

Chapter 3 - Qualifications and Training

Abstract: This chapter defines the technical qualifications and discusses the training requirements of the membership categories.

- Qualifications and Training by category of membership
- Qualification Checklists by category
- Annual Activity Requirements
- Winter Bivouac
- China Lake Shirt Policy
- China Lake Rescue and Technical Qualification Checklist - how to move up on the roster
- Recommended Climbs
- Individual Equipment list for Operations
- Mountaineer's Bookshelf
- Scheduled Training

Revision History

- 1991 Written by Bob Rockwell, Daryl Hinman, Al Green
- Feb-95 Revised by Al Green, Tom Roseman, Tom Stogsdill
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3.1 Introduction

This chapter describes the different categories of membership in the Group and what is expected of members in these categories. It also gives the requirements for attaining each category and describes the annual minimum requirements for remaining in that category.

The Group as a whole decides what categories of membership are appropriate and also the general requirements for these categories (these are appended to the Group's Bylaws). The Qualifications Committee (QC) implements specific requirements for the members to qualify for these categories.

The Training Committee (TC) schedules appropriate training events to allow members to meet these requirements.

The information presented here applies to our operational members - those who participate directly in search and rescue (SAR) operations. However, our non-operational activities (such as public education and teaching SAR skills to our field members) are important to the overall effectiveness of the Group. No specific requirements are established for participation in non-operational events, but we rely on each member to do their share.

3.2 General

The knowledge of each member's capabilities is essential to get the proper blend of skills required for field teams on SAR operations. To fulfill this need, the Group has Support, Rescue, Technical and Leader categories on the call roster for the field team members. In addition, we list such skills as climbing, tracking, winter, ELT, and others as needed. We list Coordinators and Special Skills personnel as non-field members, and we list Trainees who are working toward full membership.

We use the CLMRG and Mountain Rescue Association (MRA) patches and Kern County patch. These are attached to the uniforms as described in Section 3.6 (CLMRG Shirt Policy).

The Group needs experienced mountaineers with mature judgment and rescue skills. We also need members who have neither the time nor the interest to become (or remain) competent in all the required skills. The CLMRG Rescue and Technical Qualification Checklist in Section 3.7 lets members measure their capabilities and growth against the Group's standards.

The Recommended Climbs for CLMRG Members in Section 3.8 lists the areas and mountains where we expect to have most of our operations. We encourage members to become familiar with them.

Members with questions about their status or training needs should feel free to ask any member of the QC for counsel and the TC for the needed practices and courses.

An annual requalification is conducted to ascertain which members have kept their skills and participation current. Some allowances can be made, but ultimately the call roster must

accurately reflect each member's capability to operate in the field. The ability to climb well, and the knowledge of local mountains, is of prime importance to the Group. Every member should do at least some class 4 or 5.0 rock climbing and several strenuous mountain ascents each year. Climbing with members of the Group on scheduled Group trips is particularly encouraged because it contributes to an awareness of each other's strengths and limitations. This enables more effective cooperation on rescues and searches.

3.2.1 Applicant

Applicants are individuals who are in the application process to become a group member. Applicants are not members and do not participate in operations or vote on group business. Applicants are also not allowed to represent CLMRG on any public events.

The QC is responsible for evaluating individuals who are interested in joining the group. Once the QC feels the individuals are interested and capable of being a group member, they will contact the Kern County Sheriff's Office to obtain an application for the individual. Once the individual finishes the application and is sworn in by the Kern County Sheriff's Office, they become group members and are assigned to a membership category based on the QC's discretion.

The application process usually takes a few months. If the applicant is taking too long to finish their part of the application process, the QC may revoke the application and have the individual start over again.

During the application process, applicants are encouraged to attend trainings with the group to build up their skills. Applicants may be restricted from being used in certain roles in technical trainings due to liability issues. The leader of the training event is in charge of making sure that this policy is enforced.

3.2.2 Trainee

Trainees are individuals who have been sworn in by the Kern County Sheriff's Office, but have not demonstrated all the skills to be categorized into a field member category. Trainees may vote on group business and are allowed represent the group at public events.

Because a Trainee is not yet a field member, he is not eligible to be called on operations. They are encouraged to participate in other Group activities, such as meetings, training events, and certain trips. The trip or training event leader always has the final word on judging a person's qualifications for participation in any activity that requires special experience or equipment. If the trip organizer (the person listed on the schedule as the contact) has doubts about a person who wants to go, they should check with other group members to determine if the individual has the appropriate skills to participate.

A Trainee's advancement to full membership status requires demonstration of the minimum skills needed for the target category. For Support, this means being able to camp at a remote base camp and to assist on non-technical operations. In general, the person must be in good

enough physical condition to spend a long day in the field. Advancement also requires demonstration that he will be a responsible member of the Group. The Group must know and be confident of every member's abilities.

A Trainee should work to become a Support member. The QC regularly considers the Trainees and their activities with the Group. Scheduled trips and training events are particularly important for someone preparing to be a field member on the call roster. This participation demonstrates the Trainee's abilities and gives him an opportunity to become acquainted with the Group and gain familiarity with the way we function. Satisfactory performance on at least one scheduled overnight mountain climb is required. This allows observation of the person's physical condition in the mountains and the quality of their hiking and camping gear. Their ability to follow directions and their level of common sense can also be reasonably assessed on an overnight trip. It is important that the Trainee makes sure that the QC is aware of their participation in the activity. The Trainee should remind the trip leader to report the event and his participation.

3.2.3 Support

Support members assist, primarily, on non-technical operations. They must have the equipment to camp at a remote base camp and the physical condition to spend a long day in the field. Exhibit 3-4 (Equipment List for Operations) contains all the items the fully equipped member needs, and the Support member should strive to purchase the articles as soon as possible. This list was made by considering the multi-faceted requirements of safe mountaineering practices and the combined experience of many past operations. It represents a reasonable trade among the conflicting requirements of utility, weight, safety, and cost for the well-equipped field member.

Cardiopulmonary resuscitation (CPR) and Standard First Aid trainings must be completed before becoming a Support member, and these skills must be maintained. The CLMRG Rescue and Technical Qualifications Checklist (Section 3.7) is intended to guide the progress of Support members working to attain Rescue or Technical status. It is recommended that members striving to attain a Rescue classification fill out this form once a year for the QC to consider.

3.2.4 Rescue

Rescue members are mountaineers. They are expected to assist in the field on any SAR operation the Group is called on. A Rescue member must be competent in roughly half of the first nine skill categories on the Rescue and Technical Qualifications Checklist. Considerable variation in the mix of skills is permitted. The following, however, are considered essential: Physical Condition, Equipment, First Aid (see Chapter 7), and Participation. Also, some of the elements of the remaining skills are essential for the Rescue member. All skill items that are required for becoming a Rescue member are highlighted on the checklist. The remaining items, to make up approximately half of the entire checklist, are an individual choice. Rescue members must be comfortable on class 4 rock, experienced in roped climbing, and competent (T3) trackers.

3.2.5 Technical

Technical members are experienced and capable in a broad range of climbing and SAR skills, with the emphasis on high-angle rescue. A Technical member must be competent in all the first nine skill categories on the checklist. In addition to the skills mentioned above for Rescue, the following are added: Technical Climbing and Rescue, Search and Tracking, Maps and Route Finding, Helicopter Techniques, and Organization and Leadership. Winter is optional, but it is strongly encouraged because the Group is expected to accomplish winter SAR operations under severe storm conditions.

3.2.6 Leader

Operation Leaders (usually simply Leaders) are selected from the Technical and Rescue members and ranked annually by the voting members (all members except Trainees and those Special Skills members who do not mobilize for operations). The QC decides how many Leaders the Group will have each year. Leaders are responsible for accepting a SAR request for the Group, determining the type of response called for, leading the effort until its completion, and performing the necessary wrap-up including reporting.

Leadership skills are gained by individual study, seminars, and practical experience. All Leaders must be able to lead any kind of SAR operation that we are called for.

Each member team of the MRA identifies which of its Operation Leaders will be Joint MRA Operation Leaders - those capable of leading an overall search or rescue operation involving several mountain rescue teams. While over the years the Group has had different criteria for selecting its Joint MRA Operation Leaders, currently all of our Leaders are deemed to be so qualified.

3.2.7 Coordinator

The main role of the Coordinator is to perform in-town communication and coordination functions for an operation. The Coordinator is the primary assistant to the Operation Leader during the startup phase. The Coordinator receives information, makes suggestions to ensure that nothing is overlooked, and provides the communication link between the Leader and other entities that are or will be involved in the operation. This includes contacting members to describe the situation and ascertain their availability, requesting other teams and other resources, planning for backup teams, and dealing with agency representatives and the news media. In the ideal situation, the Operation Leader is then able to concentrate on getting ready and planning for our response without being concerned with the details of information flow. When no regular Coordinator is available for an operation, a Leader who cannot go may assume that role.

3.2.8 Special Skills

Special Skills members are Support members who may or may not go into the field but who possess important skills that can be useful during many operations. They include telephoners, base camp personnel, HAM operators, medical personnel, and others of value to the Group. Having a Coordinator or Special Skills member leave home to participate in an operation might be useful for many reasons. This participation must have the specific prior approval of the Operation Leader, and the role of this member in the operation is decided by the Operation Leader. This member must be prepared to function in the designated role and be an asset to the operation. The minimum requirement is to be adequately equipped (e.g., food, clothing, sleeping gear) to be comfortable in a primitive base camp. This member must have a current

3.3 Qualification for the Rescue and Technical Categories

Section 3.7, consisting of 10 skill categories, is intended to guide the progress of Support members working to attain Rescue or Technical status. (The 10th category is Winter, which is optional for both Rescue and Technical).

This checklist is primarily for use by Support and Rescue members as they work toward Technical qualification. It itemizes the skill categories expected for a Technical member. It can also be used by Technical members who want to check their skills against the current Group standards. There is no separate checklist for Rescue and no strict interpretation of Rescue status is defined because different members advance in different skills. To achieve Rescue status, members must become fully proficient in at least half the skills on the checklist, which must include Physical Condition, Equipment, First Aid, and Participation. These skills are highlighted as are elements of other skills that are also considered essential for Rescue members.

Support members should generally try to attain Rescue status within two years and Technical status within another two years. Section 3.11 is a compilation of available training events organized according to the skill categories given below.

All members are encouraged to improve in areas of personal interest and to attain high levels of skill and knowledge in these specialties. The call roster lists specialties such as rock climbing, tracking, and winter mountaineering.

The following are the items on the checklist and suggestions for achieving mastery of them:

3.3.1 Physical Condition

The goal is to maintain excellent aerobic condition. Be able to carry a heavy pack. Maintain good body strength and try to maintain good altitude conditioning. An appropriate test for physical conditioning for mountaineers is to be able to ascend Mt. Whitney in under six hours by the trail or the Mountaineer's Route. Note that there are no set physical conditioning

requirements to become a support member. The QC will decide if a member's physical condition is sufficient to safely participate in operations as a support member.

3.3.2 Technical Climbing and Rescue

Make enough class 4 and 5 roped climbs, particularly in the mountains, to be familiar with rope handling and anchor placement techniques. Ascend a fixed rope. Climb snow and ice routes using ice axe, rope, ice screws, flukes, and crampons.

Practice arrests. Cut a bollard. Learn and practice aid climbing. Place a bolt. Tie off and retrieve a fallen climbing partner. Take a stretcher class. Participate in stretcher practices to learn rescue techniques. Be able to rig a stretcher, a three-point anchor, and brake and mechanical advantage systems by yourself. As a stretcher attendant, climb above the stretcher with ascenders or Prusik slings.

3.3.3 Search and Tracking

Learn and practice tracking techniques. Do sign cutting exercises. Study search methods to become familiar with hasty search, confinement, and line search techniques. Participate in search case study exercises. Learn search organization.

3.3.4 Maps and Route Finding

Learn to use topographic, Bureau of Land Management, and Forest Service maps. Be able to locate yourself on the map and to describe this location by radio. Know how to triangulate using visual or L-PER bearings. Learn to use the Global Positioning System (GPS) units and how to report your location to base camp. Be familiar with the areas and mountains on the Group's list, and climb the popular routes.

3.3.5 Equipment

Obtain personal items on the equipment list. Learn and practice the assembly, use, and storage of the Group's gear shown on the checklist.

3.3.6 Helicopter Techniques

Know helirescue techniques and attend at least one practice. Practice rigging the stretcher for a helicopter hoist. When these skills are satisfied, a Helo Decal, which should be attached to the front of the rescue helmet, is issued.

3.3.7 First Aid

All field members must complete the annual CLMRG first aid training and CPR training. Members are encouraged to take wilderness first aid, EMT, and/or additional first aid classes.

3.3.8 Participation

The emphasis here is on activities with the Group. Operations must be field operations with significant participation. The climbs must be significant mountains and can be the same ones made for technical, familiarization, or winter checklists.

3.3.9 Organization and Leadership

Know the Group operation rules and procedures. Understand the roles of authorities and volunteer groups. Know the capabilities of fellow members. Leaders, study the Operation Leader procedures and California Region Mountain Rescue Association (CRMRA) joint operations procedures ([3-1]).

3.3.10 Winter Mountaineering (Optional)

Note: This skill is optional for all categories, but Technical members are encouraged to become winter qualified as soon as possible.

The first prerequisite to the Winter Mountaineering qualification is that the member must be a strong mountaineer. There is a clear distinction between the person who is perhaps a capable and experienced winter traveler and one who is a winter mountaineer. Most members of the Group are excellent winter travelers with good knowledge of survival techniques, and these members are valuable for a large fraction of our winter operations. However, the 'W' designation is given only to currently qualified winter mountaineers who have climbed several of the major Sierra peaks under winter conditions.

Generally speaking, winter operations are our most strenuous and demanding and are potentially the most dangerous. The Winter-qualified member must be able to help in a difficult search and rescue operation anywhere in the Sierra under winter storm conditions. Sometimes, we get calls to even more distant and higher locations with even more severe conditions. Special clothing and equipment are required (see Section 3.9). Each member should have climbed, under winter conditions, routes that are class three or harder in the summer.

Each member must have demonstrated the proper use of the ice axe for travel, step cutting, arrests, and belays. He must be experienced in the use of crampons and snowshoes and familiar with avalanche transceivers. He must have set up, in the field, each of the Group tents. He should have demonstrated the construction of snow caves and igloos. The member must have participated in the following activities prior to becoming Winter qualified:

One snow stretcher practice.

One avalanche seminar: MRA, CLMRG, or other.

Three Group overnight mountain climbs under winter conditions that involve camping on snow and melting snow for meals and drinks.

One winter bivouac experience. The topic of the winter bivouac deserves further attention. The Winter Bivouac section in this chapter discusses rationale, details, and ground rules.

3.4 Annual Activity Requirements

Once a member achieves the Support, Rescue, or Technical category, the Group requires that the member participate annually in certain activities to maintain that level. Members who do not satisfy one or more of the annual requirements for their category are put on probation for the following year (probation status is not indicated on the call roster). If a member does not satisfy the requirements during the probation year, he or she is put in a lower category for the next year.

Support members who do not satisfy their requirements for the second consecutive year are dropped from membership in the Group unless they have a special skill that can qualify them for retention.

Annual requirements must be met during the calendar year, except for the winter climb, which is a seasonal requirement.

We stress that these are minimal activity requirements. Members who consistently perform at a minimal level in quantity or quality of activities or who allow their skills to lapse may also be moved to a lower category without the benefit of a year of probation.

Regular contact, beyond operations and mountain climbs, is important in order to appreciate all the facets of the Group's activities, be familiar with the other members, and contribute fully to the Group's functioning. Examples include regularly attending the monthly business meetings, participating in standing or ad hoc committees, being a member of the board of directors or a committee chairperson, participating in public education events, and giving lectures to the summer mountaineering class or to local school groups.

A member who meets all of the annual activity requirements contributes a large amount of time in service to the Group. Nevertheless, each individual requirement is a minimum and members are encouraged to participate beyond these minimums in areas of their interest. For example, if a member is to realistically maintain a rescue climbing lead rating, he must make many roped climbs during the year on a variety of terrain (friction, chimneys, jam cracks). This is even more important for the member with a high rating. Yet, only one climb is actually required, and it is more of a demonstration that the member is still interested and capable of climbing at the indicated level. Analogous comments can be said about any of the specialty skill areas. Annual activity requirements for each category of field membership are summarized in Table 3.1 on page 39 and detailed in the following paragraphs.

Table 1. Annual Activity Requirements

Annual Activity	Support	Rescue	Technical
Operations	3	3	3
Mountaineering Trips	3	3	3
Overnight Trip	1	1	1
First Aid Scenario	1	1	1
First Aid Mini-Classes	3	3	3
CPR	1	1	1
Stretcher Practice	1	1	1
Tech Skills Classes	3	3	3
Technical Climb	0	1	1
Tracking Hours	3	3	3
Winter Overnight (For Winter Qualification Only)	1	1	1

Note that the required mountaineering trips must be completed on separate group trips.

There are different types of climbing trips that fulfill the Technical Climb requirement. The technical climb may be one multi-pitch (at least three pitches) roped climb on a group trip. The member should lead a pitch at their rated ability. Alternately, the technical climb may be achieved with a group climbing trip, where the member leads at least one trad pitch at their rated ability.

Winter qualification is optional for all member categories, but requires the group member to achieve at least one group overnight mountain climb under winter conditions during the previous winter season.

3.4.1 Support

Support members are encouraged to be particularly active as they learn mountaineering and SAR skills and to become familiar with other members and with Group procedures. Each year, they must complete at least the minimum requirements for SAR, training, and participation listed below.

If maintaining a rock climbing lead rating, the support member must also complete one technical climb as defined above (one multi-pitch (at least three pitches) roped climb on a Group trip

leading a pitch at their rated ability, or a group climbing trip that includes leading at least one trad pitch at their rated ability).

3.4.2 Rescue

Rescue members are active mountaineers who maintain all the skills required to support SAR operations conducted by the Group. Each year, they must complete at least the minimum requirements listed above. Rescue members who fall below the minimum requirements may, after a year of probation, be placed in the Support or Special Skills category.

3.4.3 Technical

Technical members are mountaineers who maintain all the skills necessary for any SAR operation conducted by the Group. Each year, they must complete at least the minimum requirements listed above. Technical members who fall below the minimum requirements or who consistently perform at a minimal level in quantity or quality may, after a year of probation, be placed in the Rescue, Support, or Special Skills category.

3.4.4 Coordinator

Coordinators are members who handle the callout and coordination of operations. They should maintain regular contact through Group activities, including meetings, and participate in three operations annually.

3.4.5 Special Skills

Special Skills members need not be mountaineers, but they must be willing to assist on operations that need their specialty. They should maintain regular contact with Group and stay current in their special skills.

3.5 Winter Bivouac

3.5.1 Background

A search assignment is almost always intended to last no more than one day in the field. However, for a variety of reasons (sudden storm, slower than expected progress, anticipated helicopter pickup doesn't materialize, etc.), we must be prepared to spend the night out unexpectedly. Each member carries bivouac gear for this eventuality.

In summer, a person who is unprepared (equipment, clothing, or skills) normally suffers only discomfort. In winter, the consequences of being unprepared can be fatal, and any preparation for survival that can be done becomes paramount in importance.

The winter bivouac serves several purposes. first, it gives each member striving for Winter qualification a chance to experience, under controlled and planned conditions, the situation that they may well encounter on a future operation. Clothing, gear, and ideas can be tried out in relative safety.

Second, for the member who just wants to obtain some winter survival skills, we can provide them this opportunity while being safely accompanied by experienced personnel.

Most importantly, however, it has been well established that mental attitude, outlook, and confidence are critical factors for persons caught in a survival predicament. The Group believes that the member who has already participated in one of our winter bivouacs is less likely to be overwhelmed by the magnitude of the real situation and experiences a corresponding increase in the probability of survival. The Outward Bound program is also based on this premise. The bivouac is not recommended for anybody without some prior overnight winter mountaineering experience. Clothing and equipment, presumed by the novice to be adequate, should be tested and validated under more reasonable conditions before committing to this serious undertaking.

3.5.2 Backpack

Placing anyone in danger unnecessarily makes no sense. If, however, each participant takes a full winter pack, he will not gain true heightened confidence from the experience. Therefore, we expect each member to take the normal complement of food, clothing, and equipment (including emergency supplies) that he would normally carry on a day-long search assignment under winter conditions. There are no limitations on total pack weight, but the following list suggests that a person can be comfortable with less than 15 pounds.

Table 2. Pack Items

Item	Weight
Day pack	2 lb 4 oz
Light sleeping bag	1 lb 2 oz
Bivy sack	1 lb 2 oz
Sleeping pad (1/2)	1 lb
Stove and pot (1/2 share)	1 lb 6 oz
Shovel	15 oz
Food	3 lb
Headlamp	4 oz
Quart water bottle (full)	2 lb 4 oz
First aid kit	9 oz
Total	14 lb 12 oz

Table 3. Clothing Items

Item
Waterproof shell jacket
Down or synthetic insulating jacket/parka
Long underwear
Long sleeve shirt
Insulating pants (down, synthetic, wool, etc.)
Socks (2 pair)
Winter boots
Gaiters
Insulating gloves/mittens
Shell gloves/mittens
Balaclava
Wind pants
Winter hat

3.5.3 Location

Distance of the bivouac site from the roadhead is not stipulated here. It should not be so remote as to constitute a danger in the event of a multi-day storm yet not so close that the emotional commitment to the survival situation is absent. One-half mile to five miles is probably in the right range, but the type of terrain to be traversed is important, too. Walking ten miles up a road might be too near, but going two miles might be too far if it crosses over a major pass. Also, the location needs to have appropriate snow conditions for shelter construction.

3.5.4 Shelter

Because a tent might not be carried on a search assignment, members need to be knowledgeable about building snow shelters in an emergency. Therefore, on the bivouac trip, tents are left behind and participants build, for example, igloos, snow caves, and trenches to spend the night. (However, tents are carried and are available when novices are present.) Instructions on snow shelter construction are available from any Winter-qualified Group member, and training seminars on the topic are given from time to time.

3.6 CLMRG Shirt Policy

The CLMRG shirt is displayed in Figure 1 and Figure 2.



Figure 1. CLMRG Shirt



Figure 2 - Kern County Sheriff and CLMRG Patches

The mountain in the Figure 2 is a simplified drawing of Mt. Whitney. Because our activities are concerned mainly with the southern portion of the Sierra Nevada, Whitney seems an appropriate symbol. The Buttress and the Mountaineer's Route are shown.

Center the patch by the lettering, not by the shape of the mountain. Use the A in CHINA for the top-center point. Use the C and the E in CHINA LAKE for horizontal alignment.

3.7 CLMRG Rescue and Technical Qualification Checklist

CHINA LAKE MOUNTAIN RESCUE GROUP

Technical/Rescue Category Qualifications Checklist

Name _____ Date _____

This checklist is primarily for use by Support members as they work toward Rescue and Technical qualification. It divides the skills required for a Technical member into 10 categories.

To achieve Rescue status, members must become proficient in at least half the skills listed, which must include categories 1, 5, 7, and 8. Other skills specifically required for Rescue status are identified by asterisks. Support members should generally try to attain Rescue status within two years. Members may choose to remain in Rescue but are encouraged to improve in the remaining areas to achieve Technical status. This checklist should also be used by Technical members to check their skills against the current Group standards.

The asterisk (*) before an item indicates particular importance and a skill that is typically required in order to progress to rescue or technical.

Note: There are no set requirements to join CLMRG as a trainee or support member.

New or potential members should not be concerned if they cannot not currently achieve the standards below. The QC will determine if a potential member has sufficient ability/training to safely participate in operations.

I. PHYSICAL CONDITION

Each exercise below is shown with two values. The first value is what is generally expected in order to become a rescue or technical member. The second value is what has been achieved by other group members, given as an example to strive for, but is not required. Note that the QC may accept other demonstrations of current physical conditioning or may accept a technical or rescue applicant based on their judgment and knowledge of the individual's capability.

Type	Description	Target for Technical/Rescue	CLMRG Record	
Aerobic	Time for three-mile run	30 min	18 min	
	Time up Lone Butte, no pack	27 min	16 min	
	Time up Lone Butte, 50 lb pack	40 min	32 min	
	Time up Mt. Whitney Trail	6 hr	3 hr 10 min	
Anaerobic	Sit-ups in two minutes	60	80	
Strength	Pull-ups	2	20	

II. TECHNICAL CLIMBING AND RESCUE

Climbing and Rescue Skills

Climbing and rescue skills to achieve. Check each item when you feel competent.

*Prusik, jumar		Piton use	
Step cutting		Partner tie-off	
*Cam use		*Ice axe belay	
Partner retrieval		Aid climbing	
Ice screw use		*Chock use	
Cut bollard		Snow fluke use	
Bolt use		*Ice axe arrest	
*Crampon use		Ice climbing	

Rock and Snow Skills

List the dates of Rock Skills Classes and Snow Skills Classes/Practices:

Class Description	Date(s) Completed
Ascending/descending	
Self-rescue	
Aid Climbing	
Self-arrest	
Crampon use	
Snow Anchors	

Climbs

List technical roped climbs, at least 5.0, as defined for annual requirements (10 for Technical; 5 for Rescue):

Climb 1	
Climb 2	
Climb 3	
Climb 4	
Climb 5	
Climb 6	
Climb 7	
Climb 8	
Climb 9	
Climb 10	

I feel that my climbing lead capability is now: Free _____ Aid _____

Stretcher Skills

The best times to practice the rescue skills listed below are on stretcher practices. When learned, many of the items can be checked off at the hut with a few other members or alone.

*Stretcher rigging		*Victim tie-in		*Ascend above stretcher	
*Attendant tie-in		*Brake system		*Three-point equalizer	
*Stretcher belay		*Simple 3 to 1		Snow stretcher practice	

*List dates of three stretcher practices:

Stretcher Practice 1	
Stretcher Practice 2	
Stretcher Practice 3	

III. SEARCH AND TRACKING

Read Mantracking		Search organization course	
*Tracking practice, 7 hours		*Perimeter cutting exercise	
*Basic tracking course		*Read tracking chapter CLMRG manual	
*Attend a case study seminar or search practice			

IV. MAPS AND ROUTE FINDING

Map Skills

Map skills can best be checked by doing some problems in triangulation and location description.

Map and Compass course taken on _____

Familiarity with the UTM (Universal Transverse Mercator) coordinate system	
Familiarity with the latitude/longitude coordinate system	

Route Finding

Route finding can be tested only in the field on climbs. Familiarity can be presumed from having climbed the route. Mark up a copy of the RECOMMENDED CLIMBS FOR CLMRG MEMBERS (located in the Manual) to indicate those you have done. List these climbs below (10 for Technical; 5 for Rescue). Other climbs may also be listed but note that climbs in the Sierra and particularly those in popular areas are useful for learning the area and gaining experience on applicable terrain. Climbs listed should not be trivial, but should be comparable or more difficult (in terms of commitment, length, and technical difficulty) to those listed in the recommended climbs list:

Route Finding Trip 1	
Route Finding Trip 2	
Route Finding Trip 3	
Route Finding Trip 4	
Route Finding Trip 5	
Route Finding Trip 6	
Route Finding Trip 7	
Route Finding Trip 8	
Route Finding Trip 9	
Route Finding Trip 10	

V. EQUIPMENT**PERSONAL GEAR**

Check your personal gear against the EQUIPMENT LIST FOR OPERATIONS. List the items you need:

Missing Item 1	
Missing Item 2	
Missing Item 3	
Missing Item 4	
Missing Item 5	
Missing Item 6	
Missing Item 7	
Missing Item 8	
Missing Item 9	
Missing Item 10	

Do you have a four-wheel-drive vehicle? Yes_____ No_____

GROUP GEAR

You should know how to assemble, use, and repack all the Group gear (i.e., be comfortable in the use of all the equipment listed below).

MSR stove_____

Check the group radios that you can operate (including setup / changing batteries if applicable). Also list which radios you are able to program.

Radio Model	Type	Operate	Program
Kenwood TK-2212L	Handheld		
ICOM H-16	Handheld		
Baofeng UV 82c	Handheld		
Wouxon KG-UV920P	Base Camp		
UHF/VHF Radios in Explorer	Vehicle		
UHF/VHF Radios in Suburban	Vehicle		

*Stretcher		*Stretcher wheel	
Beam antenna		Omni antenna	
*Attend radio hut night		Operate and change batteries in L-PER	
Set up PT-400 for helicopter use		DF for ELT	

Mark which group tents you have assembled:

Group Tent	Assembled
Bibler Eldorado	
Bibler Bombshelter	
Himalayan Hotel	

Operate and program GPS units _____

VI. HELICOPTER TECHNIQUES

*Read CLMRG manual chapter		*Helicopter practice	
*Rig stretcher for helicopter lift		Horse collar practice	

VII. FIRST AID

Current CPR and Community First Aid training is required of all field members.

Date of First Aid training	
Type of First Aid training	
Date of CPR training	
Type of CPR training	

Familiarity with:

Blood pressure kit		Traction splints	
Zee extrication device		Oxygen equipment	
Ambu bag		Group First Aid kits: (unpack, inspect, and repack)	

VIII. PARTICIPATION

The emphasis here is on activities with Group. The operations should be field operations with significant participation. The climbs must be committing and can be the same ones you make for the Technical, Route Finding, or Winter categories (10 each for Technical; 5 each for Rescue):

Mountain Climbs:	
Mountain climb 1	
Mountain climb 2	
Mountain climb 3	
Mountain climb 4	
Mountain climb 5	
Mountain climb 6	
Mountain climb 7	
Mountain climb 8	
Mountain climb 9	
Mountain climb 10	
Operations:	
Operation 1	
Operation 2	
Operation 3	
Operation 4	
Operation 5	
Operation 6	
Operation 7	
Operation 8	
Operation 9	
Operation 10	

IX. ORGANIZATION AND LEADERSHIP

Knowing everyone’s capabilities, strengths, and weaknesses is important. With a current call roster in hand, ask yourself which members you know well, slightly, or not at all.

*Take Group seminar on organization and procedures	
*Read CLMRG manual chapter on Operation Leadership	
Read CRMRA joint operations procedures	

Read other literature (see recommended list):

Book 1	
Book 2	
Book 3	
Book 4	
Book 5	
Book 6	

X. WINTER (Optional)

List three overnight mountain climbs under winter conditions (significant, committing climbs).

Winter climb 1	
Winter climb 2	
Winter climb 3	

Have winter gear (see equipment list)		Build and use igloo or snow cave	
Own an avalanche transceiver		Use ice axe and crampons	
Participate in snow stretcher practice		Use snow and ice anchors	
Participate in avalanche seminar		Set up Group tents in the field	
Participate in winter bivouac trip		Use snowshoes	
Camp on snow; melt snow for water			

3.8 Recommended Climbs for CLMRG Members

The areas and climbs listed here are where we can expect to have search and rescue operations. Members should become familiar with the road heads, trails, and routes in both summer and winter. The technical difficulties span the range from walking roads to climbing with aid, so everyone should be able to find something for his or her taste in climbing.

When climbing, observe the route and region in terms of possible searches or rescues. For example, try to imagine where people might get into trouble and then think how the victim might be rescued from the various spots. Consider that the rescue might occur under clear or stormy conditions and during the day or night.

Table 4. Recommended Climbing Areas

Climbing Areas:
Walker Pass to Sawtooth Peak
Langley to Williamson
Panamints
Kern Plateau
Kern River Canyon
Palisades
Onion Valley Peaks

Table 5. Recommended Class 1 Climbs

Class 1 Climbs:
Whitney Trail
Kearsarge Pass Trail
Telescope Peak Trail
Kern River Trails
Sierra passes north to Mammoth

Table 6. Recommended Class 2 Climbs

Class 2 Climbs:
Argus Peak
Maturango Peak
Owens Peak – Main Trail and Shortcut Descent
Olancha Peak
Sawtooth
Langley
Thor
Corcoran
Williamson
Kaweah Peak
Kern River (trailless sections)

Table 7. Recommended Class 3 Climbs

Class 3 Climbs:
Owens Ridge routes
Mt. Russell
Whitney -Mountaineers Route
Middle Palisade
Temple Crag
Spanish Needle Peaks
Candlelight
East Ridge University Peak (Traverse)
Mt. Carl Heller

Table 8. Recommended Class 4 Climbs

Class 4 Climbs
Five Fingers
Owens Ridge routes
Le Conte
North Palisade
Mt. Sill
Thor Face
Norman Clyde
Muir East Face
Humphreys
Great Falls Basin (rappel the falls)
Clyde Minaret
Thunderbolt peak

Table 9. Recommended Class 5 Easy Climbs

Class 5 Easy:
Owens Ridge routes
Whitney East Face (III)
Whitney East Buttress (III)
Lone Pine Peak NE Ridge (IV)
Mount Emerson - southeast face
Mount Humphreys - east arete
Bear creek spire - northeast ridge

Table 10. Recommended Class 5.7 and Above

Class 5.7 and above:
Thor Pink Perch (III)
Owens Ridge routes
Mt Sill Swiss Arete (III)
Temple Crag Moon Goddess Arete (III)
SE Face of Clyde Minaret (IV)
Temple Crag - Venusian Blind
Temple crag - sun ribbon arete
Mount Russell - Fishhook Arete, Mithral Dihedral
Charlotte Dome - South Face
Cardinal Pinnacle
Bear Creek Spire - North Arete
Clyde Minaret - Southeast Face
Third Pillar of Dana
The Incredible Hulk
Palisades Traverse

Table 11. Recommended Grade V/VI Climbs

Grade V/VI Climbs:
Keeler Needle
Whitney Direct
Evolution Traverse

Table 12. Recommended Snow Climbs

Snow Climbs:
U-Notch
V-Notch
Laurel Snow Chute
Darwin Glacier
Mendel Ice Chute

3.9 Equipment List for Operations

In general, carry any gear you might possibly want to the Hut on first mobilizing. The Coordinator usually cannot specify expected conditions completely. You can leave unneeded extra gear behind, but have your gear packed and be ready to change rapidly. Sometimes, we must have a team airborne within 30 minutes of the initial call. There must be no loose gear in the aircraft.

Note: Items in 3.9.3 and 3.9.4 are required for winter qualification.

Table 13. Basic Equipment List

Basic (Take these on a typical mountain operation)
day pack (preferably bright colored)
first aid kit (see Section 3.4)
poncho or rain gear
bivouac sack
matches (waterproofed)
headlamp and batteries
whistle
mirror
pocket knife
compass (accurate for use with topographic maps)
topographic maps of area (available at hut)
nylon cord (at least 25 feet)
cup and spoon
water bottle (filled with water and extra for operations in dry areas)
food (extra for emergency bivouac)
pocket notebook and pencil
toilet paper
sunglasses or goggles or both
watch (people with radios especially need watches)
Helmet
Shell Jacket
shirt, orange with patches and name tag
boots (Vibram soles or equivalent)
gloves or mittens
balaclava sweater (wool or pile)
personal stuff (Chapstick, camera, etc.)

Table 14. Equipment List for Easy Terrain

For Searches in Easy Terrain
trail marking paper (available at hut)
long slings (2) (10-12 feet for carrying stretcher)
carabiners (2)
field glasses (optional)
altimeter (optional)
For Searches in Easy Terrain
trail marking paper (available at hut)
long slings (2) (10-12 feet for carrying stretcher)
carabiners (2)
field glasses (optional)
altimeter (optional)

Table 15. Equipment List for Searches in Rough Terrain

Additional for Searches in Rough Terrain
ropes (available in Hut)
runners (2) (6 feet of 1-inch webbing)
carabiners(4)
Prusik slings (2) (3 feet of 5 mm Perlon)
harness (optional)

Table 16. Cold Weather Equipment List

Cold Weather Gear
boots, high quality alpine (plastic double boots recommended)
socks, wool (2 pair)
expedition weight polypro long underwear
pants (wool or pile)
overpants
down parka or extra wool or pile sweater
mittens, cold weather
sleeping bag (one per team)

Table 17. Additional Gear Needed for Operations in Deep Snow

Additional Gear for Deep Snow
snowshoes
ski pole (1 or 2) or ice ax with basket
gaiters, long
shovel (for snow caves, avalanches, etc.)
Pieps or compatible equivalent

Table 18. Additional Gear Needed for Operations with Steep Snow and Ice

Steep Snow and Ice (Many High Sierra Operations)
ice axe
crampons
ice screws (2) (available at Hut)
carabiners (6)
ropes (available at hut)

Table 19. Equipment List for Technical Operations

Technical Rescue
ropes (available at hut)
bolt kit (available at hut) (Optional)
harness
rock shoes
chocks, cams, etc. (12) (available at hut)
carabiners (16) (at least 12 free of gear)
aid slings (optional)
runners (8) (6 feet of 1-inch webbing or 24-inch sewn runners)
runners, long (2) (10-12 feet of 1-inch webbing or 48-inch sewn runners)
Prusik slings (2) (3 feet of 5 mm Perlon)
belay device
pulley (with bearings)
ascenders

Table 20. Additional Gear Needed for Overnight Operations

Overnight Gear
backpack tent, or bivouac sack
ground cloth
food (Should generally be sufficient for 3 days unless otherwise specified by the OL)
sleeping bag
pad
stove, fuel, and pots (1 set per team)

3.10 Mountain Rescuer's Bookshelf

The following books and magazines are suggested reading for members of Group. Books marked with an asterisk are recommended by the Training Committee for individual purchase.

Mountaineering

1. Mountaineering: The Freedom of the Hills, current edition, The Mountaineers
2. Accidents in North American Mountaineering, AAC, annual
3. Avalanche Handbook, Ag Handbook 489, US Dept of Agriculture, Forest Service, 1978 (A best buy)
4. Climbing Ice, Chouinard, Sierra Club
5. Snowshoeing, Prater, The Mountaineers
6. Wilderness Skiing, Tejada-Flores & Steck, 1972
7. How to Rock Climb, 2nd edition, Long, 1993
8. Rock climbing anchors, Luebben, 2007
9. Climbing self rescue, Tyson and Loomis, 2006

Search and Rescue

1. Mantracking: Introduction to Step-by-Step Method, Robbins, 1977
2. Wilderness Search & Rescue, Setnicka. Appalachian Mountain Club, 1980
3. Mountain Search and Rescue Techniques, May, Rocky Mt. Rescue Group, 1973
4. Tracking: A Blueprint for Learning How, Kearney, Pathways Press, 1978
5. On Rope, Padgett & Smith, 1987
6. High Angle Rescue Techniques, Vines & Hudson, 1989s

First Aid

1. Emergency Response, ARC, current edition
2. American Red Cross Community CPR, current edition
3. American Red Cross CPR for the Professional Rescuer, current edition
4. Emergency Care & Transportation of Sick and Injured, current edition, American Academy of Orthopedic Surgeons

5. Medicine for Mountaineering, current edition, Wilkerson, 1992

Leadership

1. Mountain Rescue Leadership, Williams, MRA, 1977

Guidebooks

1. Desert Peaks Section, Road & Peak Guide Bernard & the DPS, 1988
2. Joshua Tree Climbs, Vogel, 2015
3. Red Rocks Climbing, Barnes, 2004
4. Rock Climbing Tahquitz & Suicide Rocks, Vogel & Gaines, 3rd Edition, 2001
5. The High Sierra, Secor, 3rd Edition, 2009
6. Sierra Club Totebook Guides, (one for each topographic quadrangle)
7. Starr's Guide to John Muir Trail & High Sierra, current edition
8. Yosemite Big Walls, McNamara, Van Leuven, 3rd Edition, 2011
9. Yosemite Valley Free Climbs, Barnes, McNamara, Roper, Snyder, 3rd Edition, 2003
10. Tuolumne Free Climbs, Barnes, McNamara, Roper, 2nd Edition, 2009
11. The Domelands, Moser & Vernon, 1992
12. Sequoia Kings Canyon, Moser, Vernon & Hickey, 1993
13. The Needles Climbing, Solem, 2016
14. Southern California Rock Climbing, Slater, 2013
15. Southern California Bouldering Guide, Fry, 2nd Edition, 1995
16. Climbing California's Fourteeners, Porcella and Burns, 2008
17. Climbing California's High Sierra, Moynier and Fiddler, 2nd Edition, 2002
18. The Good, the Great, and the Awesome, Croft, 2nd Edition, 2016
19. High Sierra Climbing, McNamara and Long, 2nd Edition, 2013
20. Bishop Area Rock Climbs, Croft and Lewis, 3rd Edition, 2008
21. Mammoth Area Rock Climbs, Lewis, Moynier, 4th Edition, 2014
22. Owen's River Gorge Climbs, Lewis, 10th Edition, 2005

General

1. A Guide to Mountaineering Ropes, Edeirid
2. Be Expert With Map & Compass, Kjelstrom & Bjorn, 1976
3. Fifty Classic Climbs of North America, Roper & Allen, 1979 (Sierra Club reprint)
4. History of Sierra Nevada, Farquhar, UC Press, 1972
5. Land Navigation Handbook, Kals, Sierra Club, 1983
6. Exploring the Southern Sierra: East Side, Jenkins, 1995
7. How to Rock Climb, (series by Long et al)

Magazines

1. Climbing
2. Rock and Ice

3.11 Scheduled Training Activities

A list of types of Group training activities that are scheduled regularly is given in Table 21. They are organized according to the qualifications specialties used. Checklists for many activities are available.

Table 21. Training Activities

Activity	Frequency
Technical Skills	
rock skills (aid climbing, jumaring)	every year
stretcher class (4 nights)	every year
stretcher hut night	before each practice
rock stretcher practice	3 each year
ice axe and snow stretcher practice	every year
Owens Ridge climbing	every year
ice climbing seminar	as needed
dynamic belay practice	as needed
Search and Tracking	
tracking practice (noon)	10 per year
tracking seminar (weekend)	every other year
tracking slides lecture/practice	
sign cutting practice	
search techniques lecture	
search practice	
ELT practice (night)	every year
Maps and Routes	
map and compass lecture	every year
map/compass/mirror practice on peaks	as needed
Group Equipment	
equipment/tent hut night	every year
radio hut night	every year
Helicopter	
helitac lecture	every year
helitac practice	as needed
Organization and Leadership	
Group policies/procedures lecture	every year
leader training lecture	as needed
search case studies	as needed
Winter	
winter bivouac	as needed
Pieps practice (night)	as needed
avalanche class lecture	as needed
avalanche probe practice	as needed