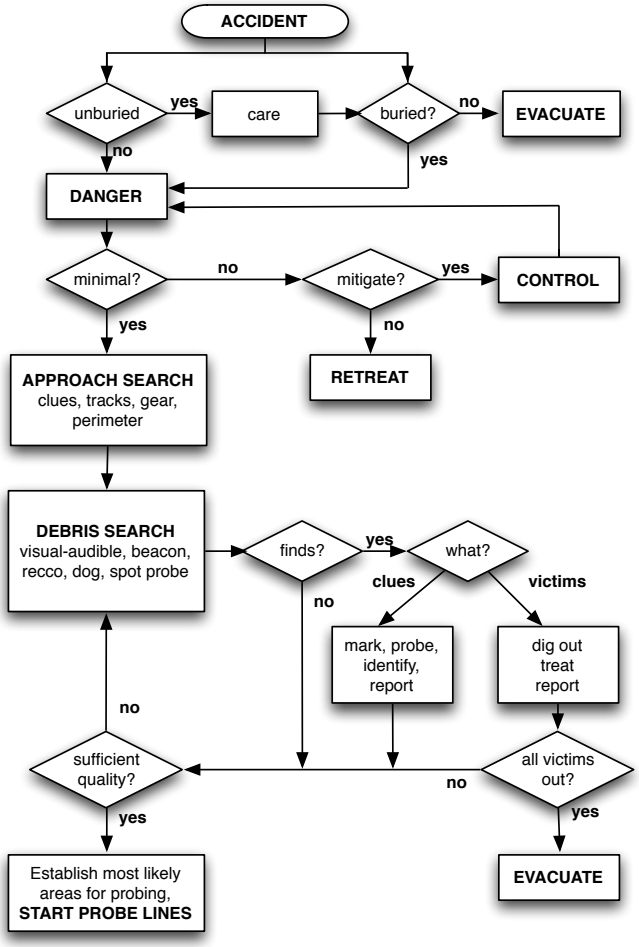
IMMEDIATE SEARCH ALGORITHM



Alpine Rescue Team

IMMEDIATE SEARCH CHECK LIST

- ☐ Assess / reassess hazards and risks.
- ☐ Secure RP.
- ☐ Identify (and later mark) Last Seen Area(s).
- ☐ Size up scene.
- ☐ Identify safe zones and escape route(s).
- ☐ Formulate a search plan.
- ☐ Communicate with Operations.
- ☐ Sketch site and digital pictures.
- ☐ Identify safe zones and escape route(s).
- ☐ Mark single path onto debris.
- ☐ Search
  - ☐ surface search ☐ spot probe
  - ☐ beacon ☐ recco
  - ☐ perimeter ☐ dog
- ☐ Turn beacons back to transmit.
- ☐ Clues = blue, Searched Areas = red, Perimeter = yellow
- ☐ Identify, mark, and report all clues to site leader.
- ☐ Identify likely burial areas – start probe lines.

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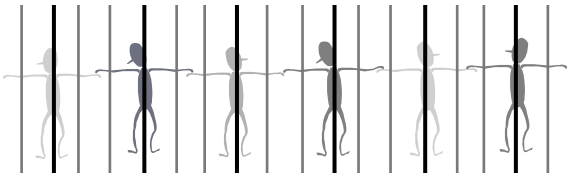
Alpine Rescue Team

PROBE LINE – 3 HOLES PER STEP



Probe Line

- ☐ arms out, palm to palm
- ☐ probe vertically 3 times – left, center, right
- ☐ probe grid 50 cm (20 in) apart
- ☐ advance 50 cm (20 in)
- ☐ mark edges with red markers (flags)
- ☐ POD first pass = 88%
- ☐ use guidon cord, when available
- ☐ use fixed-length probes, when available

10 - Person Probe Team

- ☐ 6 probers, including leader
- ☐ 2 guidon cord holders with red flags
- ☐ 2 shovelers with extra probes

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Alpine Rescue Team
FIELD TEAM LEADER CHECK LIST

- ☐ Confirm team & team #.
- ☐ Brief team on assignment.
- ☐ Confirm safety check and safety message from operations.
- ☐ Identify anticipated hazards to team (avalanche, weather, terrain, etc.).
- ☐ Identify necessary team equipment, resources and optional resources.
- ☐ Identify assignments / responsibilities (consider backups).
- ☐ Identify personal gear needed / not needed.
- ☐ Confirm team is comfortable with the assignment.
- ☐ Provide opportunity to finalize gear.
- ☐ Identify “rally point” and departure time.
- ☐ Meet and do a complete radio check (all members and Operations).
- ☐ Debrief the assignment.

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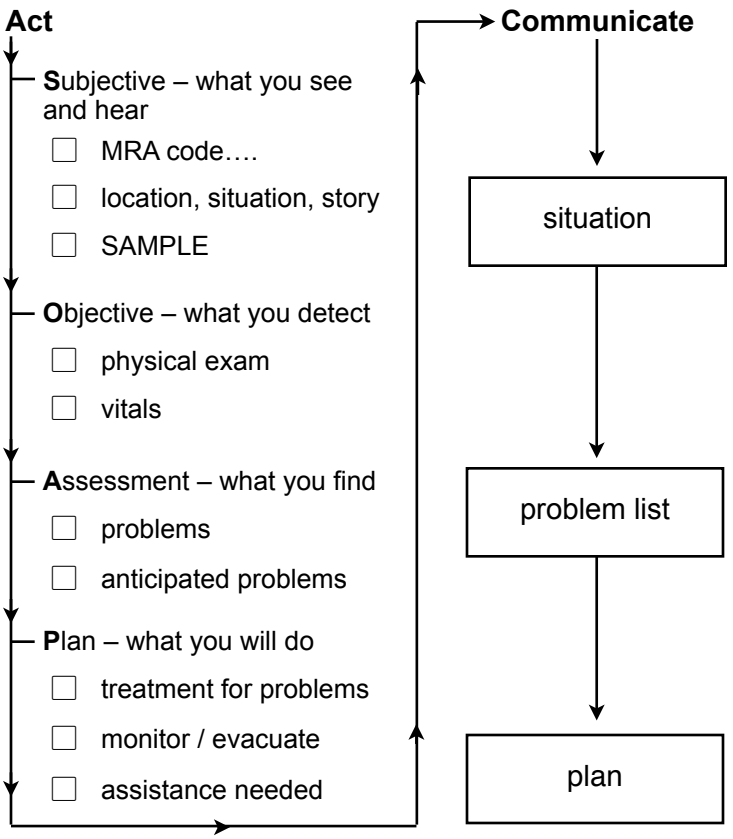
Alpine Rescue Team
RADIO SOAP



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Alpine Rescue Team
RADIO CODES

MRA	explanation
1	Subject found OK, no assistance needed
2	Subject found, assistance needed
3	Team member in need of assistance
4	Subject found dead (usually preceded by Code 5)
5	Isolate radios or turn volume down; prepare for next transmission. Used to signify that potentially sensitive transmission is to follow.

CCSO	explanation
1	On scene
2	Respond without red lights and siren
3	Respond with red lights and siren
4	Everything is OK
9	Fatality

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Alpine Rescue Team
RADIO NUMBERS (Jan. 2011)

600 Current Field Director
601 On-call mission leader
602 Second mission leader
610 Woodward, Paul "Woody"
612 Everist, Mike
613 Thomas, John “JT”
616 Ondrusek, Ric
617 Tom Wood
618 Loebach, Tom
619 Wyatt, Roy

620 Stuebe, Brian
622 Feroldi, Bob
623 Nelson, Mark
625 Wacht, Lynda
628 Gosselin, Steve
629 Wilson, Steve

630 Mallory, Jim
632 Lucht, Angie
634 Hamm, Dan
635 Bower, Mark
636 Archey, Melissa

640 Petrilli, Jerry
645 Grotheer, Scott
646 Osburn, Bryan
648 Pfau, Loren

650 Bindrich, Paula
652 Eaton, Angela
653 Montague, Kevin
654 Lytle, Bill

654 Lytle, Bill
655 Trumbly, Tony
656 Witmer, Joelle
657 McCurley, Bob
658 Peacock, Justin
659 Brock, Becky

662 Stiller, Greg
663 Ahrend, Sue
665 Rhodes, Tom
666 Wilson, Dawn
669 Wacht, Lynda

675 Bottjen, Eric
676 Brown, Wes
679 Hauser, Ken

614T Dorn, Herb
621T Atkins, Dale
624T Brown, Roz
678T Glatterer, Skeet
684T Shimanski, Charley
686T McClurley, Loui
699T Krautkremer, Roger

611R Luethy, Phil
615R Wells, John
627R Doe, Michael
631R Paul, Howard
633R Wagner, Bob
661R Barwick, Bill

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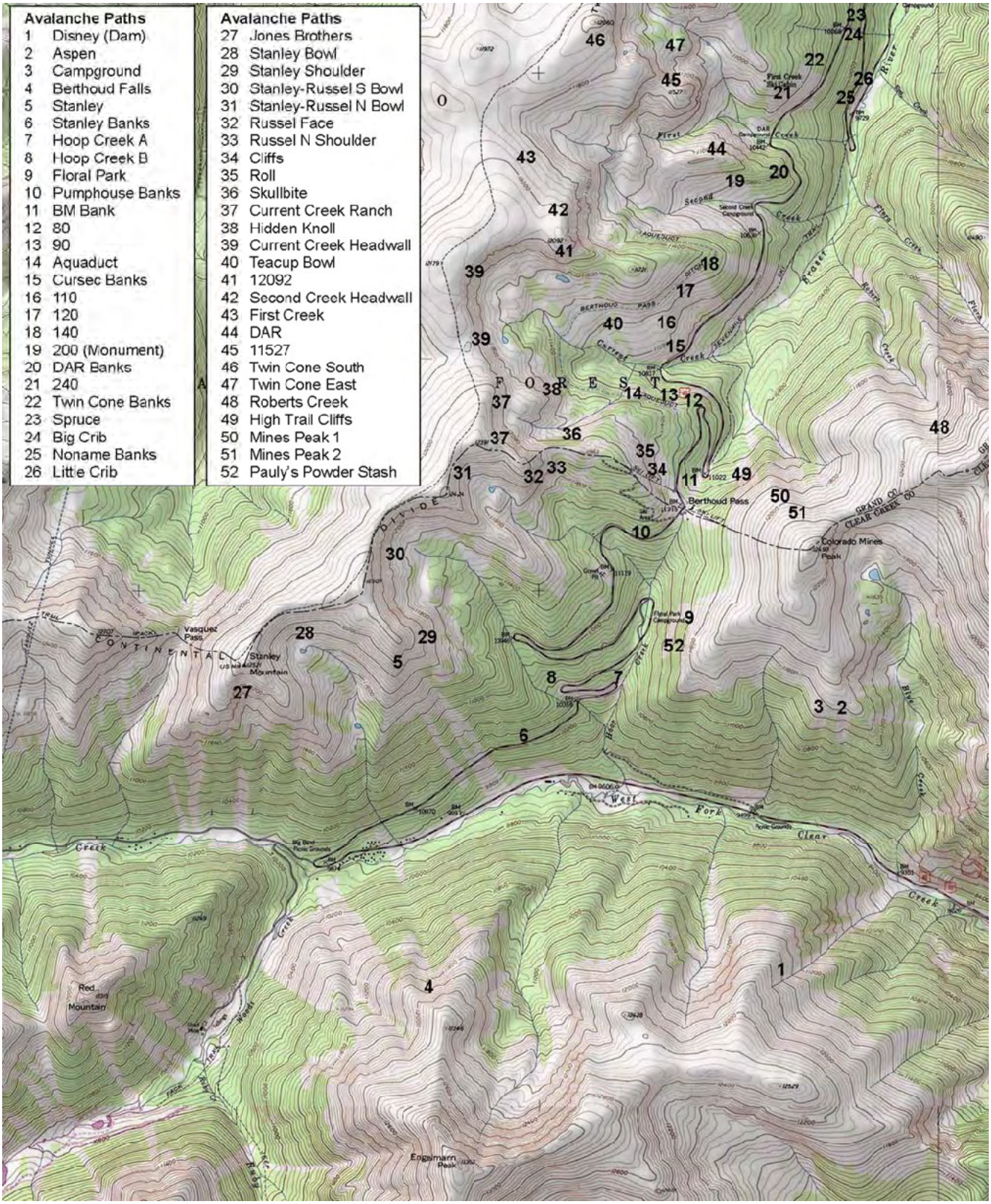
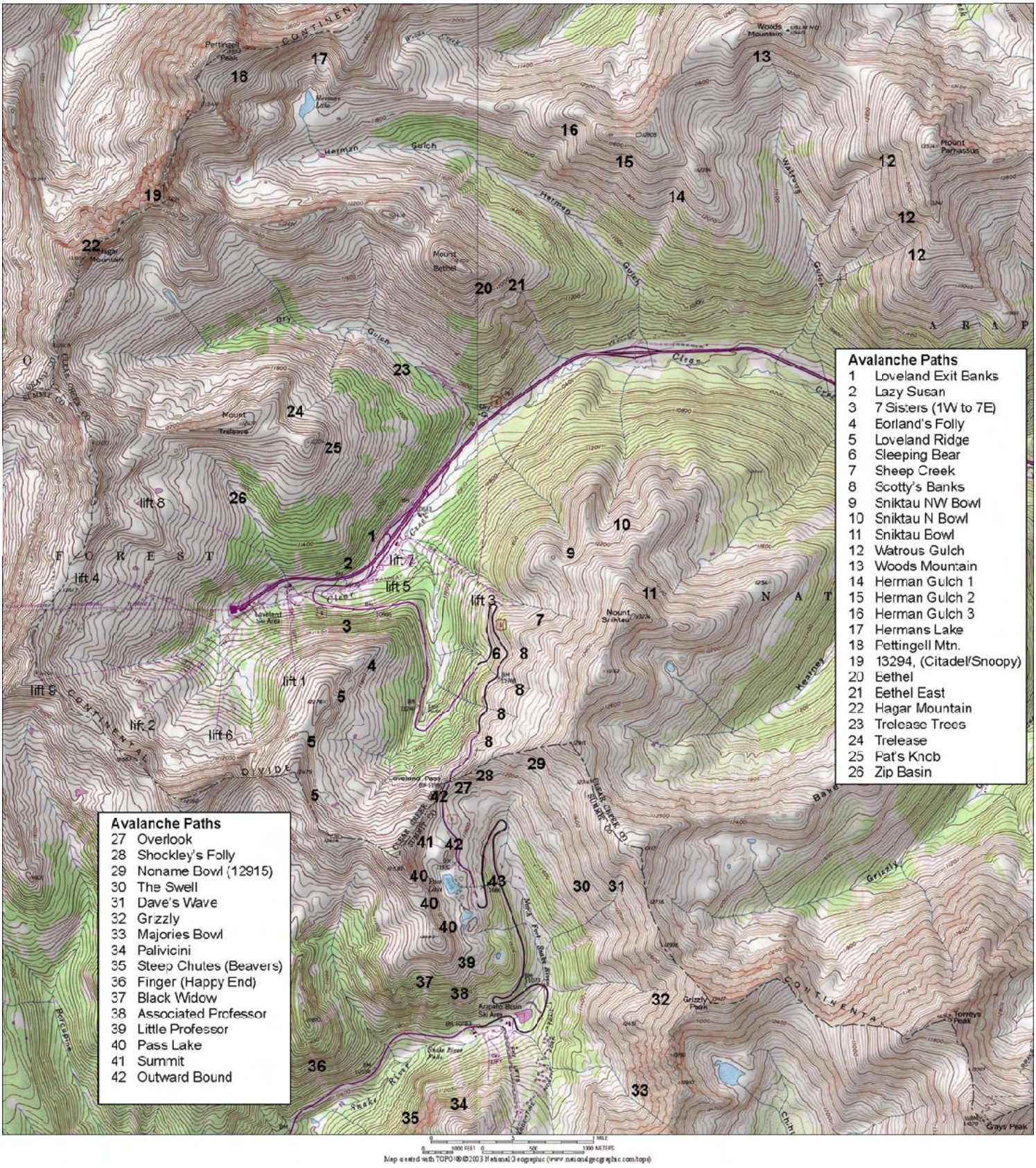
Berthoud Pass Avalanche Areas



Prepared for Alpine Rescue Team by Dale Atkins, 12/2004

Loveland Pass Avalanche Areas



Prepared for Alpine Rescue Team by Dale Atkins, 12/2004

2012 ROSTER

BOARD OF DIRECTORS

- PRESIDENT **Jerry Petrilli**
- PAST PRESIDENT **Loren Pfau**
- FIELD DIRECTOR **Tom Loebach**
- SECRETARY **Gerrit Padgham**
- TREASURER **Wes Brown**

- Q - REP **Tom Wood**
- R - REP **Eric Bottjen**
- S - REP **Eric Howland**

- DELEGATE AT LARGE **Bob Feroldi**
- DELEGATE AT LARGE **Frank Tadeo**
- DELEGATE AT LARGE **Tony Trumbly**

ADVISORY BOARD MEMBERS

- LEGAL ADVISOR **Rand Case**
- BOOKKEEPER **Marla Rodgers**
- C.P.A **Rita Felde**

2012 ROSTER

ADMINISTRATIVE – APPOINTEES

ADMINISTRATIVE DIRECTOR — **TONY TRUMBLY**

- Marketing Manager — Angie Lucht
- Website Manager — Gerrit Padgham
- Insurance Manager — Tony Trumbly
- Awards Banquet Manager — Dawn Wilson
- Pro-Purchase Manager — Ric Ondrusek
- Blue Book Manager — Woody
- SARTEAMS Manager — Mark Peesel
- Team Store Manager — Eric Howland
- CORSAR Card Sales Manager — Joelle Witmer
- Mail — Larry Anderson
- Call Roster — Eric Howland
- Historians — Woody / Jared Spears
- IT Manager — Eric Howland
- Telephone — Ric Ondrusek
- Voice Mail — Skeet Glatterer

DEVELOPMENT DIRECTOR — **WES BROWN**

- Alumni Relations Managers — Dale Atkins/Jared Spears/Woody
- Correspondence / Memorials Manager — Gerrit Padgham
- Fundraising / Events
  - Outreach Coordinator — Danny Ezrol
  - Corporate and Major Donor Coordinator — Wes Brown
  - DOLA Coordinator — Bob Feroldi
  - Combined Federal Campaign Coordinator — Heather Swenson
  - Mt Evans Ascent Coordinator — Zach Loescher
  - Little Bear Benefit Coordinators — Scott Franey/Mechele Fillman
  - Town Race Coordinator — Lynda Wacht

FACILITIES DIRECTOR — **MATT GRAHAM**

- House Manager — Roz Brown
- Maintenance Manager — Phil Luethy

OTHER PRESIDENTIAL – APPOINTEES

- PIO — Steve Wilson
  - Assistant — Bill Barwick
  - Assistant — Howard Paul
  - Assistant — Loren Pfau
- Associate Member Manager — Joelle Witmer
- MRA Representative — Scott Franey
- CSRB Representative — Frank Tadeo
- Foothills RETAC Representative — John Putt
- CCC Public Safety / Operations Representative — Roger Krautkremer
- SARDOC Representative — Angela Eaton

2012 ROSTER

FIELD – APPOINTEES

- **TRAINING DIRECTOR** — **BRIAN STUEBE**
  - o PM Program Manager — Steve Wilson
  - o Assist. PM Program Manager — Eric Bottjen
  - o Helicopter Operation Coordinator — Charley Shimanski

- **MEMBERSHIP DIRECTOR** — **STEVE GOSSELIN**
  - o Committee Member — Tom Wood
  - o Committee Member — Eric Bottjen
  - o Committee Member — Brian Stuebe

- **MISSION LEADER DIRECTOR** — **RIC ONDRUSEK**

- **COMMUNICATIONS DIRECTOR** — **TOM RHODES**
  - o Assistant — Mike Doe
  - o Assistant — Roger Krautkremer
  - o Assistant — Bob Wagner
  - o Pager System Manager — Ken Hauser

- **EQUIPMENT/ TECH SYSTEMS DIRECTOR** — **STEVE WILSON**
  - o Tech Standards Group Manager — Scott Grotheer

- **VEHICLE DIRECTOR** — **TONY TRUMBLY**
  - o Snowmobile Manager — Mike Everist
  - o ATV Manager — Bill Lytle
  - o Trailer Manager — Phil Luethy

- **MEDICAL OFFICER** — **GREG STILLER**
  - o Education Manager — Mark Bower
  - o Certification Manager — Frank Tadeo
  - o Equipment Manager — Dawn Wilson
  - o Documentation/Procedures Manager — Mark Nelson
  - o Quality Assurance Manager — Mark Bower

Alpine Rescue Team Payment Request

Date _____ Requester's Name _____

Item's Purchased _____ Amount: $ _____

Receipt Attached: Yes ____ No ____ If not attached, please explain why: _____

_____

____Budgeted Expense ____Specific Board Approval ____ML approved Mission Expense

____Other (Please Explain)_____

Please pay: Vendor____ Team Member____

Payable to: _____Mail check To: _____

Administrative
_____Accounting
_____Gifts / Memorials
_____Miscellaneous
_____Office Supplies
_____Postage
_____Professional Fees
_____Subscriptions

Fundraising
_____Evergreen Town Race
_____Grants
_____Little Bear Benefit
_____Mountain Film
_____Mt Evans Ascent
_____Winter Trails Day
_____Other Events

DOLA Tier I, II, III
_____Equipment
_____Communications
_____Vehicle
_____Personal
_____Misc.

DOLA Year End Grant
_____Equipment
_____Communications
_____Vehicle
_____Misc.

Education
_____Internal Education Funds
_____Outreach

Marketing
_____Website
_____Printing
_____Displays

Public Relations / SAR
_____MRA
_____PIO

Team Store
_____CORSAR Cards
_____Blue Book
_____Store Stock Purchases

Shack
_____Maintenance
_____Misc. Supplies
_____Fire Extinguishers
_____IT Supplies (computer / printer / AV Equip.)

Mission Expenses
_____Miscellaneous

Team Equipment
_____New
_____Repair
_____Maps
_____Supplies

Licenses / Permits / Dues
_____Dues
_____Licenses
_____Permits

Communications
_____Pager Rentals
_____New
_____Repair

Medical
_____Cert. Fees
_____Grants
_____Supplies
_____Training

Recruitment & Retention
_____Awards Banquet
_____Historian
_____Meals
_____50th Anniversary

Training
_____Attendance Website
_____PM Program
_____Reaccreditation
_____Other

Vehicle
_____Fuel
_____ATV's
_____Snowmobiles
_____Team Vehicles
_____Licenses
_____Misc.

Team Uniforms
_____New
_____Repair

Communications – 800 MHZ Quick Reference

1. The 800 digital system is an inter-connected system of repeaters which can provide local, regional, or state-wide communications among authorized agencies.

2. The 800 MHz radios allow Alpine Rescue to communicate directly with each of the three Sheriff (Clear Creek, Gilpin, Jeffco) Dispatch centers, on-scene commanders in the field, and state wide mutual aid agencies.

3. MLs and Operations Staff can also talk directly with the State CSRB Coordinator on the (**CSRB)** channel.

4. JEFFCO expects Alpine to normally contact them on the Law Enforcement Dispatch channel (**LE DISP**). We will likely be moved to a Precinct TAC (**N/MTN TAC**) or EVENT (**JEC-1**) channel after checking in.

5. CLEAR CREEK and GILPIN expect Alpine to normally contact them on the Mountain Tac channel (**MTNTC**)

6. JEFFCO Fire (**FIRE SW**) and Metro area Fire interoperability channels (**RED**) are divided into 4 quadrants. The State Mutual Aid Channels (**MAC**) channels are divided into regions, with a calling channel designated for each region in the state.

7. Radio Operation:
   a. Select a channel number and proper zone letter to select a channel. For example, 8B for CSRB, 1B for LE Dispatch, or 16B for MTNTC.
   b. Press the PTT switch and wait 2 seconds for the double beep before speaking. A single long tone means you did not connect, try again.
   c. You may only scan within individual zones A, B, or C.

8. Notes:
   a. The bold letter channel designators above are examples of commonly used channels. See the Channel list and Channel Reference Guide on each radio for specific channel usage. Alpines commonly used channels are all in Zone B.
   b. Only the mobile radio in Comm 4 and the "Out Of County" handheld at the rear of the R-2 bay are capable of state-wide operation. The other 800 handhelds will operate in Jefferson, Clear Creek, and many surrounding counties.

Adopted – 04/16/08
Revised – 12/31/10

Communications – 800 MHZ DTRS Procedures

1. Background.

The 800 MHz Digital Trunked Radio System (DTRS) mobile in Comm 4 and hand held radios allow Alpine Rescue to communicate directly with the three County Sheriff Dispatch's and officers in the field.

MLs may talk directly to the CSRB State Coordinator to request resources on the CSRB Coordination channel. All MLs are issued a 800 radio.

The 800 MHz radios also are used for mutual aid missions where counties have implemented 800 MHz operations—Custer County for example.

All 800 MHz capable agencies have several Mutual Aid Channels (MAC) channels and analog ITAC/ICALL mutual aid channels available to them. See the Operations paragraph below for a more detailed explanation.

CLEAR CREEK and GILPIN County have added 800 capabilities in most of their dispatch centers and vehicles for mutual aid and backup communications. Their primary 800 channel is MTNTC.(B16)

2. Operations:

a. 800 Radio Operating Notes:

Select both a channel number and proper zone letter when selecting a channel to use. For example, select 8B for the CSRB Coordination Channel, 7A for Fire SW, 1B for LE Dispatch. Channel designators are explained below.

Press the PTT switch and wait 2 seconds for the double beep. This double beep indicates that you are linked to the repeater system.

Scanning—you may only scan within individual zones A, B, or C. All trunked channels are presently scanned within a zone.

b. Using the DTRS Radios:

Alpine may "go enroute" with Dispatch on whichever dispatch channel is appropriate based upon which agency has requested us. **The majority of our en-route call-ins will likely be on the Law Enforcement Dispatch (LE DISP) channel.**

For search and rescue calls with a deputy enroute or on scene LE DISPATCH is appropriate for our initial check-in. For a rescue called out by a Fire Department in JEFFCO (such as Elk Creek), Alpine should "go enroute" on the appropriate Fire Channel based upon what JEFFCO county quadrant the call is in, typically FIRE SW or FIRE NW for mountain area calls. I-70 is the quadrant dividing line.

NOTE: The Fire and Law Enforcement dispatch console functions are separate at JEFFCO.

If a Fire Department calls for our assistance, the LE (Sheriff) dispatcher may not have the call we're responding to on his or her dispatch screen (and visa versa).

JEFFCO Dispatch will attempt to include what Dispatch channel is appropriate for us in our initial page out based upon which JEFFCO agency is
requesting Alpine's assistance.

After Alpine units "go enroute", JEFFCO dispatch may direct us to a tactical channel to make direct contact with the on-scene commander. This may typically be one of the two JEFFCO Event Channels, JEC-1 or JEC-2 or a division TAC channel such as N/MTN TAC (North/Mountain Tactical) or FTAC SW (Fire TAC SW quadrant). This is where we should contact the deputy on scene or the requesting Fire agency and ask for updated information on access limitations (equipment to bring), better directions, and victim status updates.

3. 800 Channel Explanations.
Use the following Channels to contact the appropriate agencies. See the list in paragraph 5 below for the actual channels available in Alpine's radios.

MTNTC = CLEAR CREEK and GILPIN
Fire NW = NW JEFFCO Foothills Dispatch
Fire SW = SW JEFFCO Foothills Dispatch
FTAC SW = Fire TAC Southwest quadrant of JEFFCO
CSRB = CSRB Coordination
IMT = JEFFCO Incident Mgt. Team
GFD = Golden FD
LE DIS = Law Enforcement Dispatch
JEC-1 = JEFFCO Event Coordination 1
SIMP-1 to 5 = Direct to local radios
MAC = Mutual Aid Channels:
MAC-1 = Metro Area calling
MAC-3 = Metro Fire mutual aid coordination
MAC-5 = NE Colorado mutual aid calling
MAC-9 = SE Colorado calling
MAC-13 = SW Colorado calling
MAC-17 = NW Colorado calling
MAC-21 = Statewide calling
RED Channels = Metro area EDACS Interoperability
ICALL = Analog mutual aid calling
ITAC-1 = Analog TAC mutual aid 1

4. Detailed Channel Usage Explanation:
The LE North/Mountain (N/MTN) Channel is used as an overflow channel when a code 3 or other major event is tying up the normal LE DISP channel. As with all emergency radio systems, we should listen for 10 seconds or so before calling to understand what traffic is active on a specific channel.

The STAC-5S channel is a state wide analog mutual aid channel.

The ICALL and ITAC are analog mutual aid channels. The ITAC channels are repeated in some areas.

The Simplex "SIMP-1" etc on our radios are direct channels for JEFFCO (Alpine) units to use when out of range of the 800 DTRS system.

For large scale incidents, and if multiple agencies are involved from the metro area, we should use Mutual Aid Channel (MAC) 3 for Metro Law Enforcement (LE) support or MAC 2 for Metro Fire support. There are MAC calling and working channels for all areas of Colorado. The list is posted in the Radio Procedures book in each vehicle.

The Red channels are bridge channels to allow EDACS (another 800 digital system used by some metro agencies) to talk together. This allows for communications with other responding non DTRS digital users. LE uses them extensively for hot pursuits across jurisdictional boundaries.

Note: JEFFCO Dispatch has the ability to patch FERN 1 or NLEC into the JEFFCO 800 DTRS system.

5. 800 Radio Channels in Alpine DTRS Radios.

These are the channels programmed into our 800 radios. This list is also attached to the radios.

Chan	Zone A	Zone B	Zone C
1	FIRE NE	LE DISP	MAC-1 MET
2	FTAC NE	N/MTN DISP	MAC-2 MET FIRE
3	FIRE NW	N/MTN TAC	MAC-3 MET LE
4	FTAC NW	SOUTH DISP	MAC-4 MET EMS
5	FIRE SE	SOUTH TAC	MAC-5 NE
6	FTAC SE	JEC-1	MAC-9 SE
7	FIRE SW	JEC-2	MAC-13 SW
8	FTAC SW	CSRB	MAC-17 NW
9	CC FD	SIMP-1	MAC-21 S/WIDE
10	FMT FD	SIMP-2	ICALL
11	GFD 1	SIMP-3	ITAC-1
12	IMT	SIMP-4	ITAC-2
13	RED NE	SIMP-5	ITAC-3
14	RED NW	GOLD 1	ITAC-4
15	RED SE	GOLD 2	STAC-5 SIMP
16	RED SW	MTNTC	STAC-5 RPT

Adopted – 05/02/08
Revised – 12/31/10

Communications – "Cell 911" SAR Mission Procedures

1. **BACKGROUND**. SAR victim position information may be available through dispatch centers for **victim initiated 911 cell phone calls**.

The availability of position information depends upon whether or not Enhanced 911 (E911) technology has been implemented in the local area. Nearly all cell phones sold since 2003 have some form of E911 capability.

Cell carriers are only required to establish and provide E911 service if formally requested to do so by a 911 dispatch center within the service area. E911 implementation requires additional equipment and software for cell carriers and dispatch centers.

The level of detail and the accuracy of the position information can vary significantly. The level of detail and accuracy depends upon the technology employed by a cell phone carrier and the E911 implementation level of the local cell carriers and dispatch centers. Cell carriers use several different transmission technologies and meet E911 position locating requirements using several different methods. FCC mandated position accuracy requirements vary based upon the technology used by the individual carrier.

Weather, terrain, the number of cell towers receiving a signal, and the quality of a GPS fix from a GPS-enabled cell phone can all affect the accuracy of a position received through an E911 system.

a. Initial 911 Cell Call Position Information. The initial level of detail and accuracy of the victim's position depends upon whether the local cell phone carriers and the dispatch center are E911Phase 1 or Phase 2 compliant. Dispatch centers and cell phone carriers throughout the state of Colorado have achieved various levels of E911 implementation.

The availability and level of victim position information is determined by:

1. **No E911 Implementation**-- no E911 Implementation, therefore no cell phone number or any position information is available to a dispatch center.

2. **E911 Phase 1 implementation and information**— may include the cell carrier's name, victim cell phone number, receiving cell tower location and possibly some rough location information based upon cell tower antenna configuration. The information may include a tower antenna quadrant or a direction from a given cell tower location. A rough distance from the tower may also be available if a cell carrier's technician is called in to evaluate the position data. This can be a lengthy process.
3. **E911 Phase 2 implementation and information**— the phase 1 information is available plus a more accurate position given in latitude and longitude coordinates.

b. Updated Victim Position Information. Updated victim position information may be obtained by a dispatch center through the use of inquires made to a cell carrier. E911 Phase 1 update "inquires" are made via manual voice interface to a cell carrier's security office. This manual interface will require the response of a carrier's technician to respond and interpret data before providing additional position information. Phase 2 update inquires are automated and made directly by dispatch to a cell carrier's call record database.

Position accuracy may be improved or victim movement may be documented by dispatch performing additional inquires to a cell carrier. For Phase 2 enabled calls, the dispatcher may select the "RTX ALI" button on their ALI screen to automatically request a position retransmission.

Note: updated position information will be available as long as the victim's phone is connected to the dispatch center. If the 911 call is disconnected, the last known position is available.

c. E911 System Notes:

1. For those dispatch centers that have implemented E911, some form of position information should be available when a 911 call is received from a victim's cell phone.

2. **Both the Clear Creek and Jefferson County dispatch centers are E911 Phase 2 compliant. However, some calls may still come in as Phase 1 information only.**

3. When Alpine provides mutual aid to other teams in Colorado, other dispatch centers may or may not be partially or fully E911 compliant.

4. The follow-on inquiries that a dispatch center makes to a cell carrier are called "rebiding" a call in cell carrier terminology.

5. Some newer cell phones contain a GPS engine and provide an actual GPS position to the cell carrier data stream. Some cell carriers have chosen to implement E911 Phase 2 using this actual GPS data. This position location may not be as accurate as that from a true GPS unit due to GPS antenna limitations within a cell phone.

6. Latitude/longitude positions received from E911 systems are in **WGS84 datum** and may be given in **degrees and decimal degrees format**. Some coordinate translation may be required for them to be useful to SAR teams. On-line coordinate translation programs are available to dispatch centers via the Internet. The topo software in Comm 4 will also convert coordinates.

7. A cell phone in roaming mode, not on its home cell system, may not be able to pass position information. This can be caused by differences in the way cell carriers determine and forward position information.

2. **RESPONSIBILITIES**. When a victim's location is not known, Mission Leaders (MLs) should determine if a victim has called 911 via a cell phone. If so, Mission Leaders should insure that position information is obtained from the dispatch center.

If the accuracy of the position is in doubt or as a search progresses without success, the ML should request an update on the victim's position from dispatch. For Phase 2 enabled calls, the dispatcher may have a "confidence level" to check on their ALI screen for the position information.

3. **OPERATIONS**. The following are a series of questions or actions that can assist an ML in obtaining initial or improved victim position information.

a. Did a victim call via a cell phone and ***did he or she call 911***? Ask dispatch for position information if it was a 911 call. Ask for the position "confidence level".

b. If the victim has a cell phone but hasn't dialed 911, if he or she is able, have him or her hang up and call 911 to establish a position fix.

c. If the victim's cell phone has a low battery or the victim is unable to place or maintain voice contact, it may still be possible for the carrier to "ping" the cell phone. A ping takes less power from the cell phone battery than a normal voice call.

NOTE: When requesting a ping, in many instances the dispatch center must go through a formal request process to the cell company (some times a legal review process when a crime is suspected). This process may take a lengthy period of time before the ping is approved and can be performed.

d. If the victim's cell phone position is in doubt or if a mission progresses without success, ask dispatch to make another inquiry or "rebid the call" to obtain an updated position fix. For Phase 2 enabled calls, dispatch initiates a "rebid" on their ALI screen by selecting the "RTX ALI" (retransmit ALI) button.

4. **REFERENCES:**

a. FCC E911 web site-- http://www.fcc.gov:80/pshs/911/Welcome.html

b. NENA web site: http://www.nena.org/pages/ContentList.asp?CTID=23

Adopted – 12/28/07

Communications – Comm 4 / APRS Procedures

I. Portable APRS Units:

1. Plug in the portable APRS units and turn on any external GPS unit (older trackers) for all portable systems to be used in the field. Check proper operation of any external GPS units.
2. Issue APRS units to teams ***noting which search team is issued what APRS unit number***.

II. APRS Transceiver:

1. Plug the APRS transceiver power plug into the 12 VDC socket near the back of the computer.
2. Turn on the APRS Transceiver, if off. Confirm a frequency of (1)44.340.
3. Check that volume control is at 11 o'clock position and adjust the squelch as needed for weak signals. Note: the speaker is normally in the off position.

III. Comm 4 Computer:

1. Turn on UPS power system on the overhead shelf, if off.
2. Plug in keyboard and mouse in the back of computer.
3. Turn on computer and monitor, and click on Administrator on the desktop.
4. From the desktop, start:
    a. CRT4.1 Program, select KPC3, and click on "Connect", (shows that data is flowing from the APRS receiver to the computer).
    b. D-Mapper program and Terrain Navigator 6.0, or
    c. Ozi-Explorer and Ozi-APRS programs as required.

IV. Software Setup:

Note: There are two programs sets to use, either Terrain Navigator with D-Mapper import software or Ozi-Explorer with Ozi-APRS import software.

1. Setup for D-Mapper: data flow setup in D-Mapper:

    a. Assign Team names in the Tactical Name Block Column to APRS units according to the APRS unit numbers you previously noted while issuing the units to individual teams. EG: Team 1, Team 2, etc.
    b. Check the "automatically import data" block.
    c. Check the "use tactical names" block.
    c. Check the "Automatically Import Data" button.
    d. Check the "Import Data Block" for each active APRS unit.
    e. To plot Team "tracks", Check the "tracks/with connecting lines" button in the far right column (in the configuration area-- may be covered up)

Notes: With D-Mapper, you may import to one or the other topo program but not both at the same time

2. Setup for TERRAIN NAVIGATOR PRO: (Easier to use, seamless transition across topo quads, **will show Team 'tracks").**

Select Terrain Navigator Pro in the software used column of D-Mapper and check the Auto Import Button. Tracking data will now be imported automatically from D-Mapper to Terrain Navigator Pro. You are now ready for mapping operations in Terrain Navigator Pro.

3. Setup for OZI-EXPLORER/Ozi-APRS: (Easily displays high definition aerial photos that can show new roads and trails not yet on topo maps).

NOTE: Live data must first be available from a portable APRS unit as displayed in the CRT4.1 Program window. Therefore *you must first activate the APRS receiver* described in paragraph II above.

There are two ways to use Ozi-Explorer. You may either manually import APRS tracking data into Ozi-Explorer from D-Mapper periodically during the mission or you may activate OZI-APRS which will automatically import data to Ozi-explorer.

Using D-Mapper:

a. In the File drop down menu, click on Map File Creation; make sure the Create Terrain Navigator Pro and Ozi-Explorer Files item is checked. All other items should be unchecked.
b. Select the Import To Other Programs option in the software used column.
c. Double click on the Ozi Waypoint Format window (bottom right of screen) to open the Notepad file describing the data format.
d. Add four (4) blank lines at the very top of the file. Click save and close the Notepad window.
e. Click on the Post To Map Now button. A note will open up. Leave the note open.
f. Go to the Ozi-Explorer window and select the Load drop down menu. The first time you import APRS data, click on the Load Waypoints From File selection. This loads the initial APRS data into the Waypoints File in the Ozi-Explorer Program.
g. Make sure you are loading the data into the correct Ozi-Explorer file by going to the C Drive--Program Files--dmapper Folder--dmapper.wpt file.
h. Create a new mission file by going to the Save menu and clicking on the Save Waypoint To File. When the window opens create a new mission name in the File Name window using the following format: "Mission yy/mm/dd". For example "Mission 06/05/03".
i. Go back to D-Mapper and click OK in the note that opened when you clicked on the Post To Map Now button. The note will close. You are now ready for mapping operations in Ozi-Explorer.

Using Ozi-APRS: To be completed later.

V. Mapping Operations: For the selected mapping program:

Note: Both the CRT and importing software (D-Mapper or Ozi-APRS) must be active for the system to work. They may be hidden behind the topo window but they must be active.

1. Select the appropriate Quad map for the mission and center the screen on the search area.
2. Adjust the map scale to best meet the mission area tracking needs.
3. Check the KPC3-CRT program screen to verify receiving live APRS data from all fielded APRS units.
4. In the D-Mapper screen, verify receipt of data from each fielded APRS unit.
5. FOR TERRAIN NAVIGATOR PRO: APRS tracking data will automatically update from D-Mapper into the mapping window when using Terrain Navigator Pro.
6. FOR OZI-EXPLORER: (If using D-mapper) Periodically (every 4 to 5 minutes) manually update live APRS tracking data into Ozi-Explorer by performing the following:
    a. In D-Mapper, double click on the Ozi Waypoint Format window (bottom right of screen) to open the Notepad file describing the data format.
    b. Add four (4) blank lines at the very top of the file. Click save and close the Notepad window.
    c. Click on the Post to Map Now button. A note will open up. Cancel the note.
    d. Go to the Ozi-Explorer window and click on the Load drop down menu. Click on the Append Waypoints from File selection. This loads the latest APRS data into the Ozi map.
7. You may label actual APRS tracks with Team names by right clicking on a waypoint or track and entering names into the edit or data field of the appropriate mapping program.
8. You may mark the Incident Command Post (ICP), last seen point, clues, areas searched, found locations, etc. on the mapping program screen as needed using the Draw or Label features of the appropriate mapping program.
9. Coordinate with the ML to advise him or her of best access routes, actual versus planned APRS tracks, current team locations, unique topography features noted on the overhead photos, etc.
10. Print actual tracking maps and/or assigned tracks from the mapping program screen as required supporting the ML and teams returning into the field.
11. If APRS wasn't used or successful, as required by the ML, import actual search team GPS tracks into the mapping program from returning teams to document actual areas covered during extended searches. Use the Import menu—Import From selection to do this. There is a cable in the drawer to accomplish this download.
12. At the end of a mission, print record copies of final mission tracks as required by the ML.
13. At the end of a mission, time permitting and if you have made file copies, clear all tracking data from the mapping program screen.
14. Shut down and store all computer and portable radio equipment brought out prior to Comm 4 departure.

VI. System Shutdown/Next Mission Preparation.

1. Upon returning to the Shack, plug all APRS units into their chargers (white wall warts plugged into a power strip stored in the drawer under the radio position seat) so the APRS units are ready for the next mission. **CAUTION**: do not leave a wall charger plugged in without an APRS Unit plugged into it charging. The charging unit could overheat.
2. The following day, unplug the charger units and replace the APRS units in their storage area. Notify the Comm Team if you need assistance with this charging activity.

Adopted – 07/09/08

Communications – Ham Radio Frequencies

(Information in italics = best coverage for a given area)

1. <u>BACKGROUND</u>.
Amateur (aka Ham) radio has the potential to reach in to back country areas where there is no direct MRA coverage or cell phone coverage. Ham radio uses high level mountain top repeaters to rebroadcast transmissions from a hand held or mobile radio to greatly extend coverage areas.

There are hundreds of Ham repeaters within Colorado and other states; however Ham repeaters don't cover all back country areas.

Only licensed Ham operators may operate Ham radios; however MLs or other Team members may talk over a Ham radio which is under the direct control of a licensed Ham (called "third party traffic").

NOTE: In true emergencies involving an <u>immediate</u> threat to life or property, non-Hams may use Ham radio frequencies. HOWEVER, be prepared to justify your use to the Federal Communications Commission. Ham radio frequencies are programmed into some Team radios.

2. <u>TOP TEN HAM RADIO VHF REPEATER FREQUENCIES</u>.
(Installed in some Alpine VHF hand-helds. Recommended for all Alpine Hams)

145.220-600, 103.5 Hz CTCSS Guy Hill, <u>Front Range area</u>, RMRL Club,
Normally check in here when deploying for a mission (and MRA of course)

146.670-600, 100 Hz CTCSS Squaw Mountain, CRRG Club, <u>Northern Front Range and ***fair coverage*** *back into some areas of Clear Creek County,*
(Bakersville) (Upper Bear Creek-- South side of Chief Mountain), (I-70 west to US 40 turnoff at Empire.</u>

146.940-600, 103.5 Hz CTCSS, Squaw Mountain, RMRL, <u>similar coverage to CRRG 67 repeater above (***better to some points to the west***)</u>

146.640-600, 100 Hz CTCSS, Centennial Cone, DRL Club, <u>I-70 west & *Jones Pass-Henderson Mine area*</u>

Colorado Connection repeaters throughout Colorado, <u>16 linked together & **links back to the Front Range & Alpine Base**</u>

> **145.310-600, 123 Hz CTCSS,** Mt Thorodin, <u>Metro area, North Front Range, Alpine Shack</u>

146.790-600, 123 Hz CTCSS, Breckenridge area & also *covers west side of Mt Evans*

147.120+600, 88.5 Hz CTCSS Conifer Mountain, ARA Club-good coverage into South Metro & *South JEFFCO (Deckers, Buffalo Creek, Pine, Pine Junction)*

146.895-600, 100 Hz CTCSS, Bailey-Crow Hill, Park County Club, *285 area & North East Park County*

147.090+600, 100 Hz CTCSS, Kenosha Pass, Park County Club, *Guenella Pass area, Burning Bear C/G, Scott Gomer Trail & south of Mt Evans*

146.97-600, 100 Hz CTCSS, Pikes Peak, PPFM Club, I-25 south and *Westcliffe valley area (enroute to the Needles*). Alpine Base & Denver base stations can generally talk to this repeater

3. ADDITIONAL HAM VHF REPEATERS FOR ALPINE MISSIONS

147.060+600, 77.0 Hz CTCSS, Westcliffe Valley & *Needles Mission Base*

145.115-600, 100 Hz CTCSS, Horseshoe Reservoir & *Larimer County*

145.115-600, 77.o Hz CTCSS, Deer Peak SE of Westcliffe, *Westcliffe Valley Needles area.*

145.355-600, 100 Hz CTCSS, La Veta Pass/Spanish Peaks, *Southern Westcliffe Valley, Milwaukee Peak access trail*

147.345+600, 123 Hz CTCSS, *Vail area*, Colorado Connection

147.285+600, 123 Hz CTCSS, *Salida area*, Colorado Connection

147.210+600, 107.2 Hz CTCSS, Steamboat Springs area

4. HAM *UHF* REPEATERS FOR ALPINE MISSIONS

449.050-5, 107.2 CTCSS, Squaw Mountain, Front Range & *a good part of Clear Creek County*, private repeater but Alpine has permission to use for missions

449.450-5, 100 Hz CTCSS, Squaw Mountain, RMRL Club, Front Range

447.500-5, 88.5 Hz CTCSS, Conifer Mountain, ARA Club, Conifer area & 285

447.150-5 107.2 CTCSS, Conifer Mountain, CRA Club, Conifer & Hwy 285

448.450-5, 100 Hz CTCSS, Pikes Peak area

449.625-5, 123 Hz CTCSS, *Steamboat Springs area*, Colorado Connection

446.000 Simplex, Direct for in-the-field use.

5. STANDARD ALPINE CROSS-BAND FREQUENCY PAIRS

Cross-band Ham repeaters in communications team member vehicles (or portable if available) placed on high spots on a 4 wheel drive road can greatly expand hand held coverage in remote areas not covered by mountain top Ham repeaters.

Caution, dual-band radios placed in cross-band repeat mode may transmit continuously causing overheating. Suggest Low or medium power on both VHF/UHF sides.

Normally field units will transmit on VHF and be repeated back to the ICP on UHF.

Alpine Cross-band Pair # 1: (CO Simplex Frequencies)

VHF Side—**147.420 simplex CTCSS 146.2 Hz**
UHF Side—**445.975 simplex CTCSS 146.2 Hz**

Alpine Cross-band Pair # 2: (CO Shared Non Protected [SNP] Repeater Frequencies)

VHF Side-- **147.315 simplex CTCSS 146.2 Hz**
UHF Side—**447.050 simplex CTCSS 146.2 Hz**

6. PORTABLE UHF REPEATER.

Alpine Rescue has a portable UHF repeater available for use (contact Roger). This repeater is designed for packing into the field to be placed on a high point to greatly extend Ham radio coverage.

This portable repeater is good to use when there is no 4 wheel road access available to use a vehicle mounted cross-band repeater.

The portable repeater is on 449.425-5.0 MHz with a CTCSS tone of 141.3Hz.

7. WILDERNESS PROTOCOL.

When outside of normal repeater range, monitor 146.520 simplex VHF and 446.000 simplex UHF for 5 minutes at the top of each hour when on limited battery power or continuously if practical.

Adopted - 06/01/08

Communications – Personal Locator Beacons

1. **BACKGROUND**.

Alpine Rescue may be tasked with missions based upon alerts from two types of emergency beacons. An aircraft in distress (typically a crash) may activate an ELT. Hikers or other people in distress may have a PLB and activate it when in extreme danger.

The Civil Air Patrol has primary responsibility for all aircraft ELT alerts. They determine what county the distressed aircraft is located in and then notify the appropriate Sheriff's Office who in turn actives the local SAR team. There is a high incidence of false alarms with aircraft ELT transmitters.

Traditional Personal Locator Beacon alerts are received by SARSAT satellites, re-transmitted to the Air Force Rescue Coordination Center (AFRCC), and then channeled through our State CSRB Coordinator to the local County Dispatch Center and on-call Mission Leader.

There are two types of traditional PLBs, *GPS enabled* and *non-GPS enabled. Non-GPS enabled PLBs typically provide a 2-3 square mile footprint* for a search. *GPS enabled PLBs provide a footprint within several hundred feet*, if the GPS unit in the PLB can obtain an accurate fix. Location accuracy may be affected due to shielding by terrain or other factors.

The new SPOT Personal Satellite Tracker uses the Globalstar Satellite System (used by the OnStar System in vehicles) and is much less expensive than traditional PLBs. Quoted from their web site:

"SPOT's message and tracking functions enable users to select levels of service and send messages to friends, family, or emergency responders, based upon varying levels of need. If the service is purchased the SPOT system will visually track the location of the SPOT Satellite Messenger": The three levels of alerts are:

- "Alert 911" button dispatches emergency responders to an exact location
- Ask for "Help" button sends a request for help to friends and family
- "Check In" button lets your contacts know where you are and that you are okay

SPOT's "Track Progress" function sends and saves a user's location and allows contacts to track progress using Google Maps". *The SPOT emergency Operations Center may be queried by SAR teams to see if a beacon is moving.*

2. **INITIAL ALERT DATA AND HOMING BEACONS**.

a. Initial Alert Data.

The initial alert data from properly registered ELTs and traditional PLBs should contain subject or aircraft identification, emergency contact information, and a rough geographic location. GPS enabled beacons also provide a more accurate position in Latitude and Longitude coordinates.

b. Search Area Homing Beacons.

ELT and traditional PLB Beacons also contain a low power VHF transmitter that allows searchers to use radio direction finding (RDF) techniques when in close proximity to an aircraft crash or distressed subject. The reception range is typically ½ mile or less on the ground.

3. **MISSION LEADER RESPONSIBILITIES**. Mission Leaders will:

a. receive available aircraft or subject identification, emergency contact, and location information and use it to direct the ground search mission.

b. insure they have all available information allowing them to narrow a search into a particular area.

c. request mutual aid resources as dictated by the individual mission. The CSRB State Coordinator number is 800-593-2772.

4. **PROCEDURES**.

The Civil Air Patrol will normally have primary responsibility on aircraft ELT alerts until an accurate ground position is determined. At that point the mission will be turned over to the local Sheriff's Office and SAR team.

Should a SAR Team locate an ELT transmitter first, CAP should be notified so they can stand down their operations. See contact information below.

Mission Leaders will:

a. receive all available aircraft or subject identification, emergency contact, and position information from the CSRB Coordinator, County Dispatch Center, and Civil Air Patrol (for ELT alerts). *Updates may be available from any of these sources as the mission progresses.*

b. consider re-contacting the Emergency Contact for the missing aircraft or subject to ensure receipt of all available information.

For example, did the subject describe where he or she was hiking, or are there any special medical or other needs for the subject? For an aircraft, how many souls were on board?

c. as required, request mutual aid resources *including RDF equipment* and trained personnel from the State CSRB. The RDF equipment may be used to assist with close-in searches.

d. follow normal search procedures along with any RDF alerts to locate the distressed aircraft or person.

5. **REGIONAL RESOURCES**.

The CSRB State Coordinators maintain a roster of available SAR RDF resources. However should you require direct contact, here is a list of nearby organizations with known trained personnel and RDF equipment. The SAR RDF groups should be contacted first as they are familiar with SAR procedures.

a. Rocky Mountain Rescue Group, phone 303-441-4444 or 303-492-6371

b. Summit County SAR Team, 970-668-8301 or 303-825-6328

c. Douglas County SAR Team, 303-660-7500 or 303-660-7505

d. Front Range RDF Group (Ham Radio Group that works with the Civil Air Patrol). The contacts for FRRDF are: 1-800-267-9951, 303-212-1468 for a numeric pager, and 3032121468@contactwireless.com for email access.

6. **REFERENCES**.

a. CSRB Notice on PLBs to Colorado Sheriffs. PDF document attached.

b. AFRCC web site on PLBs. See--
http://www.acc.af.mil/afrcc/usnationalpersonallocatorbeaconprogram.asp

c. NOAA web site on SARSAT and Types of Emergency Beacons. See—
http://www.sarsat.noaa.gov/emerbcns.html

d. FAA web site on ELTs. See—
http://www.faa.gov/airports_airtraffic/air_traffic/publications/ATpubs/AIM/Chap6/aim0602.html

e. NOAA web site on differences between traditional VHF and new 406 MHz ELTs that now provide digital identification and location information. See—
http://www.sarsat.noaa.gov/406vs121.pdf

f. SPOT web site. See--
http://www.globalcomsatphone.com/spot/?utm_source=Google&utm_medium=PPC

Adopted – 09/16/08

Attachment 1

QUOTED FROM THE CSRB PLB Circular--

"Personal Locator Beacons-Information for County Sheriffs

What is a Personal Locator Beacon?

The PLB is a hand-held, satellite-communicating, emergency location device. They are similar to "ELTs" carried on aircraft and "EPIRBS" on boats. Their use became legal in the entire United States in July, 2003 When activated, a PLB sends a data burst to passing satellites; these are the same satellites that receive the well-known ELTs from crashed aircraft. The PLB simultaneously sends an emergency signal on 121.5 MHz for direction finding (DF). The data transmitted includes a unit registration number.Once picked up by a satellite, the satellite generates the latitude and longitude of the source accurate to about 3 miles. Some models have a GPS receiver built-in, and will also transmit its GPS based location accurate to about 200'.

Owner information

The owner **should** register the unit when purchased. The information includes the owner's name, address, phone number, and backup phone number. This information is stored in a database, and is retrieved when the PLB is activated, but only if the owner registered the unit

Who gets the transmitted data?

The satellite stores the information until it is in range of a ground receiving station, which then relays the information to the National Oceanic and Atmospheric Administration (NOAA). They process the satellite data and transmit the results, along with the owner information, to the Air Force Rescue Coordination Center (AFRCC) at Langley Air Force Base. The AFRCC sends the information to the state SAR coordinator in the state in which the PLBs indicates it is located. In Colorado, this is the Colorado Search and Rescue Board's on-duty **State SAR Mission Coordinator**. The Coordinator will determine, by latitude and longitude, in what county the PLB alert originated and then contact the county sheriff's office. The coordinator will not be able to tell you the nature of the emergency, only the PLB's location, the owner's name, address, phone number and backup phone number.

If a PLB goes off in my jurisdiction, what information will I get and what should I do?

A PLB activated in your area of responsibility means that a person is in distress and needs immediate assistance. 9-1-1 Centers need to treat this like any other SAR notification. Your first notification of the event will probably be a phone call from the State SAR Coordinator with the following information: *owner's name, address, phone number,emergency phone number and latitude and longitude of the signal.* Make sure dispatchers understand the nature of the phone call. This **is** an emergency! Treat this as all other SAR reports and notify the appropriate county SAR resources.

Communications – Radio Relay Points

MRA CHANNEL / HAM RADIO RELAY POINTS

1. Background: Select a relay point based upon where a relay is needed, either from: (1) COMMAND POSTS TO SEARCH LOCATIONS OR (2) RELAYING BACK TO THE SHACK / DENVER AREA

2. Operations: Known relay locations:

COMMAND POST/ RELAY AREA	1. SEARCH LOCATION 2. RELAY TO LOCATION	MRA RELAY LOCATION	REMARKS/ HAM RELAY REPEATER
Chicago Lakes Command Post	1. Field teams 2. Shack	1. Hwy 103, West of Echo Lake	1. 146.640/449.050 2. Cell coverage to Shack or Denver?
Chief Mountain Command Post (Hwy 103 - MM 18.5)	South Side of Chief Mt	Squaw Mt access road/near top, at left dogleg turn	Ham 146.670, 146.940, 449.450, and 449.050
Grays / Torreys Command Post	1. Teams in field 2. Shack	1. Gravel Rd above Bakersville exit 2. MM16 on HWY 103	2. Ham 146.670/449.050
Guenella Pass Command Post	1. Burning Bear CG/Scott Gomer Trail, S & W Bierstad 2. Shack	1. Mt Evans Summit 2. Shack	1. Ham 146.910 2. Ham 146.790 (Colo. Conn.) 145.310 Denver
I-25 southbound for south counties mutual aid	2. Shack/Denver	None	2. Ham 146.670 to Monument Hill, 146.970 CO Spgs/ Westcliffe area
I-70 westbound to Command Posts	2. Enroute members	2. Hwy 103 MM 16 pull-off east of Eagles Arie Picnic area	2. Cell phone to Shack 2. Ham 146.670, 146.640, 449.050
Jones Pass / Henderson Mine Command Post	Shack/Hwy 70/40 Responders	Berthod Pass?	Ham 146.640 (Cent. Cone)
Herman / Dry Gulch Command Post	2. Shack/Denver	None	2. Ham 146.67, possible cross-band 445.975/146.67

MRA CHANNEL/HAM RADIO RELAY POINTS

FROM (1) COMMAND POSTS TO SEARCH LOCATIONS OR (2) BACK TO THE SHACK / DENVER

Larimer County Mutual Aid	Enroute and in-field members	1. MRA 1 or 3 2. Shack/Denver	2. Ham 145.115
Crestone Needle Command Post	1. Field teams in bowl / on Mountain 2. Shack/Denver	1. 4-wheel relay at end of jeep trail	1. Ham simplex or 146.060 local, 2. Ham HF or 146.970
COMMAND POST / RELAY AREA	**1. SEARCH LOCATION 2. RELAY TO LOCATION**	**MRA RELAY LOCATION**	**REMARKS / HAM RELAY REPEATER**
St Mary's Glacier Command Post	1.Responders on Hwy 70 2. Shack	1. Hwy 103 MM 16 pull-off east of Eagles Arie	1. Ham 146.640/449.050 2. Cell coverage to Shack or Denver?
South JEFFCO/HWY 285/ East Park Co.	Buffalo Cr, Deer Cr, Elk Cr, Harris Park, Reynolds Ranch, Pine Junction, Deckers	Conifer Mt Fire Station, Hwy 285 to Kennedy Gulch Rd to Conifer Mt Rd to Timothy's Dr	Ham 147.120 Conifer Mtn. or 146.895 Crow Hill
Summit County Mutual Aid	Enroute and in-field members	1. MRA 2. Shack/Denver	2. Ham 145.310-Denver to Ham 146.790-Summit CO Connection (linked)

NOTE: In many cases it may be possible to set up a cross-band Ham repeater to repeat Ham handhelds on UHF to a VHF mountain top repeater on VHF via a portable/mobile Team Member established cross-band repeater.

Adopted – 07/01/06

Alpine Rescue Team
Insurance Information

How Alpine protects you: What you need to know about insurance.

Alpine Rescue Team carries insurance for several purposes and situations. We also have financial protection for the team and its members from the Colorado Search and Rescue Reimbursement Fund. The information below is a summary of unique protection or particular coverage carried by the team. It does not discuss common insurance coverage, such as general or vehicular liability.

General insurance

- Our VFIS Portfolio of Coverage is specifically designed for emergency service organizations and has some unique features for you:
- "Deductible reimbursement" pays team members up to $1,000 or the amount of your auto physical damage deductible if your vehicle is damaged in the course of team "business."
- Members are insured for automobile liability by extension of the team's insurance. This coverage is excess over any insurance you may personally carry.
- "Owned Equipment" covers team equipment permanently installed in non-owned autos (i.e., team radio installed in member's vehicle).
- "Non-owned" portable equipment in the team's possession, and not furnished to us for regular use is covered, up to $50,000 per occurrence. "Professional Healthcare Liability" covers damages arising out of providing, or failing to provide, medical care to a patient.
- "Good Samaritan" liability covers actions taken "off-duty." For example, rendering medical aid at an automobile crash. This will not apply if you respond with or for any other emergency service agency.
- The "personal effects" portion of our Portable Equipment coverage pays for direct physical loss or damage to personal property while en route to, during or returning from authorized team operations. There is no deductible and the coverage is primary regardless of any other insurance you may carry.

Colorado Search and Rescue Reimbursement Fund

- In addition to the last paragraph of the VFIS section above, the Colorado Search and Rescue Reimbursement Fund will cover the cost of replacement or repair of equipment or property that is damaged during an eligible SAR mission. This includes both team property and team member's personal property. Eligible missions are those in which the subject or a member their party has one of the following:

- A Colorado Outdoor Recreation Search and Rescue Card (previously called the Hikers certificate);
- A Colorado hunting or fishing license, any type;
- A Colorado boat, snowmobile or off-highway vehicle registration in their name.
- Missions are also eligible if the subject is an family member of one of the six "license holders" above: parents, siblings, spouses, children or grandchildren. Claims for reimbursement must be certified by the county sheriff and made only after the expense is incurred.

- The team must have evidence of any of the eligible licenses, etc. The team must ascertain, at the scene, if one is involved, and also obtain follow-up contact information to determine after the fact if a relative carries one, if necessary.

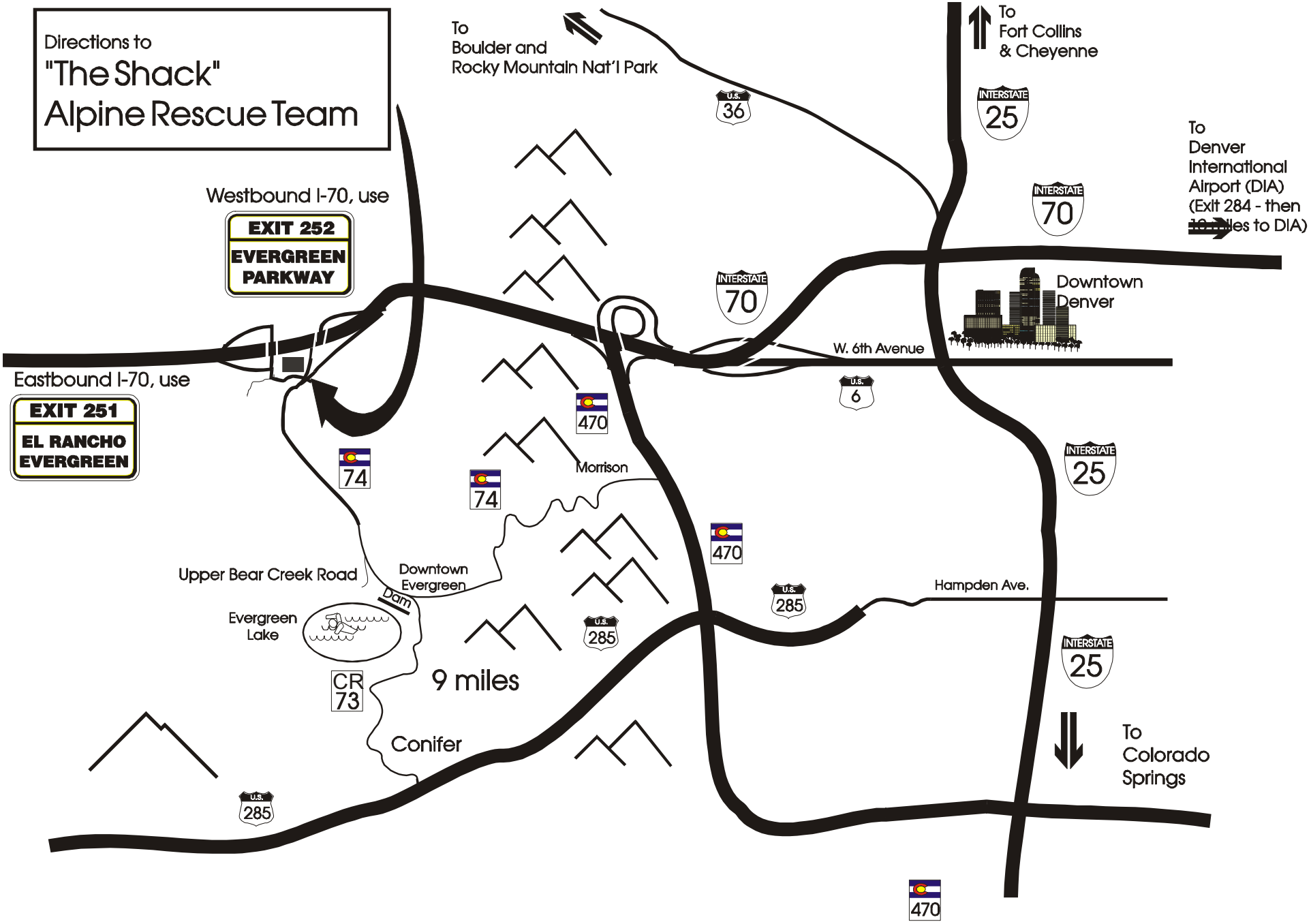
Workers Compensation

- Worker's Compensation insurance is mandated by the state, even for volunteers. It covers injury or disability suffered by a team member and will pay medical and rehabilitation costs, or a disability pension should significant injury occur. Any injury must be reported to the team within 5 days of occurrence.

- Report any personal injury or equipment loss, to the team immediately: inform the president or mission leader (in case of a field-related occurrence) or field director (in case of a training-related occurrence). If you fail to do so, coverage may be severely limited or even denied by the carrier.

Federal Public Safety Officers' Benefits

- Lastly, the federal government recognizes the value of public safety officers, both volunteer and paid, and has a program dealing with a catastrophe:
- "Public Safety Officers' Benefits (PSOB) Payments. The PSOB provides a $100,000 benefit to the eligible survivors of a public safety officer whose death is the direct and proximate result of a traumatic injury sustained in the line of duty.
- The Act also provides the same dollar amount to a public safety officer who has been permanently and totally disabled as a direct result of a catastrophic personal injury sustained in the performance of duty. Such injury must permanently prevent the officer from performing any gainful work.
- Volunteer firefighters and members of volunteer rescue squads and ambulance crews are covered, if they are officially recognized or designated members of legally organized volunteer fire, rescue, or ambulance departments."


Directions to
"The Shack"
Alpine Rescue Team
To
Boulder and
Rocky Mountain Nat'l Park
U.S. 36
To
Fort Collins
& Cheyenne
INTERSTATE 25
To
Denver
International
Airport (DIA)
(Exit 284 - then
10 miles to DIA)
INTERSTATE 70
Westbound I-70, use
EXIT 252
EVERGREEN
PARKWAY
INTERSTATE 70
Downtown
Denver
W. 6th Avenue
U.S. 6
Eastbound I-70, use
EXIT 251
EL RANCHO
EVERGREEN
470
74
74
Morrison
INTERSTATE 25
470
Upper Bear Creek Road
Downtown
Evergreen
Dam
Hampden Ave.
U.S. 285
Evergreen
Lake
U.S. 285
INTERSTATE 25
CR 73
9 miles
To
Colorado
Springs
Conifer
U.S. 285
470

UPDATED RADIO NUMBER CHANGES
Date of Change – October 7th, 2011

All radio transmissions will begin with "Alpine" and then the appropriate "600 Number". This will be done not only in Clear Creek County but also when we are training or responding to missions out of the county.

Alpine Base	**A.R.T. Headquarters**
Alpine 600	**Current Field Director**
Alpine 601	**On-call Mission Leader**
Alpine 602	**2nd Mission Leader**
Alpine 605	**Mission Leader Trainee**
Alpine 610 - 619	**Qualified Rescue Members**
Alpine 620 - 649	**Rescue Members**
Alpine 650 - 679	**Support Members**
	Reserve Members: Romeo Suffix (R) **Technical Specialists: Tango Suffix (T)**

ART Vehicles

- Alpine Rescue 1 - Primary Response Vehicle
- Alpine Rescue 2 - Secondary Response Vehicle
- Alpine Comm 4 - Communications Vehicle

- Ski-doo Skandic 600 / Ski-doo Skandic 600
  - Snowmobile Trailer 1
- Artic Cat M-8 / Artic Cat M-8
  - Snowmobile Trailer 2
- Artic Cat Bearcat / Artic Cat Bearcat
  - Snowmobile Trailer 3
- Polaris Sportsman 550 (Red) ATV / Polaris Sportsman 550 (Black) ATV
  - ATV Trailer 1
- Polaris Sportsman 500 ATV / Polaris Sportsman 500 ATV 4 (6x6)
  - ATV Trailer 2

Unavailable Numbers

Number	Reason
626	Radio # Retired (Hunter Holloway)

Alpine Radio Number Assignments:
Revised 10/07/2011

Role Based Designation: 600 - 609	
#	Role
600	Field Director
601	On-Call Mission Leader
602	2nd Call Mission Leader
603	
604	
605	Mission Leader Trainee
606	
607	
608	
609	

Qualified Rescue Member 610-619	
#	Name
610	Woodward, Paul
R	
612	Everist, Mike
613	Thomas, John
TS	
R	
616	Ondrusek, Ric
617	Wood, Tom
618	Loebach, Tom
619	Wyatt, Roy

Rescue Members: 620 - 649	
#	Name
620	Stuebe, Brian
TS	
622	Feroldi, Bob
623	Nelson, Mark
TS	
625	Wacht, Lynda
~~626~~	Hunter Holloway
R	
628	Gosselin, Steve
629	Wilson, Steve
630	Mallory, Jim
R	
632	Lucht, Angie
R	
634	Hamm, Dan
635	Bower, Mark
636	Archey, Melissa
637	Becky Brock
638	Justin Peacock
639	
640	Petrilli, Jerry
641	
642	Eric Bottjen
643	
644	
645	Grotheer, Scott
646	Osburn, Bryan
647	
648	Pfau, Loren
649	

Support Members: 650 - 679	
#	Name
650	Bindrich, Paula
651	
652	Eaton, Angela
653	Montague, Kevin
654	Lytle, Bill
655	Trumbly, Tony
656	Witmer, Joelle
657	McCurley, Bob
658	
659	
660	
R	
662	Stiller, Greg
663	Ahrend, Sue
664	
665	Rhodes, Tom
666	Wilson, Dawn
667	Jared Spears
668	
669	
670	
671	
672	
673	
674	
675	
676	Brown, Wes
677	
TS	
679	Hauser, Ken

Tech Specialists, Reserve Members:		
#	Suffix	Name
611	Romeo	Luethy, Phil
614	Tango	Dorn, Herb
615	Romeo	Wells, John
621	Tango	Atkins, Dale
624	Tango	Brown, Roz
627	Romeo	Doe, Mike
631	Romeo	Paul, Howard
633	Romeo	Wagner, Bob
661	Romeo	Barwick, Bill
678	Tango	Glatterer, Skeet
684	Tango	Shimanski, Charley
686	Tango	McCurley, Loui
699	Tango	Krautkremer, Roger

01/01/07

SAMPLE LONG FORM

RESCUE 1

LONG FORM - Vehicle Maintenance and Equipment Readiness

Team Leader _____ **Date** _____

Fluids and Belts	**Circle One**	
___ Fuel	(Fill any tank that is not Full)	
___ Brake Fluid	Full	Low
___ Oil	Full	Low
___ Power Steering Fluid	Full	Low
___ Windshield Washer Fluid	Full	Low
___ Radiator Fluid	Full	Low
___ All Belts	OK	Replace

Operation	**Circle One**	
___ Radios	OK	Repair
___ Horn, Lights	OK	Repair
___ Signals, Siren	OK	Repair
___ Windshield Wipers	OK	Repair
___ Tire Inflation (70 lbs each)	(Inflate to proper PSI if low)	
___ EV lights	OK	Repair
___ Windex inside of Windows	Done	Not Done

Generator	**Circle One**	
___ Fuel	Full	Low
___ Oil	Full	Low
___ Spare Can w/Fuel	Yes	No
___ Spare Qt. Oil	Yes	No

Repair Notes	**(Briefly State Problem(s)**
1	
2	
3	
4	
5	

R-Rank Team Lead - Please Report any Problems to ML on Call

Order of Equipment is from Driver's side front seat toward Rear of vehicle to vehicle's Right side

		QTY MISSING
Truck Cab		
___ Driver's Radio	Test MRA Channel 1	
___ UHF HH Radio	1 only - Turn on / Listen for beep / Turn off	
___ Cell Phones	1 Nextel / 1 ATT - Turn on / Acquire signal / Turn off	
___ Glove Box	Spare Keys / Winch Cable / 2 Hitch Converters	
___ Road Atlas	1 only	
___ Vehicle Op Guide	1 only	
___ Call List	CURRENT? If not, make 20 copies and replace old ones	
___ Press Forms	Ensure folder is present with several briefing forms	
Command Center		
___ Recco	1 only	
___ Avy Beacons	10 only - Turn on / Ensure above 60% / Turn off	
___ Helmets	3 orange duffels: ATV or Snowmobile (seasonal)	
___ GPS Units - BLK	4 (1 on console) - Ensure 75% charge / Acquire Sats	
___ GPS Units - Etrx	8 only - Ensure 75% charge / Acquire Sats	
___ Laptop Computer	1 only - Turn on / Turn off	
___ Power Inverter	1 only - needed for the laptop	
___ Spotlights	2 only - Turn on / Turn off	

SAMPLE LONG FORM

___	Spare Batteries	Ensure 12 or more in stock (under desk lid)
___	Topo Maps	3 boxes - Check against master list
___	Radios	6 only - Test MRA Channel 1 on each
___	Radio Harness	6 only - Confirm quantity
___	Smith Sled	1 only
	Left Compartments	
___	Rock Bolt Drill	1 only - Ensure battery for the drill in Kit
___	Bolts / Hangers	1 only
___	Sked	1 only
___	Edge Pro	4 rollers and 4 soft edge and 1 matt
___	I C Vests	1 Pack
___	3RD Man Pack	Verify Contents and make new J-tag
___	High Line Pack	Verify Contents and make new J-tag
___	Kootenay Pack	4 pulleys - Verify Contents and make new J-tag
___	Brake Tube Pack	2 b tubes / 2 biners - Verify Contents and make new J-tag
___	Vehicle Anchor Pack	Verify Contents and make new J-tag
___	Dynamometer	1 only - Insert batts/ Test power / Return batts to storage
___	Dynamomter -Remote	1 only in a case
___	Litter Wheel / Pack	1 only - Confirm both pack and wheel
___	Extension Cord	1 only
___	Fire Extinguisher	1 only - Confirm charge in acceptable range
___	Bolt Cutters	2 pair
___	Honda Generator	1 only
___	Spare Can w/Fuel	1 only - Ensure it is full
___	Spare Qt. Oil	1 only
	Rear Compartment	
___	Litter	1 Composite (Cascade)
___	Litter	1 Titanium w/ Orange Helmet/Tie-ins/Vert Spider/Stirrup
___	Litter	1 Hard Shell w/ Orange Helmet/Tie-ins/Stirrup
___	Sleeping Bags	2 only
___	Bean Bag	2 only - with pumps
___	Bash Packs	2 only - Verify Contents and make new J-tag
___	Ropes (300 feet)	2 only
___	Ropes (200 feet)	9 only - 3 Red, 3 Blue, 3 Yellow
___	Probe Poles	15 only - fixed length
	Right Compartments	
___	600' Spool Rope	1 only
___	Traffic Cones	8 only
___	Body Bag	1 only
___	2 cycle oil	1 gallon
___	Washer fluid	1 gallon
___	Fix-a-flat	3 cans
___	Police flagging	1 roll
___	Jumper cables	1 set
___	Spotlight	1 only
___	Tire chains	1 set
___	Spare Avy Supplies	1 Orange pack - Ensure it is present

SAMPLE LONG FORM

___ Snowshoes	9 pair	
___ Ice Axes	6 only	
___ Snow / Ice Anchors	Verify Contents and make new J-tag	
___ Probe Poles	4 only - collapsable	
___ Pickets	12 only	
___ Avy Bash Pack	Verify Contents and make new J-tag	
___ Avy Shovels	3 only	
___ Avy Support Pack	Verify Contents and make new J-tag	
___ PFD's	16 only during Summer / 8 only during Winter	
___ Oxygen Tanks	6 only	
___ Oxygen Regs	2 only	
___ IV Warmers	1 plug in / 1 insulated	
___ Gloves	At least 1 box	
___ Hotpacks	At least 2 paks	
___ Lg Med Pack	Verify Contents and make new J-tag	
___ Airway Pack	Verify Contents and make new J-tag	
___ Sm Med Pack	6 only - Verify Contents and make new J-tag	
___ C-Collars	5 only	
___ AED	1 only - Turn on / Turn off	

R-Rank Team Lead - Please Report any Problems to ML on Call

Mountain Rescue Association
Rocky Mountain Region

A/R Worksheet Packet

This packet includes a seven page A/R worksheet (pages 1-7) that will assist the evaluator's in determining whether the team being evaluated has met the requirements necessary for re-accreditation. The packet also includes a one page "Evaluator Form" (page 8) that becomes an official document of the region. Listed below are instructions on how to use these worksheets.

If you are assigned to evaluate the **Search,** please score the questions on pages 1-3 that you observed, and also score page 4.

If you are assigned to evaluate the **High Angle Evacuation or the Scree Evacuation,** please score the questions on pages 1-3 that you observed, and also score page 5.

If you are assigned to evaluate the **Technical Evacuation portion of Winter Rescue,** please score the questions on pages 1-3 that you observed, and also score page 6.

If you are assigned to evaluate the **Avalanche portion of Winter Rescue,** please score the questions on pages 1-3 that you observed,) and also score page 7

As an evaluator or observer you may not have the opportunity to observe all portions of each scenario. If you did not observe a specific area, place an "X" in the proper column for each question. If the team did not perform a requirement in a specific area, place an "O" in the proper column for each question.

Now what??

Worksheets are a tool to assist the evaluators in completing the Evaluator's Form and to provide the evaluators and observers a method of giving specific feedback to the team being evaluated. Evaluation Team members are encouraged but not required to list your name and team on the top of each page of the worksheet.

Observers are encouraged but not required to fill out the worksheets and then discuss their observations with the evaluators that were at the same area.

Evaluators should fill out the worksheets and then discuss their observations with the appropriate observers prior to filling out the "**Evaluator's Form**". The final page of the packet is only to be filled out by the evaluators (observers to do not fill out this page).

Evaluators must complete and sign the Evaluator's Form and return it to the Lead Evaluator at the conclusion of the A/R exercise.

Observers and Evaluators must submit their worksheets to the Lead Evaluator at the conclusion of the A/R exercise.

A/R Worksheet *Name*_____ *Team*_____ 03/01/98 Page 1

***Scenario Lead*____ *Evaluator*____ *Observer*____** *(avalanche revised 02/01/10)*

Scoring:

1 = Team does not meet the requirements in this area
2 = Team meets the requirements in this area
3 = Team significantly exceeds the requirements in this area
x = Did not observe
o = Did not perform the requirements in this area

Winter Rescue Aval	Winter Rescue Tech Evac	Technical Rock High Angle	Technical Rock Scree	Search

A. Organization

1. Mission Leadership

____	____	____	____	____	a. Did a recognized leader take charge of the operation?
____	____	____	____	____	b. Did he/she delegate responsibility appropriately?
____	____	____	____	____	c. Did he/she have the respect and cooperation of the entire team?
____	____	____	____	____	d. Did he/she gather information appropriately from other team members?
____	____	____	____	____	e. Is there adequate depth of leadership on the team that others could take over the entire operation or specific aspects?
____	____	____	____	____	f. Did they properly utilize the available personnel and equipment?
____	____	____	____	____	g. Were distractions (e.g. press) handled appropriately?
____	____	____	____	____	h. Were reporting parties and subjects vehicles properly handled?

Comments _____

2. Scene Leadership

____	____	____	____	____	a. Did a recognized leader take charge of the operation?
____	____	____	____	____	b. Did he/she delegate responsibility appropriately?
____	____	____	____	____	c. Did he/she have the respect and cooperation of the entire team?
____	____	____	____	____	d. Did he/she gather information appropriately from other team members?
____	____	____	____	____	e. Is there adequate depth of leadership on the team that others could take over the entire operation or specific aspects?
____	____	____	____	____	f. Did they properly utilize the available personnel and equipment?
____	____	____	____	____	g. Were reporting parties and subjects equipment properly handled?

Comments _____

3. Coordination

____	____	____	____	____	a. Did individuals on field team's work together to get their task done?
____	____	____	____	____	b. Did field team leaders direct the efforts of their field teams and coordinate those efforts through the overall mission command?
____	____	____	____	____	c. Did the team properly prioritize multiple victims and operations?
____	____	____	____	____	d. Did the team function as a unified organization rather than as individuals?
____	____	____	____	____	e. Was everyone on the team aware of the overall plan and worked toward it?
____	____	____	____	____	f. Did necessary equipment arrive in the field when needed?

Comments _____

4. Judgment

____	____	____	____	____	a. Were the situations evaluated thoroughly and correctly?
____	____	____	____	____	b. Did the team "dig" for information from bystanders and victims?
____	____	____	____	____	c. Was a good approach taken to solve the problem?
____	____	____	____	____	d. Were appropriate personnel selected for various jobs?
____	____	____	____	____	e. Did the team react properly to new developments in the problem?
____	____	____	____	____	f. Were the team members "clue aware", and did they report findings to team or mission leaders?
____	____	____	____	____	g. Were individuals aware of their own limitations?
____	____	____	____	____	h. Was the location of mission base appropriate for the situation?

Comments _____

Scoring:

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2 = Team meets the requirements in this area
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x = Did not observe
o = Did not perform the requirements in this area

Winter Rescue Aval	Winter Rescue Tech Evac	Technical Rock High Angle	Technical Rock Scree	Search

A. Organization (cont)

4. Efficiency

_____ _____ _____ _____ _____ b. Did the team minimize wasted time and effort?
_____ _____ _____ _____ _____ c. Did personnel look for jobs to be done without being told?
_____ _____ _____ _____ _____ d. Were all jobs accomplished as quickly as reasonably possible?

Comments _____

_____

B. Patient Care

1. Medical Care

_____ _____ _____ _____ _____ a. Was someone assigned to care for the victim?
_____ _____ _____ _____ _____ b. Was that person's medical background appropriate for the situation?
_____ _____ _____ _____ _____ c. Was the subject's medical condition continually reassessed?
_____ _____ _____ _____ _____ d. Did the team follow their medical protocols?
_____ _____ _____ _____ _____ e. Did the team make appropriate trade-off between in-field medical care and expedient evacuation?
_____ _____ _____ _____ _____ f. Does the team have sufficient depth of medical training?
_____ _____ _____ _____ _____ g. Was the team aware of signs and proper treatment of possible environmentally induced injuries / illnesses?

Comments _____

_____

_____

2. Patient packaging

_____ _____ _____ _____ _____ a. Was the subject made as comfortable as appropriate for the situation?
_____ _____ _____ _____ _____ b. Were the injuries treated appropriately?
_____ _____ _____ _____ _____ c. Was loading handled in an appropriate manner?
_____ _____ _____ _____ _____ d. Was the subject secured in the litter?
_____ _____ _____ _____ _____ e. Was the subject properly immobilized per the team's medical protocols during loading?
_____ _____ _____ _____ _____ f. Was the packaging appropriate for the subject's injuries?
_____ _____ _____ _____ _____ g. Do the team's packaging techniques provide adequate environmental protection for the subject?

Comments _____

_____

_____

Scoring:

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2 = Team meets the requirements in this area
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x = Did not observe
o = Did not perform the requirements in this area

Winter Rescue Aval	Winter Rescue Tech Evac	Technical Rock High Angle	Technical Rock Scree	Search

C. Safety

1. Personnel

_____ _____ _____ _____ _____ a. Was the safety of the rescuers paramount at all times?
_____ _____ _____ _____ _____ b. Was everyone properly equipped for the situation (technical gear, foul-weather gear, etc.)?
Comments _____

Winter Rescue ***(rev. 2/1/2010)***

_____ _____ c. Are personnel trained in winter skills?
_____ _____ d. Did personnel have their avalanche beacons checked prior to going into the field?
_____ _____ e. Was local avalanche hazard assessed appropriately?
Comments _____

Technical Rock

_____ _____ f. Was everyone in rock danger wearing helmets?
_____ _____ g. Were personnel tied in when necessary?
_____ _____ h. Was rock fall danger minimized?
Comments _____

2. Technical systems

_____ _____ _____ _____ a. Were anchors, knots, carabiners, etc. rechecked during the operation?
_____ _____ _____ _____ b. Were knots adequate, properly utilized and safetied?
_____ _____ c. Was the team aware of the hazard of icy ropes?
_____ _____ d. Were ropes protected against damage from abrasion and rock fall?
_____ _____ e. Was the system designed to minimize rock fall from running slopes?
_____ _____ _____ _____ f. Were ropes properly managed during the operation?
_____ _____ _____ _____ g. Were locking or double carabiners used where necessary?
_____ _____ _____ _____ h. Did the team utilize any piece of equipment inappropriately?
Comments _____

3. Subjects

_____ _____ _____ _____ _____ a. Was extra equipment carried for the subjects?
_____ _____ _____ _____ _____ b. Was the subject secured as soon as possible (if necessary)?
_____ _____ _____ _____ _____ c. Was the subject secured throughout the operation?
_____ _____ _____ _____ _____ d. Was the subject's safety a priority during the entire operation?
Comments _____

4. Overall safety

_____ _____ _____ _____ _____ a. Does the team follow a consistent set of procedures?
_____ _____ _____ _____ _____ c. Do they use these procedures to ensure systems are within adequate safety margins?
_____ _____ _____ _____ _____ d. Are all members of the team adequately safety conscious?
Comments _____

Scoring:
1 = Team does not meet the requirements in this area
2 = Team meets the requirements in this area
3 = Team significantly exceeds the requirements in this area
x = Did not observe
o = Did not perform the requirements in this area

Search

D. Search

1. Initial evaluation of the mission

_____ a. Does the team conduct a thorough interview with the reporting party?
_____ b. Is the reporting party kept available for follow-up questions and support?
_____ c. Are the expected points of return (subject's home, vehicle, trailhead, etc.) monitored throughout the operation?

Comments _____

_____

2. Initial response

_____ a. Does the team match the mission urgency with the right kind, quantity, quality and urgency of response?
_____ b. Are logistical requirements such as maps, transportation, communications and special needs identified and met in an organized and timely manner?
_____ c. Are additional interviews and investigations started? (If appropriate)

Comments _____

_____

3. Mission management

_____ a. Is a search plan developed?
_____ b. Is the plan distributed to all the necessary elements promptly and completely?
_____ c. Is a communications plan developed and implemented?
_____ d. Are field teams properly briefed on the subject, terrain, weather and anticipated hazards?
_____ e. Are field personnel properly equipped to perform their task?
_____ f. Does the management team plan for a transition to rescue if necessary?
_____ g. When the subject is found or the mission suspended, is there notification to the appropriate parties?

Comments_____

_____

4. Strategy and tactics

_____ a. Is the team familiar with the common and accepted strategies and tactics of search operations and proficient in their use?
_____ b. Are field teams “clue-aware’, and do they report clues to mission command?
_____ c. Is the team careful to not disturb (and protect) evidence?
_____ d. Do field teams attempt to attract the subject?
_____ e. Did field teams appropriately interview bystanders?

Comments _____

_____

3. Multi-agency organization structure

_____ a. Is the applicant’s senior leadership sufficiently familiar with the common search management structures (e.g. MSF, MLPI) to allow their team to work within a large-scale Multi-resource operation

C**omments** _____

Scoring:

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2 = Team meets the requirements in this area
3 = Team significantly exceeds the requirements in this area
x = Did not observe
o = Did not perform the requirements in this area

Technical Rock High Angle	Technical Rock Scree

E. Technical Rock

1. General

_____	_____	a. Did the team members utilize a consistent set of techniques?
_____	_____	b. Did the team members recognize their own weaknesses?
_____	_____	c. Did individuals adequately understand the principles behind the techniques used?
_____	_____	d. Did Individuals understand the load limits of the system?

Comments _____

2. Anchors

_____	_____	a. Were natural anchors used to the best advantage?
_____	_____	b. Were anchors selected for position in relation to the problem?
_____	_____	c. Were the anchors selected for security?
_____	_____	d. Were the anchors backed up when appropriate?
_____	_____	e. Did multiple anchor point systems distribute the load properly?
_____	_____	f. Were the overall anchor systems “bomb-proof”?
_____	_____	g. Did members appropriately utilize artificial protection? (If applicable)

Comments _____

3. Lowering methods

_____	_____	a. Did the team have appropriate equipment to conduct the evacuation?
_____	_____	b. Did the team understand the proper use of the equipment?
_____	_____	c. Was the rigging set up in the best location and was the system designed for safety and efficiency?
_____	_____	d. Did the team understand strengths and weaknesses of their equipment and setup?
_____	_____	e. Were the belay devices and techniques appropriate for the operation and terrain?
_____	_____	f. Were the ropes managed effectively?
_____	_____	g. Was the work area and equipment kept organized?
_____	_____	h. Were distracting conversations and radio traffic eliminated during the evacuation?
_____	_____	I. Did signals between litter and belayer take top priority?
_____	_____	j. Were signals clear and concise?
_____	_____	k. Were knot passes executed smoothly and properly?

Comments _____

4. Raising methods

_____	_____	a. Was a mechanical advantage set up appropriately?
_____	_____	b. Was the uphaul a smooth, united effort?
_____	_____	c. Was a ratchet/safety utilized appropriately?
_____	_____	d. Were pulley systems kept organized and uncluttered?
_____	_____	e. Was an appropriate raising system utilized?
_____	_____	f. Were knot passes executed smoothly and properly?

Comments _____

5. Litter management

_____	_____	a. Was the litter rigging safe and appropriate for the operation?
_____	_____	b. Were the carrying methods and number of litter bearers appropriate to the terrain?
_____	_____	c. Was the litter properly positioned for the rescue situation and for the medical condition of the subject?
_____	_____	d. Did the litter bearers work as a team?
_____	_____	e. Did the litter bearers manage the litter so to care for / protect the subject?

Comments _____

Scoring:

1 = Team does not meet the requirements in this area
2 = Team meets the requirements in this area
3 = Team significantly exceeds the requirements in this area
x = Did not observe
o = Did not perform the requirements in this area

Winter Rescue Tech Evac

F. Winter Rescue - Technical Evacuation

1. General

_____ a. Did the team members utilize a consistent set of techniques?
_____ b. Did the team members recognize their own weaknesses?
_____ c. Did individuals adequately understand the principles behind the techniques used?
_____ d. Did Individuals understand the load limits of the system?
Comments _____

2. Snow anchors

_____ a. Are enough members familiar with setting up adequate snow anchors?
_____ b. Were the anchors properly positioned in relation to the problem?
_____ c. Were the anchors used appropriate to the snow conditions?
_____ d. Were the anchors backed up when appropriate?
_____ e. Did multiple anchor point systems distribute the load properly?
_____ f. Were the overall anchor systems "bomb-proof"?
_____ g. Were boot-ax belays used, if so, were they done appropriately?
Comments _____

3. Lowering methods

_____ a. Did the team have appropriate equipment to conduct the evacuation?
_____ b. Did the team understand the proper use of the equipment?
_____ c. Was the rigging set up in the best location, and was the system designed for safety and efficiency?
_____ d. Did the team understand strengths & weaknesses of their equipment and setup?
_____ e. Were the belay devices and techniques appropriate for the operation and terrain?
_____ f. Were the ropes managed effectively?
_____ g. Was the work area and equipment kept organized?
_____ h. Were distracting conversations and radio traffic eliminated during the evacuation?
_____ I. Did signals between litter and belayer take top priority?
_____ j. Were signals clear and concise?
_____ k. Were knot passes executed smoothly and properly?
Comments _____

4. Raising methods

_____ a. Was a mechanical advantage set up correctly?
_____ b. Was the uphaul a smooth, united effort?
_____ c. Was a ratchet/safety utilized appropriately?
_____ d. Were pulley systems kept organized and uncluttered?
_____ e. Was an appropriate raising system utilized?
_____ f. Were knot passes executed smoothly and properly?
Comments _____

5. Litter management

_____ a. Was the litter rigging safe and appropriate for the operation?
_____ b. Were the carrying methods and number of litter bearers appropriate to the terrain?
_____ c. Was the litter properly positioned for the rescue situation and for the medical condition of the subject?
_____ d. Did the litter bearers work as a team?
_____ e. Did the litter bearers manage the litter so to care for / protect the patient?
Comments _____

Scoring:
1 = Team does not meet the requirements in this area
2 = Team meets the requirements in this area
3 = Team significantly exceeds the requirements in this area
x = Did not observe
o = Did not perform the requirements in this area

Winter Rescue Aval

G. Winter Rescue – Avalanche *(rev.2/1/2010)*

1. General

_____ a. Did members evaluate avalanche danger while traveling to site?
_____ b. Was a safe route identified and communicated to Command?
_____ c. Did members approach the avalanche area in a controlled and organized manner?

Comments _____

_____

_____

2. Avalanche Rescue

_____ a. Was pertinent information obtained from the reporting party? (if applicable)
_____ b. Was the safety of the reporting party considered?
_____ c. Was the avalanche danger assessed appropriately at the accident site?
_____ d. Did someone function as the site leader and manage the operation?
_____ e. Was a staging area / equipment cache located?
_____ f. Was an operation plan formulated by the immediate search team?
_____ g. Was the operation plan communicated to all members of immediate search team?
_____ h. Was the site assessment and plan communicated to Command?
_____ i. Was the operation plan executed?
_____ j. Was an avalanche lookout, if needed, used appropriately?
_____ k. Was an escape route(s) identified and communicated to all?
_____ l. Were safe zones identified?
_____ m. Were likely burial areas determined and searched?
_____ n. Was an effective surface search (visual and audible) done?
_____ o. Was a beacon search conducted appropriately?
_____ p. Were members instructed when to have their beacons on transmit or receive?
_____ q. Were clues, searched areas, and perimeter (if needed) marked in an effective and consistent manner. (An example of a color marking scheme is: Red - probed areas, Blue - clues, Yellow - perimeter.)
_____ r. Were clues used to determine likely burial areas?
_____ s. Were clues and obstacles spot probed?
_____ t. Was a perimeter search, if needed, done effectively?
_____ u. Was the site leader informed of all clues and did he/she ask appropriate questions?
_____ v. Were clues used to determine the number of subjects in the avalanche area?
_____ w. Did the team perform an adequate probe line search?
_____ x. Were multiple victims and operations prioritized?
_____ y. Was shoveling performed in an organized manner?

Comments _____

_____

_____

Evaluator's Form

(This form must be completed and signed by all evaluators and returned to the Lead Evaluator**)**

Team being Re-Accredited_____Date_____

Each evaluator must now make decision(s) based on their evaluation of those areas that they observed. The worksheets you have filled out are only to be used to assist you in making these decision(s). No one question should be weighted more than another should, nor should the scores be added up. The decision(s) you make will be subjective. In making your decision you should also consider the following questions for each of the five (5) exercises.

1. Would you feel safe if this team were to rescue you?
2. Would you trust your life to their system setups?
3. Are their techniques familiar / standard enough that their members could easily integrate with other MRA teams?
4. Would you be able to work with this team on a mountain search and rescue operation?
5. Was the safety of any rescuer, the person(s) being rescued or any bystander ever inappropriately compromised?

==========

SEARCH

PASS _____ NOT PASS _____ DID NOT OBSERVE _____

Strengths in this area _____

Weaknesses in this area _____

==========

TECHNICAL ROCK - SCREE

PASS _____ NOT PASS _____ DID NOT OBSERVE _____

Strengths in this area _____

Weaknesses in this area _____

==========

TECHNICAL ROCK - HIGH ANGLE

PASS _____ NOT PASS_____ DID NOT OBSERVE _____

Strengths in this area _____

Weaknesses in this area _____

==========

WINTER RESCUE - TECHNICAL EVACUATION

PASS _____ NOT PASS _____ DID NOT OBSERVE _____

Strengths in this area _____

Weaknesses in this area _____

==========

WINTER RESCUE - AVALANCHE

PASS _____ NOT PASS _____ DID NOT OBSERVE _____

Strengths in this area _____

Weaknesses in this area _____

==========

_____ _____ _____

Evaluators Signature **Date** **Your Team**

Amended and restated Bylaws of the Rocky Mountain Region of the Mountain Rescue Association

Table of Contents

DEFINITIONS

Regular Member Unit (RMU): are fully accredited teams that have successfully passed the A/R exercise in all three skill areas as defined by the MRA bylaws.

Associate Member Unit (AMU): can obtain partial accreditation by successfully passing the A/R exercise in any one or two skill areas as defined by the MRA bylaws.

Ex-Officio Member Unit (EMU): can be fully accredited teams that have successfully passed the A/R exercise in all three skill areas as defined by the MRA bylaws or can obtain partial accreditation by successfully passing the A/R exercise in any one or two skill areas as defined by the MRA bylaws.

Active Member: an active member is defined by each Team's own definition through their own Policies and/or bylaws.

Delegate: a delegate must appear on a Region Team's roster and be duly authorized by the Region Team's leadership to vote for that Region Team.

Proxy: a proxy must specify the effective date, duration of the proxy. The proxy need not state specific issues to be discussed at the meeting. Proxy forms can either be in written form and presented to the Secretary before the meeting commences or may be in email form, in which case the Secretary must have received such form at least 24 hours in advance of the meeting or such other reasonable period that the Secretary will promulgate.

In Good Standing: as defined in Article VII, Section 5 of these bylaws.

Region Meetings: these are meetings of the member Teams of the Rocky Mountain Region. The Region will hold a minimum of two Region Meetings per year. These meetings will be held prior to the winter and summer meetings of the MRA. The winter Region meeting shall be held prior to December 31st of each year.

Region Board Meetings: these are meetings of the Region Board of Directors. The Region Board may hold Region Board Meetings at their discretion. These meetings may be called by any Region Board member.

Article I. Name

Section 1. Name

The name of this organization shall be “Rocky Mountain Region of the Mountain Rescue Association”, hereinafter referred to as “Rocky Mountain Region” or “Region”.

Article II. Affiliation

Section 1. Legal Status

The Rocky Mountain Region is a geographical and administrative subdivision of the Mountain Rescue Association, hereinafter referred to as "MRA", a non-profit corporation organized under the laws of the State of Washington. The Rocky Mountain Region is a voluntary unincorporated association.

Section 2. MRA Bylaws and Policies

The Bylaws and Policies of the Rocky Mountain Region shall conform to the Bylaws and Policies of the MRA. If the MRA or the Region determines that any of the Region Bylaws conflict with current MRA Bylaws, that portion of the Region Bylaws shall be considered to be unenforceable. The Region Board, as defined below, will temporarily craft a solution to the unenforceable Region Bylaw(s) and promptly request that the Region put forth a proposal for a long-term solution.

Article III. Purposes & Expectations

Section 1. Purposes

The specific and primary purposes for which the Region is formed are:

1. To carry out the purposes of the MRA within the Region, and to communicate Regional issues and concerns to the MRA,
2. To provide a forum for the interchange of information and ideas on search and rescue by member units,
3. To coordinate intra-Region mountain rescue trainings for member units,
4. To facilitate the common and joint response by member units to emergency operations,
5. To review the competency of member units, or of applicants for membership in the MRA, and to recommend to the MRA such competency, and
6. To further public education in mountain and wilderness safety.

Section 2. Expectations

The Region expects all members of Region Teams (as defined below) to act in a reasonable, professional and constructive manner. The Region has a long tradition of holding Region Teams to a strong and consistent set of minimum standards. The honor and pride members of Region Teams have in the Region is based on the premise that the Region accredits Region Teams on the minimum standard but at the same time encourages teams to strive for higher levels of excellence. As professionals the Region recognizes that teamwork is the cornerstone of safe, effective, and efficient mountain rescue services. Just as each Region Team is a team of individuals, the Rocky Mountain Region requires cooperation from the Region Teams to fulfill the Purposes of the Region.

Article IV. Headquarters and Boundaries

Section 1. Headquarters

The headquarters of the Rocky Mountain Region will be the home address of the Chairperson, as defined below.

Section 2. Boundaries

The boundaries of the Rocky Mountain Region shall be the states of Wyoming, Colorado and New Mexico, or other boundaries as may be established by the MRA.

Article V. Region Board

Section 1. Number and Constitution

The entire management and government of the Region, except as otherwise expressly provided herein, shall be vested in a Board of Directors, hereinafter the "Region Board", consisting of the Chairperson, Vice-Chairperson, Secretary-Treasurer and two Directors at Large.

Section 2. Powers

The Region Board shall govern and manage the Region. It shall perform any and all duties imposed on it collectively or individually by law, by these Bylaws, or the Bylaws and policies of the MRA. It shall have the power to adopt Policies, Procedures and Guidelines, and act collectively as a Region in furthering the purposes of the MRA, pursuant the Bylaws and policies of the MRA.

Section 3. Election of Region Board and Terms of Office

Members of the Region Board shall be elected at the Region meeting immediately preceding the winter national MRA meeting (See Region Meetings below). The current Region Board will serve as the Nominating Committee unless they delegate otherwise. Any active member of a Region Team in good standing can nominate active members of Region Teams to Region Board positions. A slate of willing candidates for open positions shall be presented to the Region by the Nominating Committee thirty (30) days prior to the winter Region meeting. Up to fifteen (15) days prior to the winter Region meeting, additional nominations of willing candidates can be made by any active member of a Region Team in good standing. Active members of Region Teams in good standing may be nominated for more than one open position. If any open Region Board position does not have a willing nominee prior to the winter Region meeting, nominations for that open position may be made from the floor at the winter Region meeting. Each open position will be voted on independently so that individuals elected into one position can be removed from the nominations for another position.

Each Region Team in good standing will have one vote for each open position. The accepted nominee receiving the most votes for each open position will be awarded that position. In the event of a tie the continuing board member will vote to break the tie as long as they have not voted as the delegate for their team. The continuing board member will be the Chairperson or Vice-Chairperson whose two-year term is not expiring at the end of the current year. If the continuing board member is not present, the chair of the meeting will vote to break the tie.

The Chairperson must be an active member of a Regular Member Unit of the Region in good standing when elected. During each odd calendar year, the Chairperson shall be elected for a two-year term commencing on January 1st of the subsequent even numbered year.

The Vice-Chairperson must be an active member of a Regular Member Unit of the Region in good standing when elected. During each even calendar year, the Vice-Chairperson shall be elected for a two-year term commencing on January 1st of the subsequent odd numbered year.

The Secretary-Treasurer must be an active member of a Regular Member Unit of the Region in good standing when elected. During each calendar year, the Secretary-Treasurer shall be elected for a one-year term commencing on each January 1st.

Directors at Large must be an active member of any Region Team in good standing when elected. During each calendar year, each Director at Large shall be elected for a one-year term commencing on each January 1st.

No person shall hold more than one elected or appointed office at the same time. No Region Team shall have members serving concurrently as the Chairperson, Vice-Chairperson, and Secretary-Treasurer. No position can be filled by the same person for more than two consecutive terms except the Secretary-Treasurer position which can be filled by the same person for four consecutive terms. If a Chairperson, Vice-Chairperson, or Secretary-Treasurer represents a Region Team that becomes an Associate Member Unit, that Region Board Member will not be allowed to serve for the remainder of his or her term.

Section 4. Resignation

Any Board Member may resign from office at any time by giving written notice to the Region Board. Such resignation shall take effect on the date of receipt of such notice, or at any other date specified therein. Unless otherwise specified in the notice, receipt shall constitute acceptance by the Region Board.

Section 5. Removal

Any Region Team may request the removal of any Board Member by submitting a request to all Region Teams. Any Board Member may be removed from office by a vote of at least two thirds (2/3) of the Region Teams in good standing present and voting at a Region meeting provided that notice of such a vote has been given to each Region Team and the Region Board at least thirty (30) days prior to the Region meeting.

A Board Member will automatically be removed from office if he or she is no longer an active member of a Region Team.

Section 6. Vacancies

Any vacancy shall be filled by appointment by the Region Board. If there is a vacancy during the first year of a two-year term of a Region Chairperson or Vice-Chairperson, the Region Board shall appoint a replacement to complete the first year of the two-year term. At the next winter Region meeting there shall be a regular election to fill the position for the second year of the two-year term.

Section 7. Duties of the Chairperson

The Chairperson shall be responsible for:

1. Presiding at Region Board meetings.
2. Appointing and removing all committee chairpersons, subject to approval of the Region Board, and except where otherwise specified in these Bylaws.
3. Assuming leadership for the Region in all Region matters.
4. Acting as or appointing another to act as liaison to the MRA.
5. Notifying the Region of Nominations for the Region Board positions.

6. Performing all duties incident to the office of Chairperson and such other duties as may be required by law, these Bylaws, or which the Region Board may assign.

Section 8. Duties of the Vice Chairperson

The Vice Chairperson shall be responsible for:

1. Performing all the duties of the Chairperson, in the absence of the Chairperson, or in the event of an inability or refusal to act by the Chairperson, and when so acting, have all the powers of the Chairperson.
2. Arranging for and keeping the records of the Accreditation and Reaccreditation of Region Teams.
3. Chairing the Accreditation Committee.
4. Coordinating and overseeing all Accreditations and Reaccreditations within the Region.
5. Performing all duties incident to the office of Vice-Chairperson and such other duties as may be required by law, these Bylaws, or which the Region Board may assign.

Section 9. Duties of the Secretary-Treasurer

The Secretary-Treasurer shall be responsible for:

1. Performing all the duties of the Chairperson or Vice-Chairperson, in the absence of the Chairperson or Vice-Chairperson, or in the event of an inability or refusal to act by the Chairperson or Vice-Chairperson, and when so acting, have all the powers of the Chairperson and /or Vice Chairperson as required.
2. Keeping the minutes of all Region meetings and Region Board meetings and publishing the minutes to Region Teams within thirty (30) days. All minutes will contain contact information for all members of the Region Board.
3. Tracking the status of Region Teams in relation to membership requirements to determine which teams are in good standing with the Region and reporting the results to the Region Board as required.
4. Having charge and custody of, and be responsible for, all funds securities of the Region, and deposit all such funds in the name of the Region in such banks, trust companies, or other depositories as shall be selected by the Region Board.
5. Receiving, and giving receipt for, monies due and payable to the Region from any source.
6. Disbursing, or causing to be disbursed, the funds of the Region as may be directed by the Region Board, taking vouchers for such disbursements.
7. Keeping and maintaining adequate and correct accounts of the Region properties and business transactions, including accounts of its assets, liabilities, disbursements, gains or losses.
8. With approval of the Region Board, exhibiting the books of account and financial records to any member team, or the team's attorney or agent, upon request.
9. Rendering to the Region Board, whenever requested, an account of any or all of his or her transactions as Secretary-Treasurer, and the financial condition of the Region.
10. Performing all duties incident to the office of Secretary-Treasurer and such other duties as may be required by law, these Bylaws, or which the Region Board may assign.

Section 10. Duties of the Directors at Large

1. The Directors at Large will be responsible for overseeing and coordination of regional trainings.
2. The Directors at Large are responsible for such other duties as may be required by law, these Bylaws, or which the Region Board may assign.

Article VI. Region Board Meetings

The Region Board may hold Region Board Meetings at their discretion. These meetings may be called by any Region Board member. Minutes from all Region Board Meetings will be published to all Region Board members and to all Region Teams within thirty (30) days.

Region Board Meetings may be conducted in any manner agreed upon by all Region Board members, i.e. phone, internet, in person or any combination thereof.

Section 1. Notification

The Chairperson or any Region Board member will make a reasonable effort to notify all Region Board members and Region Teams of Region Board Meetings at least three (3) days prior to such meetings. This notification may be by phone, mail, email or in person. Attendance at Region Board Meetings may be restricted to the Region Board. The Region Board is expected to keep the Region notified of the actions of the Region Board.

Section 2. Quorum

In order for the Region Board to conduct business a quorum of at least fifty percent (50%) of the Region Board is required.

Section 3. Voting

Region Board members may vote by proxy or absentee ballot. A majority vote of the Region Board is required to act.

Article VII. Members

Section 1. Membership

Membership in the Rocky Mountain Region shall be composed of those Regular Member Units, Associate Member Units, and Ex-Officio Member Units of the MRA having a primary geographical location within the geographical boundaries of the Rocky Mountain Region, as that region is defined by the MRA, herein referred collectively as Region Teams.

Section 2. Rights and Responsibilities

Region Teams shall have all the rights and responsibilities reserved to Region Teams by these Bylaws and by Region Policies.

Region Teams are expected to be represented at all semi-annual MRA membership meetings.
All Region Teams in good standing shall have one (1) vote for all matters that come before the Region at Region Meetings.

Region Teams may send members to Region Trainings, Accreditations, and Reaccreditations pursuant to the requirements stated in Region Policy.

Section 3. Classifications of Membership

The Classifications of membership, and requirements for admission to the classifications of membership, shall conform to the classifications established by the Bylaws and policies of the MRA.

Section 4. Membership Recommendations to the MRA

The Chairperson or his or her designee will make membership recommendations regarding Region Teams to the MRA. These recommendations will follow the outcome of Accreditations, Reaccreditations, and compliance with Region Bylaws and Policy. For Associate or Ex-Officio Teams these recommendations will be determined by a majority vote of teams present at the Region Meeting immediately preceding the MRA meeting.

Section 5. Region Team Membership Requirements for Good Standing

As determined by the Region Board on March 1st of each year each Regular Member Unit and Associate Member Unit shall be considered to be in good standing with the Region by fulfilling the following requirements. Ex-Officio Member units are encouraged to fulfill the requirements listed below.

a) Provide the Region Secretary-Treasurer with a current team roster and contact information for their Board of Directors.
b) Participate in intra-Region communications by enrolling a minimum of three (3) active members including at least one current Board Member on the Region's email list server.
c) Provide annual mission statistics, using the MRA form, to the MRA and the Region for the previous year
d) Timely payment of MRA dues.

If the Region Board determines a Region Team is not in good standing it will contact that Region Team and give it thirty (30) days to become in good standing, if possible. After thirty (30) days the Region Board will notify the Region of any Region Team not in good standing.

Section 6. Reaccreditation Requirements

All Regular Member Units or Region Teams accredited in one or two disciplines are required to send an evaluator to a minimum of three (3) Accreditations or Reaccreditations every five (5) years. If a team does not meet this requirement they will be asked to go through a full Accreditation rather than a Reaccreditation at their next scheduled Reaccreditation.

Article VIII. Region Meetings

Section 1. Time and Place of Region Meetings

The Region will hold a minimum of two Region Meetings per year. These meetings will be held prior to the winter and summer meetings of the MRA. The winter Region meeting shall be held prior to December 31st of each year. The Chairperson or his or her designee will set the time and location of the meetings. Any Region Team or Region Board Member may call other Region meetings pursuant to the requirements set forth herein.

Section 2. Notification of Region Meetings

The Chairperson or his or her designee will make a reasonable effort to notify all Region Teams of Region Meetings at least thirty (30) days prior to the Region Meeting. This notification may be by phone, mail, email, or in person. Notification requirements for amendments to Bylaws are discussed below.

Section 3. Quorum

In order to conduct business a quorum of at least fifty percent (50%) of the Regular Member Units of the Region in good standing is required.

Section 4. Region Meeting Agenda

The Chairperson or his or her designee is responsible for creating and attempting to timely notify all Region Teams of the agenda for Region Meetings including actions that will be voted on at any given meeting.

Section 5. Delegates

Each Region Team may appoint a delegate to vote for that team. Delegates must appear on a Region Team's roster and be duly authorized by the Region Team's leadership to vote for that Region Team. In the case of a challenge to the status of a person acting as delegate, the Secretary/Treasurer shall rule on the matter based on the evidence presented.

Section 6. Voting

Region Teams in good standing shall be able to vote on all matters that come before the region at a Region meeting by delegate, absentee ballot, or proxy; provided that any Region Board Member who is present at the Region Meeting receives the absentee ballot or notification of the proxy prior to the Region Meeting. A vote of at least two thirds (2/3) of the votes cast is required to amend or adopt changes to these bylaws or for the removal of a Region Director. All other matters will be decided by a simple majority of the votes cast.

Article IX. Committees

Section 1. Establishment of Committees

The Region Board may establish committees to manage the affairs of the Region, as it may see fit. The Chairperson may also establish committees, subject to approval of the Region Board. The Board shall have the power to terminate committees, as it sees fit. The exception to this is the Accreditation Committee.

Section 2. Powers

The Region Board may not delegate its fundamental duties to a committee. Committees will not have the power to spend any regional money unless authorized by the Region Board. Committees terminate one (1) year from the date they are created unless re-affirmed by the Region Board or as provided specifically in writing published to all Region Teams.

Section 3. Meetings and Actions of Committees

The time, place and agenda of all committee meetings shall be fixed by the chair of each committee and shall not be subject to the notices and rules set forth herein. The Region Board may adopt rules and regulations pertaining to the conduct of committee meetings to the extent that such rules and regulations are not inconsistent with the provision of these Bylaws.

Section 4. Accreditation Committee

There shall be at all times an Accreditation Committee of at least three (3) individuals. The Vice-Chairperson will chair this Committee and appoint at least one (1) currently qualified Lead Evaluator, as defined in Region Policy, to the committee. It is the responsibility of this committee to coordinate and oversee all Accreditations and Reaccreditations held within the Region.

Article X. Policies, Procedures and Guidelines

Section 1. Authorization

The Region Board may adopt Policies, Procedures and Guidelines as it deems appropriate, provided such Policies, Procedures and Guidelines do not conflict with these Bylaws or with MRA Bylaws. The Chairperson or his or her designee will make a reasonable effort to notify all Region Teams of the intent to vote on the change of Region Policies, Procedures and Guidelines at least three (3) days prior to the Region Board Meeting at which the proposed changes are considered. This notification may be by phone, mail, e-mail or in person.

Section 2. Adoption

Adoption of or changes to Region Policies, Procedures or Guidelines must be approved by a majority vote of the Region Board.

Section 3. Recordation and Dissemination

Following adoption by the Region Board, a copy of the approved Policy, Procedures or Guidelines shall be kept with the Region records and a copy furnished to all Region Teams within thirty (30) days.

Section 4. Enforcement and Conflict with Bylaws

The Region Board shall be the final arbiter of Region Policy, Procedures and Guidelines. Should a conflict arise between Region Policy, Procedures or Guidelines; and Region Bylaws, or MRA Bylaws the MRA Bylaws shall take precedence, followed by Region Bylaws.

Article XI. Amendments to Bylaws

Section 1. Amendments Provided For

These Bylaws may be altered, amended, or repealed according to the following provisions. An amendment to theses Bylaws can be presented to the Region by any Region Team.

Section 2. Notice

All proposed amendments to these Bylaws must be sent to all Region Teams at least three months prior to the Region Meeting at which the amendment will be considered. Any subsequent modifications to a proposed amendment must be sent to all Region Teams at least two months prior to the Region Meeting at which the amendment will be considered. The Region Board shall coordinate the review and appropriate discourse for all such reasonable amendments.

Section 3. Vote Required

A proposed amendment must be ratified by a two-thirds vote of all Region Teams in good standing and present, via delegate, proxy or absentee ballot, at the Regional Meeting where the amendment is considered.

Article XII. Prohibition against Sharing Region Profits and Assets

No member of any Region Team, employee or other person connected with the Region, or any private individual, shall receive at any time any of the net earnings or pecuniary profit from the operations of the Region, provided, however, that this provision shall not prevent payment to any such person of reasonable compensation for services performed for the Region in effecting any of its public or charitable purposes, provided that such compensation is otherwise permitted by the Bylaws and is fixed by resolution of the Region Board; and no such person or persons shall be entitled to share in the distribution, or shall not receive any of the Region assets on dissolution of this association. All Region Teams shall be deemed to have expressly consented and agreed that on such dissolution of the affairs this association, whether voluntarily or involuntarily, the assets of the Region, after all debts have been satisfied, then remaining in the hands of the Region Board, shall be distributed as required by the Bylaws of MRA.

Certification

These Bylaws have been ratified by at least two-thirds (2/3) of the Region Teams in good standing present at a Region Meeting attended by at least fifty percent (50%) of the Regular Member Units of the Region and for which proper notice was provided to all Region Teams.

As verified by Regional Chair: _____ Date: _____

Printed Name: _____ Team Affiliation: _____

Witnessed by Secretary-Treasurer: _____ Date: _____

Printed Name: _____ Team Affiliation: _____

A/R Exercise Guidelines
Rocky Mountain Region, MRA

Regional Vice-Chair Responsibilities

Prior to the A/R Exercise

- Insures that the applicant team has met the requirements as outlined in the Regional Policies, Article IX Policy 1.
- Insures that the Applicant team has requested testing dates at the previous annual regional meeting.
- Verifies that they have received a letter from the applicant team prior to the exercises stating that they meet the Membership Qualifications as stated in the MRA Policies 101.
- Have assigned a qualified person to serve as the Lead Evaluator for the exercise.
- Inform the Regional Chair as to the assigned dates for each team's exercise so that the dates may be posted on the Regional website.

After the A/R Exercise

- Is responsible for getting the signed Evaluator Forms, a recap of the voting, copies of the scenarios for each A/R Exercise and the letter stating that the team meets the MRA Policies 101 from each Lead Evaluator for all of the A/R Exercises during the year and getting them placed in the Regional files. All Regional documents (as of 01/01/07) are currently stored in a safe at the Alpine Rescue Team headquarters.
- Is responsible for getting a final list of Evaluators, Observers, Scenario Leads and the Lead Evaluator for every A/R Exercise entered into the current Regional Stats. They should be posted on the Regional Website every year. This information is needed so to assure that every RMU in the Rocky Mountain Region has met the requirements as listed in the Regional By-Laws, Section 5. 2.

Lead Evaluator Responsibilities

Prior to the A/R Exercise

- The Lead Evaluator has been assigned by the Regional Vice Chairperson and has met the Regional requirements as outlined in the Regional Policies, Article IX Policy 1.
- Establish contact with team going through the A/R Exercise.
- Determine who will be your contact from the applicant team going through the A/R Exercise.
- Be sure that the team understands the Regional By-laws & Policies.
- Inform the applicant team that the safety of the Evaluation Team is not their responsibility and that the individual members of the Evaluation Team will be responsible for their own safety.
- Inform the team that they must submit a letter to the Vice-Chairperson. **Prior** to the A/R Exercise stating that they continue to meet the Membership Qualifications as stated in the MRA Policies 101.
- Determine the areas / sites that will be used for the exercises (It is highly encouraged that you go and visit the team and see the sites prior to the A/R Exercise weekend).
- Once the areas / sites have been determined and agreed upon, they may not be changed unless it is agreed upon by both the Host Team and the Lead Evaluator.
- Coordinate housing between the Host Team and the Evaluation Team.
- Coordinate with the Host team about the maximum size of the Evaluation Team.
- Responsible for recruiting Scenario Leads, Evaluators and Observers.
- Verify Scenario Leads, Evaluators and Observers experience (can be done by past experience at A/R exercises, the current Regional data base or by contacting the Operations Leader of their team).
- Appoint Scenario Leaders for each of the 5 exercises.
- The five Scenario Leads, if possible, should be from five different RMU's. , or AMU's/EMU's that are accredited in that specific skill area.
- The Lead Evaluator should review all scenarios prior to actual exercises.
- All scenarios should be written down and there should be enough copies for all members of the Evaluation Team. The written scenarios will become part of the Regional records for each A/R Exercise.
- Determine how many Observers and from what teams can attend. Priority has been given to teams that are next in line to go through their own A/R Exercise.
- The Evaluation Team should try not to exceed 30 members on either day. Each RMU has the right to have 2 Evaluators at any A/R Exercise.
- Establish meeting times and places for the Evaluation Team,
- Establish guidelines that the entire Evaluation Team will adhere to (who is in charge of each exercise / who can make changes to the scenario / Etc.)
- Coordinate what radio frequencies will be used by the Evaluation Team and the Host Team.
- Coordinate with the Host Team which color vests should be worn by the Evaluators and Observers so they may be clearly identified as part of the Evaluation Team.

During the A/R Exercise

- Serve as the liaison person between the Host Team and the Evaluation Team.
- Insure that the scenario's given are consistent with previous scenarios in the past and give the host team the ability to demonstrate the skills as outlined in the A/R Exercise worksheet.
- Appoint the Evaluators and Observers to the different exercises (at a minimum, each scenario must have 5 Evaluators from 3 different teams).
- In the past, prior to the Evaluation Team discussing the scenarios for that day, the host team has been given time to address the Evaluation Team on those areas in which the team knows they had difficulties. (The purpose of this was to cut down on the discussion amongst the Evaluation Team that happens when discussing each scenario).

- Coordinate the critique with the Evaluation Team at the end of each day.
- Coordinate the critique with the Host Team at the end of each day (This is perhaps the most critical responsibility for the Lead Evaluator). Sometimes the message is not good and the messenger is the one who takes all the heat.
- During the critique, the Lead Evaluator should discuss the following for each scenario:
  - The areas that the team performed that significantly exceed the requirements.
  - The areas that the team performed that did not meet the requirements.
  - Recommendations from the Evaluation Team that they feel would help the host team.
  - Overall recommendation from the Evaluation Team for each scenario.
- If for any reason, the Evaluation Team feels that a particular member from the host team should not be in a particular position for a given scenario, appropriate notice should be given to the host team. (In the past this has been done to have the host team demonstrate some depth and not have the same person always be in the same position - medical, site command, mission management)
- Any conflicts that might arise during an A/R Exercise should be dealt with by the Lead Evaluator and the Leaders of the host team.
- The Lead Evaluator is responsible for the actions of everyone on the Evaluation Team. The Lead Evaluator has the right to remove a member of the Evaluation Team if, in their opinion, that person is having a detrimental effect on the A/R Exercise.

After the A/R Exercise

- Submit the "A/R Exercise Worksheets" from all of the Evaluators to the host team that went through the A/R Exercise.
- Submit the signed "Evaluator's Forms" to the Regional Vice-Chairperson.
- Submit the five written scenarios to the Regional Vice-Chairperson who will insure that they are placed in the Regional files.
- Submit a recap of the voting for the entire exercise to the Regional Vice-Chairperson who will insure that this is placed in the Regional files.
- Submit a record of who was a part of the Evaluation team. This should include what team they are from and what position they held during the A/R exercises. (Scenario Lead, Evaluator or Observer)

Scenario Leader Responsibilities

Prior to the A/R Exercise

- Review the current Regional A/R Worksheets so that you are familiar with the skills that are being required for the scenario you are putting together.
- The scenario should be consistent with scenarios in the past. Past Scenario Leads and past Lead Evaluators can answer many questions for you.
- The scenario should be written out so that you can submit a copy of it to the Lead Evaluator prior to the exercise.
- Any supplies that would be needed for the scenario should be obtained by the Scenario Lead prior to the weekend exercise.
- A prior visit to the site in which the scenario will take place will help you determine how to set the scenario up. (In the past, the Scenario Leads have arrived a day before the A/R exercise to go scout out the areas).
- Be aware that your scenario may be connected with another scenario that same day and coordination between the two Scenario Leads must happen.

During the A/R Exercise

- The morning of your scenario, the Evaluation Team will meet and Evaluators and Observers will be directed to the different scenarios that day. There has not been a specific way this is done except that the Scenario Leads recruit people that morning.
- Please know how many Evaluators and Observers are needed for your scenario.
- You should have a handout of your scenario for every Evaluator / Observer that is going to be helping you at your scenario. This really helps in making sure everyone is on the same page.
- If specific skills or experience is needed for certain Evaluators, (medical, third man, etc.) these people should be recruited first.
- You should verify that you have “At Least” 5 Evaluators from 3 different teams at your scenario.
- The region has different color vests for the Scenario Leads, Evaluators and Observers. These should be worn by all the Evaluators / Observers during the scenarios.
- Scenario Leads will wear lime green vests during the entire exercise in which they are the lead.
- Communications (radio Frequencies) amongst the Evaluation Team should be determined through the Lead Evaluator who is coordinating this with the host team.
- Any equipment that is not part of the scenario should be flagged with orange flagging. Try not to flag any natural things – this can lead to much confusion.
- Any ropes, harnesses, helmets climbing pro, etc. that is used for safety purposes during the scenario (either for an evaluator or a subject) should also be flagged. Try and make your scenario as realistic as possible keeping in mind that safety in number one for everyone involved!
- Only the Scenario Lead or their designee may change the scenario during the exercise.
- You may be asked by the Lead Evaluator to go over your scenario when the host team is going through the critique.

After the A/R Exercise

- Scenario Leads may be asked at sometime in the future to submit their scenario to other Scenario Leads so that we don’t have to recreate the wheel every time. Please keep copies of your scenarios, hopefully in an electronic form.

Evaluator Responsibilities

Prior to the A/R Exercise

- All Evaluators must meet the requirements as outlined in the Regional Policies. If you are a "Support" member with your own team, you can not serve as an evaluator.
- Review the current Regional A/R Exercise Worksheets so that you are familiar with the process.
- All members serving as Evaluators should have permission from their own team prior to signing up with the Lead Evaluator.
- To assist the Lead Evaluator, please sign up as early as possible and if you need to cancel, notification should be given at the earliest time possible.

During the A/R Exercise

- All safety issues for Evaluators as it pertains to what areas you are going to observe should be based on your own comfort level.
- All Evaluators should bring the appropriate personal gear for all of the scenarios (this would include beacons, shovels, snow travel gear, harnesses, helmet, etc.)
- You should expect very long days starting early each morning at the meeting site determined by the Lead Evaluator.
- Assignments for each day will be determined at this meeting.
- The Region has vests for all of the Evaluators and Observers. Evaluator vests will be different, either in color or stripping, than the vests worn by the Observers.
- All Evaluators should act in a professional manner through out the exercise.
- The only reason that you can stop a scenario is for safety reasons. If possible, try to confer with the Scenario Lead before doing this.
- During each scenario, your job is to observe, not interfere.
- Your commitment as an Evaluator does not end until the critiques of each day's scenarios have been completed with the Host Team.
- All Evaluators must submit a signed copy of the Evaluator Form to the Lead Evaluator at the end of the day for those exercises in which they are evaluating. If you are staying for the entire exercise, this form can be submitted at the end of the final day.

After the A/R Exercise

- You are the liaison person between your team and the Region. There is a lot that can be learned at these exercises. Please share any information you get with the rest of your team.
- Stay involved in the Region!!

Host Team Responsibilities

Prior to the A/R Exercise

- Determine sites that can be used for the Winter Scenarios, Rock Scenarios and the Search. Attain any permission that might be needed at any of these sites.
- Meet all requirements as outlined in the Rocky Mountain Region By-Laws and Policies
- Appoint a representative from your team to serve as a liaison person to the Region.
- If the host team wants to have any pre-tests this can be done on your own or coordinated through the Lead Evaluator.
- Coordinate housing with the Lead Evaluator for the Evaluation Team.
- Coordinate locations that can be used for each days critique with the Evaluation Team.
- Host team will be required to print up the appropriate number of A/R Exercise worksheets for the Evaluation Team.
- Coordinate with the Lead Evaluator what color vests should be worn by the Evaluators and Observers so that so that they may be clearly identified as part of the Evaluation Team.

During the A/R Exercise

- It is the responsibility of the host team to make sure that all their members are familiar with the A/R Exercise process. If there are questions about what the procedures are or what they might see during a scenario, these questions should be addressed with the Lead Evaluator prior to the exercises.
- Host team members should be familiar with the Regional A/R Exercise worksheet that the Evaluation Team uses during the scenarios.
- Questions, comments or concerns before, during and after the scenarios should to be addressed to the appropriate people in the Evaluation Team. (Lead Evaluator, Scenario Leads)
- At the end of each day, the host team will be able to have a representative from their team address the Evaluation Team prior to the Evaluation Team critiquing the different scenarios. This time should be used to address those issues that the team realized did not go well during the scenario.
- If at all possible, all members of the team going through the A/R Exercise will be asked to attend the critique at the end of each day (this is the most important part of the exercise!).
- The Host Team is responsible for the actions of everyone on their Team. All Members of the Host Team should act in a professional manner through out the exercise.

After the A/R Exercise

- At the completion of the A/R Exercise, the worksheets from all the Evaluators will be given to the host team. These worksheets can be used in any way the host team deems appropriate. The signed Evaluator Forms will be submitted to the Region and placed in the regional files.
- The goal of the Region is to get its members involved in the A/R Exercise process. Attending other team's exercises is highly encouraged!

Critique Guidelines

Prior to the A/R Exercise Critique

- The Lead Evaluator is to act as the facilitator for the critiques. While no time limits are suggested, the concept is to create a timely, non-redundant, non-adversarial critique with suggestions for improvement by the Evaluation Team to the Host Team.
- The Host Team will provide a location conducive for a constructive critique, preferably an area where all the evaluators, observers, and members of the host team can gather together as a group. This should include a provision for a private workroom for the evaluators to discuss their critiques; ideally, this private workroom would include a method for written feedback, such as a chalkboard, whiteboard or blank flipchart.
- The Host Team will provide A/R Exercise Worksheets for all members of the Evaluation Team.
- A single critique session should be held at the end of each day that covers the scenarios performed that day.
- A representative from the Host Team should be given the opportunity to address the Evaluation Team prior to the start of each days Evaluation Team critique to provide Host Team input regarding their performance on the days scenarios.
- During this brief address (hopefully no more than 5 minutes per scenario) by the Host Team representative, the representative should provide input regarding the performance for each scenario that should be confined to problem areas or areas they recognize may need improvement. While this information may not preclude the team from a pass or fail, it can be used by the Evaluation Team as a precursor of lengthy debate of a deficiency or problem area that was also noted by the Evaluation Team.
- Observers should be reminded that their comments should be funneled through evaluators.
- The Lead Evaluator should record feedback and suggestions or appoint a "scribe" to perform this duty.

During the A/R Exercise Critique

- Comments/critique should be confined to those items that have received a 1 or 3 score from the A/R Exercise Worksheet. Items with a score of 2 indicate the team meets the requirements and do not need discussion in a critique format. Further discussion is strongly encouraged outside of the official critique as necessary to increase understanding and learning between the Host Team and Evaluation Team
- The Evaluation Team shall deliver all critiques in a constructive and professional manner.
- Comments and critiques, once made, should not need additional underscore.
- For each scenario, the Evaluation Team should record feedback in the following areas that can be presented during the critique with the Host Team and the Evaluation Team:
  - Areas in which the team did not meet the requirements as outlined in the A/R Exercise Worksheet (scores of 1).
  - Areas in which the team significantly exceeds the requirements as outlined in the A/R Exercise Worksheet (scores of 3).
  - Equipment or technique recommendations that might assist the host team, if applicable (if associated with items with a score of 1; other recommendations can be discussed outside of the critique)
- A pass or fail vote will be taken after each scenario discussion by the Evaluators and Scenario Leaders

- It should be the goal of the Evaluation Team that members of the Evaluation Team are not swayed by the votes of other evaluators. Listed below are possible ways to conduct the voting to help ensure this:
  - A paper vote at the conclusion of each scenario discussion.
  - A vote by raising hands at the conclusion of each scenario discussion.
  - With eyes closed, a straw vote can be taken prior to the scenario discussion thus giving the Lead Evaluator a sense of how the evaluation team feels prior to the discussion.
- At the end of the A/R exercise weekend an overall summary critique should be given that addresses overall pass/fail status without going back over points that have already been discussed in previous critiques.

After the A/R Exercise Critique

- As written in the Regional Policies, at the completion of the A/R Exercise, the 6 page worksheets from all the evaluators will be given to the host team and the signed Evaluator Forms will be given to the Lead Evaluator and submitted to the Region and then placed in the regional files.
- The Lead Evaluator will summarize significant discussion points, deficiencies, strong points, and voting results in a written format to the Host Team with a copy to the Region Chair, Region Vice-Chair, and the regional files.

Scenario Guidelines

As stated in the Rocky Mountain Regional Policies "The scenarios should be as realistic as possible within the parameters of a typical mountain rescue mission."

Search

- Lost or missing subjects in the search scenario should not be more than 1 mile from the LSP.
- Although search dogs are used in normal operations, teams should understand that the region is not testing the dogs and they should not be used in these scenarios.

Technical Rock – Scree

- Teams should understand that during or after the scree evacuation, the evaluation team may require the team to change from a lowering to a raising so that these skills may be observed.
- Teams should expect that during or after the scree evacuation, the evaluation team may require the team to perform a knot pass (even if the team normally uses a brake tube or the evacuation distance is less than one rope length)

Technical Rock – High Angle

- Teams should expect to evacuate by litter no more than one (1) injured subject from a rock face.
- Teams should expect that during or after the high angle technical rock evacuation, the evaluation team may require the team to perform a knot pass (even if the team normally uses a brake tube).
- Teams should expect that during or after the high angle technical rock technical evacuation, the evaluation team may require the team to change from a lowering to a raising so that these skills can be observed

Winter Rescue – Technical Evacuation

- Teams should expect that during or after the winter technical evacuation, the evaluation team may require the team to perform a knot pass (even if the team normally uses a brake tube).
- Teams should expect that during or after the winter technical evacuation, the evaluation team may require the team to change from a lowering to a raising so that these skills can be observed.

Winter Rescue – Avalanche

- Avalanche debris area should not be larger than 3200 square meters.
- No more than three (3) beacons will be buried in the debris area.
- Beacons should not be buried more than 1.5 meters deep.
- Beacons should be buried on a board, dummy or in a pack (at least 2'x 2') to allow for probe hits.
- Although search dogs are used in normal operations, teams should understand that the region is not testing the dogs and they should not be used in these scenarios.

Mountain Rescue Association
Rocky Mountain Region

Article IX Policy 1

Accreditation Policies

Accreditation in the region can be in one of the three membership categories as defined in the MRA bylaws: Regular Member Units (RMU), Associate Member Units (AMU), and Ex-Officio Member Units (EMU).

- RMUs are fully accredited teams that have successfully passed the A/R exercise in all three skill areas as defined by the MRA bylaws.
- AMUs can obtain partial accreditation by successfully passing the A/R exercise in any one or two skill areas as defined by the MRA bylaws.
- EMUs can be fully accredited teams that have successfully passed the A/R exercise in all three skill areas as defined by the MRA bylaws or can obtain partial accreditation by successfully passing the A/R exercise in any one or two skill areas as defined by the MRA bylaws.

Introduction

Member teams need a common set of skills: when one team is called to assist another, it must effectively integrate into the operation, providing an asset rather than a liability. The Rocky Mountain Region's accreditation / reaccreditation (A/R) exercise tests teams to a minimum level of competency. These are full team scenarios because effective mountain rescue requires teamwork. These scenarios represent the common types of calls mountain rescue teams in the Rocky Mountain Region encounter. The primary factor in all of these scenarios is safety. Teams must appropriately balance effectiveness, efficiency, and safety.

Teams are tested in three skill areas as defined in the MRA bylaws: Search, Technical Rock Rescue and Technical Snow and Ice Rescue. The Rocky Mountain Region has subdivided technical rock rescue into two scenarios, scree and high angle. The Rocky Mountain Region has also subdivided technical snow and ice rescue into two scenarios, technical evacuation and avalanche. Teams must pass both scenarios in technical rock rescue and technical snow and ice rescue to be accredited in the skill area. A tabletop scenario is also required for those teams going through their initial A/R exercise.

The A/R exercise in the Rocky Mountain Region consists of the following scenarios:

- Technical Rock - scree scenario
- Technical Rock - high angle scenario.
- Winter Rescue - technical evacuation scenario
- Winter Rescue - avalanche scenario.
- Search – field scenario
- Search - tabletop/oral scenario - this is only required when a team takes their initial A/R exercise

Membership Classification and Recommendations to National MRA

The national MRA retains full responsibility for classifying member teams. The following policy applies to teams which are accrediting for the first time, or to teams which have lost their accreditation and are attempting to establish new accreditation. These decisions are made by a simple majority vote of the full membership at national meetings based upon recommendations made by the regions.

The Rocky Mountain Region will make recommendations in accordance with the following criteria:

- All recommendations based upon A/R exercises undertaken in the previous year will be made at the winter MRA national meeting.
- Teams that have successfully passed the A/R exercise in all three skill areas will be recommended to be a RMU or fully accredited EMU. Teams approved by the National MRA as a RMU or EMU will receive an "Accreditation Certificate" signed by the Regional Vice Chairperson and the Lead Evaluator for their A/R Exercise.
- If a partially accredited team successfully completes a skill area that will add an accreditation area, a recommendation will be made each time a new area is completed. If a team in adding accredited areas passes all three skill areas, thus allowing them to become a RMU or fully accredited EMU, the appropriate recommendation will be made.
- Teams that have successfully completed a portion of the A/R exercise will be recommended to be AMUs or EMUs accredited in the skill areas in which they have successfully completed.
- Teams who have not successfully completed any of the skill areas in the A/R exercise will be recommended to be non-accredited AMUs or EMUs.

Reaccreditation Reporting to National MRA

The Rocky Mountain Region will make reports to the National MRA in accordance with the following Criteria

- All reports based upon A/R exercises undertaken in the previous year will be made at the winter MRA national meeting. In the event a six month extension is granted to a team by the Regional Board of Directors, a report for this extension will be made at the winter MRA national meeting. Reports based upon the result of any A/R exercise undertaken during the provided extension will be made at the summer MRA national meeting.
- Teams that have successfully passed the A/R exercise in all three skill areas will be reported to the National MRA Membership Chair as being renewed as an RMU or fully accredited EMU for five more years. Teams successfully renewing their reaccreditation as a RMU or EMU will receive an "Accreditation Certificate" signed by the Regional Vice Chairperson and the Lead Evaluator for their A/R Exercise.

Scheduling

Teams accredited in any of the three skill areas are required to undergo an A/R exercise every five years. Teams with partial accreditation can request to only be tested in the areas that they are currently accredited in or can take the A/R exercise in all three skill areas. The renewal date for every team will be December 31st of the fifth year after the region makes its initial recommendation for accreditation to the MRA.

Once a team is accredited, the A/R renewal schedule for that team will be every five years from the year they became accredited. In the event of a team changing its membership status, or a sixth month extension is granted for an A/R exercise in the sixth year, the renewal dates will remain the same.

A six month extension for an A/R exercise can only be granted in the case of a scheduled A/R exercise being cancelled due to weather or circumstances beyond the control of the applicant team. A recommendation for a six month extension for an A/R exercise into the sixth year must be approved by a simple majority vote of the Regional Board of Directors.

The Regional Vice Chairperson (RVC) will coordinate the schedule for each year with the goal of evenly spreading out the regional A/R exercises. First priority in the scheduling will go to those teams seeking reaccreditation and are in their fifth year of the five year renewal period. Second priority will go to those teams seeking reaccreditation and are in their fourth year of the five year renewal period. Third priority will go to those teams seeking their initial accreditation.

Teams wishing to take an A/R exercise in any year must notify the Regional Board of Directors before the previous year's winter regional meeting. Prior to scheduling any A/R exercise, the applicant Team must submit to the RVC a letter stating that they continue to meet all of the Membership Qualifications as stated in MRA Policy 101. Scheduling of all A/R exercises will be the responsibility of the RVC and will be performed via coordination of all the teams scheduled to take the A/R Exercise in a given year. The RVC will also coordinate the scheduling of a current member of the Board of Directors to attend each A/R exercise. This person's function will be to act as a resource to the Lead Evaluator in helping to ensure realistic scenarios, objective evaluation criteria and fair and balanced dialogue during the evaluator sessions. This person will also help to communicate the importance of the A/R process and associated standards of professionalism to all in attendance at the exercise. After the schedule is negotiated and agreed upon by all the teams taking part in the A/R exercises in that year, the RVC will notify the remaining region teams in a timely manner. This notification will include the name of the Board of Director member attending each exercise.

The impact on the region's teams and members of the A/R exercise process must be balanced with the desire of any one team to test on a preferred schedule. For these reasons the following requirements are placed on region teams.

- Teams may request to take the A/R exercise no more than three times within the five year renewal period starting from their initial accreditation exercise. Teams may only take the A/R exercise two times in any one calendar year.

- If the region recommends a change in status from a RMU or fully accredited EMU to an AMU or partially accredited EMU, that team will not be allowed to take the A/R exercise for one calendar year from their last renewal date. After the one year period they will be able to take the A/R exercise in the skill area(s) that they did not pass. This A/R exercise will count as one of their three tests within their next five year renewal period. If they do not pass this A/R exercise, they will remain as an AMU or partially accredited EMU until their next scheduled A/R exercise when they will have the opportunity to take the A/R exercise in all three skill areas.

A/R Exercises - Evaluation Team

The Evaluation Team will consist of a Lead Evaluator, Scenario Leaders and Evaluators that are current members of teams in good standing in the Rocky Mountain Region of the MRA. At a minimum, the

Evaluation Team for each of the scenarios shall consist of at least five evaluators who represent at least three region teams.

If requested by the applicant team, in order to reduce the number of members on the Evaluation Team, the Lead Evaluator can count each of the five Scenario Leaders as one of the two evaluators that each team is allowed to send each day and/or ask individual teams to voluntarily give up their two evaluators positions for this A/R exercise. Only members of RMUs and fully accredited EMUs in good standing can fill the position of Lead Evaluator.
Scenario Leaders and Evaluators must be members of teams accredited in those skill areas that they are evaluating.

- **Lead Evaluator**: The RVC will appoint the Lead Evaluators for all A/R exercises held during their term in office.(When a person is serving in this position for the first time, the RVC will assign another Lead Evaluator (mentor), who has served in this position at least twice, to assist this person. The Lead Evaluator must be, at a minimum, a current MRA rescue level member within their own organization, endorsed by their team and been a member of a Rocky Mountain Region team for at least five years. They must have incident management experience and training as well as have participated in at least three A/R exercises (not including their own teams) in the past five years. They must have served as a Lead Evaluator, Scenario Leader or mentor at an A/R exercise at least once in the past three years. The Lead Evaluator will appoint five Scenario Leaders that represent at least three different Rocky Mountain Region teams. The Lead Evaluator is discouraged from voting but is permitted to do so in cases in which it is necessary.

- **Scenario Leaders:** Each Scenario Leader must be, at a minimum, a current MRA rescue level member within their own organization, endorsed by their team and been a member of a Rocky Mountain Region team for at least three years. When a person is serving in this position for the first time, the Lead Evaluator will assign another Scenario Leader (mentor), who has previously served in this position in the past five years, to assist this person. They must also have participated in at least two A/R exercises (not including their own teams) in the past three years, at least one of which was as an evaluator or mentor. Members from Rocky Mountain Region teams that have partial accreditation may only serve as Scenario Leaders in those areas in which they are accredited. Scenario Leaders must provide written scenarios to the Lead Evaluator prior to the exercise for approval. At the end of the A/R exercise, scenario descriptions and summaries will be included in the regional records. Scenario Leaders are required to fill out the A/R worksheets for all scenarios that they observed as well as participate in the scenario critiques at the end of each day.

Evaluators: Each RMU or fully accredited EMU may send a maximum of two evaluators per day (not per scenario) and each evaluator shall have one vote per scenario they evaluate. AMUs/EMUs with partial accreditation may send a maximum of two evaluators per day only for the areas in which they are accredited. Each evaluator must be, at a minimum, a current MRA rescue level member within their own organization, endorsed by their team and have been a member of a Rocky Mountain Region team for at least three years. They must also have participated in at least one A/R exercise (either as an observer or mentor or with their own teams A/R exercise) in the past three years. At the beginning of each day the Lead Evaluator must be notified as to who will be the voting evaluators for that day's scenarios. Evaluators are required to fill out the A/R worksheets for all scenarios that they observed as well as participate in the scenario critiques at the end of each day.

A/R Exercises - Observers

At the discretion of the Lead Evaluator and applicant team, members from any Region teams or other agencies, (that have approval from their team or agency operation leader) may be invited to be observers. Observers that attend the A/R exercises are not involved in the evaluation process of the applicant team and should provide their observations to members of the Evaluation Team or to their team's evaluators for potential incorporation into critiques. They are encouraged, but not required, to fill out the A/R worksheets to gain experience with this form. They do not have a vote.

A/R Exercises – Liaison

- **Liaison**: (single point of contact – administrative function) The Team seeking reaccreditation shall designate one of their members as the liaison to work with the Lead Evaluator throughout the A/R process. While it is desirable that this liaison be a rescue level member, it is not required. The liaison must be endorsed by their Team.

A/R Exercises - General Requirements

The A/R exercise is normally held over a 2-3 day period. Prior to the A/R exercise, the liaison from the team seeking accreditation and the Lead Evaluator (assigned by the RVC) will mutually agree upon the sites for each of the scenarios. It is recommended that the two technical rock scenarios and two winter rescue scenarios not occur on the same day. The search scenario will be held on either day at the discretion of the Lead Evaluator. (When applicable, the tabletop scenario will be held at a time mutually agreed upon by the applicant team and the Evaluation Team.)

At the conclusion of each day's exercise, the Evaluation Team will meet to discuss the day's scenarios, determine whether or not the team seeking accreditation has met the requirements for those skill areas performed and then hold a critique of the day's events with that team.

Other Requirements:

- The Evaluation Team should strive to provide the highest level of professionalism throughout the A/R exercise.
- The scenarios for testing will be set up by the Evaluation Team. The Lead Evaluator and Scenario Leaders will inform the (applicant) team being accredited of the situation and the ground rules.
- The scenarios should be as realistic as possible within the parameters of a typical mountain rescue mission.
- Safety of the individuals playing the roles of scenario subjects may require the use of additional equipment in the scenario that could cause confusion for the team seeking accreditation. Any such safety equipment must be clearly marked with a system agreed upon prior to the start of the A/R tests by the Lead Evaluator and the Liaison from the team seeking accreditation, and this system must be conveyed to all participants during the briefings for each day/scenario.
- Role playing of scenario subjects shall not inappropriately distract from the primary purpose of evaluating the technical competence of the team seeking accreditation.
- Prior to the A/R exercise, the Lead Evaluator and the applicant team will discuss scenario options. While scenarios will normally be conducted separately, the applicant team may be granted the option of conducting A/R scenarios simultaneously or in close succession. This will

be at the applicant team's discretion only. All decisions about scenario options will be conveyed to all participants during the briefings for each day/scenario.

- The Lead Evaluator and applicant team will discuss how specific required skills will be demonstrated to the Evaluation Team. Discussion should include the applicant team protocols, and whether or not the required skills will be demonstrated within the context of the A/R scenarios or separately. All decisions about specific required skills will be conveyed to all participants during the briefings for each day/scenario.
- The Evaluation Team must agree upon the location and nature of any imaginary obstacles. These obstacles shall be clearly marked and identified with a system agreed upon prior to the start of the A/R exercises by the Lead Evaluator and the Liaison from the team seeking accreditation, and then explained to everyone before the scenario begins.
- During the scenario, changes can only be made by the Lead Evaluator or the Scenario Leader for that scenario.
- At each site or location where the team being evaluated is to perform significant required tasks, evaluators from at least two different teams shall be present.
- The Evaluation Team should observe from a sufficient distance so as to leave the work area open for use by the team seeking accreditation, but close enough to effectively observe real-time operation of the systems. Once the scenario is deemed ended by the Scenario Lead, any evaluator may request that all systems remain intact for inspection by the Evaluation Team; and it is at this time that evaluators can ask questions of the members of the team seeking accreditation. However, if an evaluator sees a safety issue that could have serious adverse consequences they can call an immediate halt to all activity while the issue is investigated by the Scenario Lead.
- The Lead Evaluator may remove any member of the Evaluation Team or applicant team from participation in the A/R exercise, if in their judgment, this person is a detriment to the A/R exercise.
- The Lead Evaluator will be responsible for providing safety guidelines for all members of the Evaluation Team.

Any concerns throughout the annual A/R process should be communicated to the Regional Board of Directors. Concerns can be submitted by the teams testing that year as well as by any member of the Evaluation Teams. The Region Board of Directors shall address all concerns in a timely fashion.

The teams tested each year are asked to submit the completed Rocky Mountain Region Evaluation Team Feedback Form to the Regional Vice Chairperson.

A/R Exercises - Scoring

The completed A/R worksheet from each evaluator will be provided to the Applicant as feedback on their performance in the specific scenarios. The signed Evaluator's Form from each evaluator, recording their pass or not pass vote, will be placed in the official Rocky Mountain Region records. Scoring will be in accordance with the following criteria:

- At the conclusion of each day's exercise, the Evaluators and Scenario Leaders vote either pass or not pass on those scenarios that they observed.
- A passing vote for each scenario is defined as at least a 2/3 majority of evaluators present and voting at that scenario;

- The vote as submitted by the Evaluation Team is final and shall be entered into the regional records.
- At the discretion of the Evaluation Team, portions of the A/R exercise may be re-tested during the same weekend. Any scenarios retested during this weekend will not count as an additional A/R exercise for that team.

Accreditation Procedures

The team seeking accreditation (Applicant) must be:

- A viable, functioning team (i.e. has been effectively and safely performing missions with the support of local governing authorities) which has been operating continuously as a search and rescue organization for a minimum of four years.
- A volunteer non-profit, public service organization, which does NOT charge for its services, except for Accredited Ex-Officio Teams.
- A team whose primary mission load occurs in a wilderness environment (i.e. beyond the trailhead).
- A team whose primary coverage area is not already served by an existing accredited MRA team

The team seeking accreditation must demonstrate proficiency in solving problems in the three skill areas along with a Search – tabletop/oral scenario with effective, efficient and safe techniques and with evidence of adequate numbers of trained active personnel to accomplish such a search or rescue on a routine basis. The areas evaluated in each scenario are listed in the Rocky Mountain Accreditation Packet.

Requirements

Prior to scheduling any field tests, the applicant team must have met all of the Membership Qualifications as stated in the MRA Policies 101. The applicant must complete all national requirements as outlined in MRA Policy 102 and submit them to the Regional Chairperson for review.

The applicant team must submit the required documents to the Regional Chairperson with at least five copies for the Regional Board of Directors. The Regional Board of Directors will review the applicant team's documents and make a determination whether to proceed with the A/R exercise. The required documents are as follows:

History / Description of the applicant team, including:

- When, how and why the team was organized.
- The team's need and role in the community.
- The team's primary area of operation and/or responsibility in relation to the Rocky Mountain Region of MRA.
- The working relationship and understandings between the applicant team and local governmental authorities.
- The working relationship and understandings between the applicant team and other MRA teams in the same area (if applicable).
- The team's method(s) of funding and financing for equipment and operations.

- Method of notification of the team and individual members for a mission.
- The team's scope of operations and types of missions, including areas of special skills or limitations.

Bylaws of the Organization, including:

- An organization chart showing the various positions of authority within the team and a brief description of the responsibilities of those positions.
- Membership requirements and standards for the team as well as any additional requirements for various levels of membership or positions of responsibility.
- Annual membership rosters for the past three years.
- Training schedules for the past three years.
- A list of missions with dates, places, type and man-hours for the past three years.
- A list of personal equipment, which is required to be obtained and carried by each member during missions.
- An inventory of team equipment listing the primary items that are owned and used by the team (not down to the last piton and/or bandage).
- Training manual or published training guidelines (if applicable and appropriate)

Sponsoring Team Recommendation:

Any team wishing to become accredited must have a sponsor from among the existing RMUs or fully accredited EMUs of the region. The sponsoring team acts as a "Mentor" for the applicant team. The duties of the sponsoring team include:

- Assisting the applicant team in understanding the three skill areas necessary to pass the A/R exercise.
- Mentoring the applicant team on the required documentation.
- Assisting the applicant team in understanding the requirements of the Search – tabletop/oral scenario.
- Notifying the Regional Chairperson promptly in the event that it cannot provide the recommendation for membership for the applicant or it desires to terminate its sponsorship of the applicant.
- Providing the Regional Board of Directors with a written recommendation for membership at least ninety days before the desired A/R exercise.

Reaccreditations Procedures

RMUs and EMUs seeking to become reaccredited will take the A/R exercise in all three skill areas but are not required to go through the Search - tabletop/oral scenario. AMUs and partially accredited EMUs seeking to become reaccredited will take the A/R exercise in the areas that they are currently accredited in or can take the complete A/R exercise in all three skill areas.

The team seeking reaccreditation must demonstrate proficiency in solving problems in the three different skill areas with proper and safe techniques and with evidence of adequate numbers of trained active personnel to accomplish such a search or rescue on a routine basis. The areas evaluated in each scenario are listed in the Rocky Mountain Reaccreditation Packet.

Prior to confirming the date of the A/R exercise, each team seeking reaccreditation must submit to the Regional Vice Chairperson a letter stating that they continue to meet the Membership Qualifications as stated in MRA Policy 101.

These policies have been approved and accepted by the Board of Directors of the Rocky Mountain Region of the Mountain Rescue Association on the date of _____.

Regional Chair: _____

Regional Vice-Chair: _____

Regional Secretary/Treasurer: _____

Regional Director at Large: _____

Regional Director at Large: _____

Amended on: 12/09/06
03/01/08
12/10/08
12/05/09
12/10/10

Team #_____ Members #_____ APRS #_____ Date_____

Assignment _____

_____

_____

Safety Notes _____

_____

Team Leader _____

Members

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Equipment

	Radios		Small Med Kit		Avy Bash Pack
			Large Med Kit		Avy Support Pack
	Titanium Litter		Airway Pack		Recco Detector
	Cascade Litter		AED		Flagging
	Sked Litter		Oxygen Tanks		Fixed Probe Poles
	Litter Tie-ins		Oxygen Regulator		Team Shovels
	Scree Tie-ins		Bean Bag		Saw
	Pt Helmet		Extremity Vac Splint		
	Litter Wheel		Warming Blankets		***Personal***
			Sleeping Bag		Harness/Helmet
	Bash Pack		Body Bag		Personal Rope
	200’ Rope - R B Y		IV Warmer		Climbing Pro
	300’ Rope - R B Y				Ice Axe
	600’ Rope - R B Y				Ice Tools
			Camera		Crampons
	3rd Man Pack		GPS/Map		Skis
	Pickets		Binoculars		Snow Shoes
	Flukes		Evidence Kit		Sleeping Bag
	Kootenay Pulleys		PFD		Stove
	Edge Rollers		Throw Rope		Water Filter
	Highline Pack		Glow Sticks		

Team #_____ Members #_____ APRS #_____ Date_____

Assignment _____

_____

_____

Safety Notes _____

_____

Team Leader _____

Members

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Equipment

	Radios		Small Med Kit		Avy Bash Pack
			Large Med Kit		Avy Support Pack
	Titanium Litter		Airway Pack		Recco Detector
	Cascade Litter		AED		Flagging
	Sked Litter		Oxygen Tanks		Fixed Probe Poles
	Litter Tie-ins		Oxygen Regulator		Team Shovels
	Scree Tie-ins		Bean Bag		Saw
	Pt Helmet		Extremity Vac Splint		
	Litter Wheel		Warming Blankets		***Personal***
			Sleeping Bag		Harness/Helmet
	Bash Pack		Body Bag		Personal Rope
	200’ Rope - R B Y		IV Warmer		Climbing Pro
	300’ Rope - R B Y				Ice Axe
	600’ Rope - R B Y				Ice Tools
			Camera		Crampons
	3rd Man Pack		GPS/Map		Skis
	Pickets		Binoculars		Snow Shoes
	Flukes		Evidence Kit		Sleeping Bag
	Kootenay Pulleys		PFD		Stove
	Edge Rollers		Throw Rope		Water Filter
	Highline Pack		Glow Sticks		

Debrief

Prepared By _____

Summary _____

Debrief

Prepared By _____

Summary _____

ART – April 2010

ALPINE RESCUE TEAM AWARDS 2011

Alpine Award - (Award began in 1993)

This award is bestowed by the President and Field Director upon a Sustaining or Field Active Team member who has demonstrated outstanding service to the team.

1993 - Dave Siebert
1994 - Phil Luethy
1995 - John Wells
1996 - Mark Mattivi / Mike Everist
1997 - Bob Feroldi
1998 - Bill Thomas
1999 - Paul "Woody" Woodward
2000 - Ron Bookman
2001 - Howard Paul
2002 - Terry Burke
2003 - Rich Solosky
2004 - Rachel Emmer
2005 - Bob Wagner
2006 - Ken Hauser
2007 - Steve Wilson
2008 - John Wells
2009 - Dale Atkins
2010 - John Wells / Paul "Woody' Woodward
2011 - Ric Ondrusek

(If you have recommendations for this award in 2012, please contact the President or the Field Director)

Code 3 Rescue Helmet Award - (Award began in 1980's – records not available prior to 1993)

This award is given to an individual, team member or otherwise, who has provided outstanding service to the team in a specific area that has resulted in exceptional benefit to the team.

1993 - Ron Bookman
1994 - Rand Case
1995 - Steve Shelafo
1996 - Terry Burke
1997 - Roy Wyatt
1998 - Bill Barwick
1999 - Debbie Baldwin
2000 - Todd Holmes
2001 - Rachel Emmer
2002 - Paul "Woody" Woodward
2003 - Phil Luethy / Mark Mattivi
2004 - Sue Ahrend
2005 - Ann Thomas
2006 - Roger Krautkremer

2007 - Roz Brown
2008 - Wes Brown / Mike Doe / Bob Wagner / Roger Krautkremer
2009 - Jerry Petrilli
2010 - Mike Everist
2011 - Dawn Wilson

(If you have recommendations for this award in 2012, please contact Dawn Wilson)

Bent Piton Award - (Award began in 1965 – records not available prior to 1993)

This award is given for outstanding performance while participating on a mission by either a individual Team Member, a group of Team Members or all Team Members on a specific mission.

1993 - John Wells
1994 - Team members on Tunnel 2 Mission
1995 - Mark Mattivi
1996 - Paul "Woody" Woodward & Mike Everist (One on One rescue in Clear Creek Canyon)
1997 - Bob Feroldi (Search in Jeffco)
1998 - Team members on Mine Rescue Mission
1999 - Herb Dorn & Steve Kelleher (Two technical Missions)
2000 - Team Members on Mt Evans Mission
2001 - Team Members on North Face of Mt Evans Mission
2002 - Team Members on the Grand CO Snowmobile Mission and Vail Pass Snowmobile Mission
2003 - Mark Bower (St Mary's Mission)
2004 - Todd Holmes (Rosalie Peak mission)
2005 - Mike Selka (keeping our snowmobiles running all year)
2006 - Tom Wood (leadership excellence on numerous missions this year)
2007 - Loren Pfau (Recovery mission on East Ridge of Mt. Bierstadt)
2008 - Roy Wyatt & Kurt Traskos (Mission with lost 94 YOW)
2009 - Crestone Needle/Peak traverse rescue (Dale, Herb, Casey, Jim, Brian, Todd, Mark, Woody)
2010 - Brian Stuebe (leadership excellence on numerous missions this year)
2011 - Tom Loebach (Exceptional commitment in participating on missions – 98%)

(If you have recommendations for this award in 2012, please contact the Field Director or any Mission Leader)

Byron Angevine Award - (Award began in 2002)

Bestowed by the Officers of the Alpine Rescue Team upon an individual or organization who has made an exceptional commitment to providing extraordinary assistance and support to the Team.

2002 - Colorado Road Runners, Inc.
2002 - Rand Case
2007 - White Family Foundation
2010 - Kim Goldberger

(If you have recommendations for this award in 2012, please contact any Board Member)

Gordon Stucker Award - (Award began in 1998)

This award is given to the top prospective member of each year's class.

1998 - Scott Amdur
1999 - Rachel Emmer & Matt Wroblewski
2000 - Steve Baumgartner & Kyle Firestone
2001 - Scott Duke
2002 - Gordon Stevenson
2003 - Angie Lucht
2005 - Heather Swenson & Chris Delnero
2007 - Wes Brown
2009 - Jared Spears
2011 - Rob Anderson

(If you have recommendations for this award in 2012, please contact the PM Director)

Windy Peak Aw-Shit Magnet Award - (Award began in 1980's)

This award is given to a team member for making the "Big Goof" while participating on a Mission or Training.

1993 - Roy Wyatt
1994 - Jim Johnson (After a subject was found, Jim turned his radio off thus causing another search for his field team)
1995 - Bob Feroldi (Getting lost with his subjects on Mt Spalding)
1996 - Ken Hukari (Announcing on MRA to everyone that our subject was MRA Code 4 - subject was MRA code 1)
1997 - Paul "Woody" Woodward (During a hot unload from a huey, released the window instead of opening the door)
1998 - Tracy Clevenger (Searching for a beacon that was in her own pocket)
1999 - Ron Bookman & Scott Grotheer (Discussing breakfast menu items over the radio while on a real scree evac)
2000 - Bob Wagner (Had a lawn chair in his pack instead of a probe pole on avalanche re-accreditation scenario)
2001 - Mark Freeman (Burning up the snowmobile)
2002 - Herb Dorn (Also getting lost with his subjects on Mt Spalding)
2003 - Angie Lucht (Dating the subject that she helped rescue)
2004 - Jim Mallory (As a litter attendant, he got caught in a crack during a high angle training and had to be rescued)
2005 - Tom Loebach (Videotaped wearing only his tighty whity shorts during a training)
2006 - Ric Ondrusek (Getting separated from his pack / his pack was in the helicopter)
2007 - Mike Selka (Had a little problem with attaching the snowmobile trailer to Rescue 1)
2008 - Ken Hauser (Having his Hummer vehicle stuck at Little Cub when he drove it too far off the road)
2009 - Tom Wood/Mark Nelson (Buried a snowmobile at Jones Pass - Team recovered it the next day)
2010 - John Wells/Phil Luethy (Had a difficult time hooking up the battery on Comm 4)
2011 - Bob Feroldi (Reporting his location to Ops on a mission from his GPS that ended up being his home)

(If you have recommendations for this award in 2012, please contact Bob Feroldi)

Other Awards –

1996 25 Year Service Award - Glenn Brand, Byron Angevine
1996 10 Year Service Award - Ron Bookman (Field Active) / Phil Luethy (Field Active) / Mark Mattivi (Field Active) / Ric Ondrusek (Field Active) / Bill Thomas (Field Active) / Howard Paul (Field Active) / Larry Anderson (Some of these folks had more than 10 years)
1996 Special Award to Tom Rhodes FS 95
1997 25 Year Service Award - Roz Brown
1997 10 Year Service Award - Charley Shimanski (Field Active) / Mike Snovak (Field Active) / Bill Barwick (Field Active) / John Wells (Field Active)
1997 Special Award to Dale Atkins
1998 25 Year Service Award - Larry Anderson
1998 10 Year Service Award - Paul "Woody" Woodward (Field Active)
1999 10 Year Service Award - Bob Feroldi (Field Active)
2000 10 Year Service Award - Angela Eaton (Field Active) / Loui Clem / Bob Wagner (Field Active)
2000 15 Year Service Award - Ron Bookman (Field Active) / Ric Ondrusek (Field Active) / Phil Luethy (Field Active) / Howard Paul (Field Active) / Charley Shimanski
2000 25 Year Service Award - Dale Atkins, John Peleaux
2000 Special Award to Kim Goldburger
2001 10 Year Service Award - Mike Everist (Field Active) / Marcus Rice (Field Active)
2001 15 Year Service Award - Mark Mattivi (Field Active)
2002 10 Year Service Award - Roy Wyatt / Herb Dorn
2002 15 Year Service Award - Mike Snovak (Field Active) / Bill Barwick (Field Active) / John Wells (Field Active)
2002 20 Year Service Award - Phil Luethy (Field Active)
2002 30 Year Service Award - Roz Brown / Byron Angevine
2003 15 Year Service Award - Paul "Woody" Woodward (Field Active)
2003 30 Year Service Award - Larry Anderson
2003 Special Award to Paul "Woody" Woodward for past slide show presentations
2004 10 Year Service Award - Todd Holmes (Field Active) / Tom Loebach (Field Active)
2004 15 Year Service Award - Bob Feroldi (Field Active)
2005 30 Year Service Award - Dale Atkins / John Peleaux
2005 20 Year Service Award - Ron Bookman / Mark Mattivi (Field Active) / Ric Ondrusek (Field Active) / Howard Paul (Field Active)
2005 15 Year Service Award - Loui McCurley / Bob Wagner (Field Active)
2005 10 Year Service Award - Scott Grotheer (Field Active) / Rich Nagler (Field Active)
2006 15 Year Service Award - Mike Everist (Field Active)
2007 10 Year Service Award - Paula Bindrich (Field Active) / John Thomas (Field Active) / Steve Wilson (Field Active)
2007 15 Year Service Award - Rand Case / Herb Dorn (Field Active) / Roy Wyatt (Field Active)
2007 20 Year Service Award - Bill Barwick (Field Active) / Charley Shimanski / John Wells (Field Active)
2007 25 Year Service Award - Phil Luethy
2007 35 Year Service Award - Roz Brown
2007 Special Award to Ben and Marilee Doud for donation of new building
2008 10 Year Service Award - Rich Solosky / Tom Wood (Field Active)
2008 20 Year Service Award - Paul "Woody" Woodward (Field Active)
2008 35 Year Service Award - Larry Anderson
2009 Special award to Sheriff Ted Mink, Undersheriff Ray Fleer and Fleet Manager Rusty Hardy - Jeffco
2009 Special award to Major Albers and Sergeant Safe - Clear Creek
2009 15 Year Service Award - Todd Holmes (Field Active) / Tom Loebach (Field Active)

Other Awards – cont.

2009 20 Year Service Award - Bob Feroldi (Field Active)
2010 10 Year Service Award - Sue Ahrend (Field Active) / Steve Gosselin (Field Active) / Bryan Osburn (Field Active)
2010 15 Year Service Award - Scott Grotheer (Field Active) / Rich Nagler
2010 20 Year Service Award - Rand Case / Loui McCurley / Bob Wagner
2010 25 Year Service Award - Ric Ondrusek (Field Active) / Howard Paul
2011 Special presentation to Charter Members - JoAnn Stucker, Joanie Lines and David Pratt
2011 10 Year Service Award - Dan Hamm (Field Active) / Ken Hauser (Field Active) / Mike Doe / Carrie Hamm / Zach Loescher / Ann Thomas
2011 20 Year Service Award - Mike Everist (Field Active)