



King County Explorer Search and Rescue

FIELD OPERATIONS MANUAL

Sixth Edition

Saved: \$Date: 2008-03-19 16:53:36 -0700 (Wed, 19 Mar 2008) \$

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Important Notice

The activities described in this manual could be dangerous or hazardous and any person, especially if inexperienced or untrained, undertaking it, should approach it with caution and under appropriate supervision. Each situation has its own unique conditions and must be evaluated by those at the scene. Effective risk management comes from experience, proper training, organizational commitment to safety and good personal judgment. It is your responsibility to obtain competent instruction, including basic ESAR team member training, choose quality equipment, maintain a current manual copy and use adequate safety precautions. The Field Personnel Operations Manual is intended as an aid for training and guideline for search and rescue mission activities, not a substitute for them.

Neither the Author and/or ESAR staff take any personal responsibility for the reader's use of this manual nor any information contained herein.

Chapter 1

Introduction and History

If you have just received a copy of this manual, there is a good chance you have recently successfully completed basic training. You have shown dedication and a high level of skill by passing this difficult course. As you may recall, training was especially formulated to be as demanding as any search mission could be. Be assured that you now have the basic skills to face the challenges ahead of you. You may find search and rescue operations interesting, challenging, rewarding and potentially dangerous.

During the years that follow, we invite you to continue to refresh and increase your skill level since there is always more to learn. Search operations usually do not come at convenient times and you may have to forgo prior commitments to respond to a mission. The sacrifice you make is repaid by the knowledge that you came to the aid of others. Some day it may be you who saves the life of a lost or injured child, hiker or airplane pilot. Remember *Explorer Search and Rescue's (ESAR)* motto:

DEDICATED TO THE SAVING OF LIVES

Both past and current ESAR members invite you to maintain your high level of enthusiasm shown during training and actively participate on missions. Volunteers are special people. As an organization, ESAR tries to provide an environment of trust and respect among its volunteers.

The people who work in Operations and Training are always looking for new ideas and approaches. Feel free to offer them your constructive criticism and feedback. Search and rescue is an evolving science and yesterday's ideas often are today's practices.

HISTORY

Organized search and rescue as we know it today had its beginnings in Europe. In the United States, *Seattle Mountain Rescue Council (SMR)* and its founders were leaders and organizers. In 1954 Explorer leaders, including Don Wilson, saw a need to keep older youth involved in Scouting, community service and outdoor safety. SMR members Bill Pitts, Max Eckenburg and Ome Diaber with Scouting backgrounds helped lay program groundwork with the Chief Seattle Council and others. Many within the King County Sheriff's office, including Major Harold Gauntlett, Lieutenant Bill Stockham and Sergeant Bill Stanley, were also early supporters.

Initially, Scouting did not allow women in ESAR. However, they started a commissary unit in 1969 to support missions. Full/equal field status and membership came in 1972.

ESAR's first request for service came in June 1956 from the Seattle Police. The first wilderness search occurred in 1957 for a lost Boy Scout in Mount Rainier National

Park and had a happy conclusion. Until the late 1960's, ESAR had approximately 10 missions per year. Since then, 30 to 40 missions have been the norm with a high of 46 in 1974. During 1994 ESAR and other rescue units dealt with four separate incidents on the Snow Lake trail in one day. The 1974 Osland-Ott evidence search totaling 13 days and 4,887 hours is the largest to date. The following is a summary of mission activity for the last five years:

	Number of Missions	Volunteers	Volunteer Hours
2007	63	122	4300
2006	73	120	5723
2005	56	110	3877
2004	51	115	4100
2003	40+	106	2577+

ESAR's successful performance and good reputation are, in part, a reflection of the organization's commitment to training. From the beginning, basic outdoor training has occurred in the Camp Brinkley area. Originally, activities were coordinated out of the T-H Ranch (the old red barn). Now, the base is the Brown House (white until 1965). The Course II problem has always been the most challenging component, but its content has remained similar over the years although emphasis on compass runs was reduced to five. Early Course III's included a hike to Echo Lake with a compass run for accuracy at the end. Today's Course III simulates a real SAR mission and is now held in our primary response area along the I-90 corridor. The SAR Academy (a.k.a. Course IV) was added in 1995 to include helicopter, crime scene, infectious diseases and first aid training in the basic curriculum.

There was a time when ESAR members had to communicate with field teams over borrowed police walkie-talkies and citizens' band radios. In 1973 we were licensed on low-band radio frequencies (47 MHz) and have used this ever since. Over the years, the weight of the radios has been significantly reduced with technological advances. While "high-tech" has crept into some of our equipment (e.g., Gore-TEX, polypropylene, internal frame packs), trainees have always found surplus wool clothing to be the most versatile and functional.

Today ESAR is involved in many missions. These include lost person searches, delivery of first aid, evacuation of injured hikers/climbers, special event support, evidence searches, avalanche rescue, flood control sandbagging, wilderness navigation classes, public education and downed aircraft missions. For current information on ESAR and its activities, you can connect to the organization's web site at www.kcesar.org.

ORGANIZED SAR IN KING COUNTY

Besides ESAR capabilities, there are various volunteer groups and governmental agencies that provide assistance, technical consultation and field support to the KCSO. The King County Sheriff's Office is responsible for search and rescue (SAR) in the unincorporated areas of King County under the Revised Code of Washington (RCW) § 38.52. In practice, KCSO may or may not exercise their authority depending on the nature of an incident and how it is progressing. No matter who is incident

commander, other organizations still follow their established on scene chain of command.

Search and rescue in King County has been delegated to the KCSO Special Operations section. Special Operations provides services in areas beyond those available from a normal police response. Some of these services include, but are not limited to, marine divers, air support (Guardian One and Two), K-9, critical response and SWAT.

The King County Search and Rescue Association (KCSARA) was formed in 1965. The purpose of the Association is to promote organizational unity among member units, exchange SAR knowledge and techniques, deploy qualified personnel as required by incident needs, educate the public in wilderness safety and recreation, train and coordinate aircraft/watercraft volunteer emergency locator transmitter (ELT) personnel within the County during missions, promote training and proficiency in SAR techniques and operations and provide resources to man made and natural disaster responses. Individual volunteer members of KCSARA donate their time, money, equipment and skills. KCSARA units operate under the direction of KCSO during missions and each unit maintains a unique specialization within King County.

Chapter 2

Before the Pager Goes Off

RADIO FREQUENCIES

Sometimes people like to listen to radio communications during a mission or need to coordinate activities with outside agencies and groups. Outside the 800 MHz radio system, the more common frequencies used in King County, Washington are as follows:

Table 1:
SAR Radio
Frequencies

Commercial Frequencies Used (VHF "High Band")			
	Receive	Transmit	Tx Tone
KCSO F2 repeater	154.965	153.995	123.0
KCSO F2 simplex	154.965	154.965	123.0
KCSO F3	153.755	153.755	123.0
4x4	155.175	155.175	123.0
ESAR	155.325	155.325	123.0
ESAR Denny Mtn "repeater"	155.325	155.325	131.8
KCEOC	155.235	155.235	131.8
KCSD	155.235	155.235	131.8
Rescue 1	155.880	155.880	100.0
SMR	155.205	155.205	100.0
SMR Denny Mtn repeater	155.205	155.205	100.0
SPART	155.295	155.295	
SPART Denny Mtn repeater	155.295	155.295	103.5
Trackers	155.280	155.280	123.0
State SAR	155.160	155.160	
Snohomish SAR	155.415	155.415	127.3
Amateur Frequencies Used (VHF)			
KC7SAR repeater I-90	145.110	144.510	127.3
KC7SAR repeater HWY 2	145.110	144.510	123.0
145.11 Denny Mtn "repeater"	145.110	144.510	131.8
146.44 Simplex	146.440	146.440	123.0

Transmissions on the above frequencies are covered by rules and regulations administered by the Federal Communications Commission (FCC) and only FCC type accepted radios may be used. Organizations are licensed to use certain frequencies

and their employees/members receive specific authorization to use them. To transmit on an amateur ("HAM") radio frequency you must hold a valid HAM license. Failure to follow FCC rules and regulations has severe penalties.

RENDEZVOUS LOCATIONS

In addition to METRO park & ride lots, to make it easier to coordinate transportation to search and training mission locations, many designated rendezvous locations have been established. Taking the time to locate these locations before the pager goes off will allow you to make more timely response to a search or rescue.

Ken's Truck Town (Seattle East)

Take Exit 34 off Interstate 90, turn left and follow the road under the freeway. Parking will be normally be along S.E. 146th Street, east of Ken's™s.

Preston Park & Ride

Take Exit 22 off Interstate 90, turn left and follow the road over the freeway. Parking will be in the lot on the north side of the freeway after the stop sign.

Lynnwood WalMart

Take Exit 183 off Northbound Interstate 5 and turn right onto 164th S.W.

North Bend King County Sheriff Station

Take Exit 31 off Interstate 90, turn left and follow the main road through the traffic light, one block past the light, turn right onto Second Avenue. Park in the bank lot next to the fire station.

Skykomish Ranger Station

Go East on Highway 522 to Monroe and, then, East on Highway 2. The ranger station is approximately one mile past the town of Skykomish on the left-hand, North, side of the road.

Snoqualmie Pass Sheriff Substation ("the Cache")

Take the first summit exit off Interstate 90, milepost 52. At the stop sign, turn right, go 100 yards and then left into the fire station parking lot on the east side of the building. Do not block the apparatus bay doors.

Woodinville Union 76 Station

Take the Woodinville Exit off Highway 522, turn right at the South side of the station and meet in the McLendon's Hardware parking lot (weekdays) or the business park to the South (weekends).

MAP RESOURCES

One of the ten essentials is a map of the area into which you intend to go. To prepare for missions and have a good general map library of the common ESAR response areas, the following maps are recommended:

Table 2:
Recommended
Map List

Map Description (Area)	Map Source	UMS Number
Index	Green Trails	142
Mt. Si	Green Trails	174
Skykomish	Green Trails	175
Stevens Pass	Green Trails	176
Bandera	Green Trails	206
Snoqualmie Pass	Green Trails	207
Enumclaw	Green Trails	237
Greenwater	Green Trails	238
Mt. Baker/Snoqualmie National Forest	US Forest Service	
Thomas Bros. Maps®, Puget Sound		

All of the maps shown above can be obtained at local sporting goods stores, such as REI, or at Metsker Maps in Seattle. In addition, you may want to consider purchasing The Washington Atlas and Gazetteer that is a topographic map of the entire State of Washington. Pacific Northwest Road Atlas and Driver's Guide by Thomas Bros. Maps® is a complete highway map with metropolitan street maps for Oregon, Washington, Southwestern British Columbia and Western Idaho.

INFORMATION FOR PARENTS AND SPOUSES

Your son, daughter, spouse or significant other has decided to join Explorer Search and Rescue. This organization is sponsored by the Boy Scouts of America and, as a search and rescue organization, falls under the rules and regulations of the King County Sheriff and Washington State Department of Emergency Management. ESAR has been serving the people of King County and the State of Washington since 1956. For the ESAR system to work, our members need your support and understanding in their endeavors.

They will receive pages or calls at all hours of the day or night, even three o'clock in the morning. When a call out person telephones or the pagers go off, there is a real emergency somewhere. Those people calling are volunteers like everyone else and need understanding and respect. Youth members of ESAR must maintain grades of 2.0, stay current with school work and may leave school to help on search and rescue missions of less than 48 hours duration.

Your son, daughter or spouse has received some of the best individual and team training for search operations in the nation. However, unless people can get to search base or a rendezvous, the training will be of little use to those in need. Consequently, you may be called upon to provide transportation to an in town meeting spot or

mission site. If transportation is a problem or is needed on a particular day, please notify the call out person and/or prearrange car pools with other ESAR members in your area.

Missions are often turned around and you may wonder if it is worth the trouble sometimes. While our paging system is tested during the day, call outs are only made when someone needs help and, frequently, time is of the essence. We realize that these events can be inconvenient and upset other plans. As a volunteer organization, people are not required to go on missions and may move their names on and off the active call out list depending on availability.

If you need information on a search or wish to check on its progress, call the ESAR's voice mail ("the Information Line"), (206) 521-3200. In addition, if you need to get an important message to someone in the field, the voice mail will give you a person to contact.

Chapter 3

Responding to a Mission

A requesting party or agency can contact the King County Sheriff (KCS) through their dispatch center. For an individual, this may have been done by dialing "911" to report an overdue or injured hiker.

The KCS Communications Center supervisor (Sergeant) contacts a Duty Search and Rescue Officer (SAR officer) if the situation warrants a response with resources available to him. The SAR officer decides which organizations to call. ESAR is one of many resources available. Others include, but are not limited to, American Red Cross, Search and Rescue Operations (SAR OPS), 4x4 Rescue Council, King County Search Dogs, Northwest Horseback Search and Rescue, Pacific Northwest Trackers Association, Rescue One, Seattle Mountain Rescue, Ski Patrol Alpine Rescue Team (SPART), the "Soup Ladies", and the Washington National Guard. For most search and rescue missions, multiple organizations are requested.

The SAR officer is responsible for all aspects of the mission, including planning, mapping, coordination of the above-mentioned volunteer groups, logistics, communications, transportation, public information (media relations) and debriefing/critique. He or she is supported in this function by other police officers and the leadership from volunteer organizations.

The ESAR alphanumeric pager system is the primary mode for notifying members of a mission. This can be supplemented by a backup telephone tree if the alphanumeric system fails. Once a base of operations is established, the ESAR chain of command has Team Leaders, with teams, reporting to the Operations Leader (OL) and/or Field Leader(s). The communications, van driver and information unit people support the OL.

CALLOUT PROCEDURES

To start a mission, the King County Communications Center or SAR officer typically activates the paging system with a message similar to "ESAR, 4x4, and SMR OLs, contact Deputy Smith for injured hiker at Snow Lake: 425-555-1212." You may also see only a numeric message containing "830", followed by a phone number. This is known as the "830" page, and it is the Operation Leader's (OL) responsibility to call and obtain the information related to the event. Team members SHOULD NOT call any of the numbers on this page. OL pagers have a separate page code, but to alert all personnel of upcoming missions, we also set off the general 830 page. The on duty OL will place a message on the voice mail, (206) 521-3200, if appropriate. If OL's get flooded with calls from people or if personnel begin to head for mission points before official notification this system will be changed. Remember that sometimes we are paged days in advance for evidence or low priority missions.

The USAMobility alphanumeric pager system is the primary means for notifying people of missions. If for some reason you do not, or cannot, have a pager it is up to you to arrange an alternate means of notification. ESAR does maintain an email distribution list that will forward pages to email and cell phones, but is subject to outages the paging system is not. During the hours of 3:30pm to 8:30pm on weekdays and from 10:00am to 8:30pm on weekends, the paging system can be used for group informational pages by those authorized to do so.

What do you do when the pagers go off?

Take a deep breath and relax. Figure out if you are available for a mission. If you are about to do something that would make you unavailable (going to a Sonics game, etc.) you might want to stall a bit. It's your choice. There may or may not be a mission. Remember about 25% of initial call outs end in turn-a-rounds. Do not call the Operations Leader to find out what is going on. Wait until the second page goes off, which could take 10 to 20 minutes. Once a message has been placed on the ESAR voice mail, the digital pagers will be set off with an 832-series code, a message and phone number to call (e.g., 832-521-3200). The line may be busy immediately after the page; so, if this happens, just wait a few minutes and try again.

What do the other pager displays mean?

The other pages that alphanumeric pagers receive will generally be for general membership (see the list below for details). ESAR leadership and activity organizers can page in the evenings/weekend and use the voice mail to report upcoming events and leave information. If it's not for you, do not worry about the page. However, most activity leaders welcome all ESAR members at their activities; so, feel free to check out what they are doing.

What should be done with "000" pager codes?

If you are on the way to a mission and you receive a 000 page you can turn around and head for home. At the first convenient place, stop and call either the voice mail or the communications operator and let them know you've turned around. The Operations Leader will be waiting at the rendezvous location or base camp for you until everyone is accounted for.

What do test pages look like?

Alphanumeric pagers are prone to activation by wrong numbers, also. The on duty Operations Leader will call in and investigate any uncoded messages. If the activation is a test related or a wrong number, a 333-code page will then be set off.

Where do you get a pager or who handles service problems?

For those who would like a pager (new or replacement), contact the Communications Director. Also contact the CD with problems regarding unintelligible messages, missed pages and unexplained activations.

DRIVING TO A MISSION

Between the time that you receive the initial OL page, and the time that the "832" page is sent out, you should do any final preparations needed to get you and your pack ready. If you are planning to carpool to search base, you should use this time to make sure your prearranged ride is available and also going to the mission. Please be sure to bring all of the equipment in your 48-hour pack to every mission. Missions are often times extended into multiple days, or we may respond to a second mission directly from the first. Most members carry another backpack or storage bin so that they can break the 48-hour pack down into a 24-hour pack once they reach base camp.

Having the 832 page coming out, asking for members to respond to the search, is your sign that ESAR has accepted the activation request and is responding as a unit. At this time, you should follow the directions on the pager to call the mission line (206-521-3200), and state that you are leaving for the mission. The reason for doing this is twofold: 1) to notify the in-town communications and operations leader that you're on your way, and 2) to put yourself underneath the Washington State Department of Emergency Management insurance policy.

It is important that you wait until you receive the 832 page before leaving your house to respond to the search. Members that "jump the gun", and start responding to the search as soon as the initial 830 page is received do so without the coverage provided by the state insurance, and will not be covered in the case of an accident. At no time should members enter base camp before ESAR has officially been activated with the 832 page.

As you are driving your car to the mission, please remember that all traffic laws still apply. Responding to a search and rescue mission does not give you the authority to a) speed, b) drive in the HOV lanes (as a single occupancy driver), or c) display warning lights (strobes, wig-wags, etc). Please be aware that you will be driving with a heightened level of adrenaline, and you will need to make a conscientious effort to relax and drive in a relaxed manner. On the way home, you will often times be physically and mentally fatigued, and you will need to stop before you become too tired. If you are tired when the mission is over, the OL will arrange for sleeping arrangements at base camp, where you can get a few hours of sleep before driving home. Driving to and from a mission is by far the leading cause of injury in search and rescue. Please take care of yourself and your passengers.

In the case of an accident, you should follow the same procedures you would follow at any other time, making sure that you maintain complete documentation of the incident, including police reports and the information of all parties involved. As soon as is possible, contact the in-town communications person or the voicemail to explain the situation, that you should no longer be expected at base camp, and whether or not you need any help. After the mission has been completed (within the next 2-3 days), you should contact the OL for the mission to start the claim process with the county and state.

Some of the base camp locations are remote and difficult to navigate to. Having a good map in your car will help you successfully find these more remote locations. It is a good idea to take the time while at home to find base camp on the map and make sure you know the route. If you do become lost while responding to a search, contact the in-town communications for help.

SELECTING A COURSE OF ACTION

During basic training, many search techniques and approaches were practiced and discussed. In the wilderness/SAR setting there are many opportunities to make "go" or "no go" decisions and change strategy(ies). Once a course of action is selected, other questions or opportunities present themselves. These include how many people, in what area and with what resources? This is analogous to medical triage where you try to do the most good with the limited resources available. To make an informed decision, answers to six basic questions need to be secured. They are:

- What is the subject(s) location and how can it be reached?
- Is the person(s) injured and, if so, what was the mechanism and extent?
- Is the subject(s) entrapped, suspended, hanging and/or lost?
- Can the person(s) be reached by any other method (e.g., boat, arranging for unlocking a road gate)?
- What biographical information is available on the person(s) (e.g., age, experience, plans, health)?
- Is the subject(s) deceased?

With answers to these, decisions to dispatch and/or commit teams to the field becomes easier. First responding teams can only do what they are trained and equipped to do. Technical, cave and swiftwater rescues are usually left to special teams or crews. Field teams are important "eyes and ears" for SAR leadership and the two must maintain good lines of communication to insure informed decisions can be made. Initially and during a mission more detailed assessments are made. This would include:

- Evaluate environmental conditions en route to and at the incident site:
 1. Trail or nontrail
 2. Technical (> 40 degree slope) or nontechnical (< 40 degree slope)
 3. Time of day (i.e., day or night)
 4. Distance to subject(s)
 5. Weather (e.g., rain, cold, wind, fog, warm, low ceiling)
- Evaluate patient condition through initial and focused examination.
 1. Medical (i.e., *BLS* or *ALS*)
 2. Rescue/extrication requirements
 3. Transportation needs (e.g. self-evacuation, litter, ambulance, helicopter)
- Evaluate available SAR resources.
 1. Personnel and their specialized training
 2. On scene personnel physical/mental condition
 3. Equipment

The situation should be regularly re-evaluated to decide whether plans need to be modified. There is a tendency to wait before asking for additional resources (e.g., aid cars, medics, technical rescue teams, helicopters, evacuation personnel) in both major

trauma and wilderness/off road incidents. This is due in part to lack of accurate information. It is far easier to initially request too much help than find out later you should have. Typically, these questions are dealt with to varying degrees by the SAR Officer, OL, FL and, to a lesser extent, TLs, but team members are encouraged to also be thinking about them.

INCIDENT COMMAND SYSTEM

ESAR has integrated the use of the Incident Command System (ICS) into certain phases of search, rescue and training missions. At this time the focus is on situations involving subject(s) medical care, rescue and evacuation. ICS is a method for efficiently allocating resources, limiting the number of people supervised, providing for clear lines of communication, planning and insuring safe operations. This is achieved by dividing and/or reassigning duties and responsibilities among different people/teams as the need arises. For our purposes, the commonly assigned positions are: Operations Section Chief, Division (Field) Supervisor, Medical Unit Leader, Helispot Manager, and Communications Unit Leader. Based on the nature and complexity of a situation, there may be a need for a separate Safety Officer, Staging Area Manager and/or Technical Rescue Controller. A brief discussion of the foundations and principles of the ICS can be found in ICS Orientation, 1994, National Wildfire Coordinating Group, USDA Forest Service.

On missions that involve multiple units (e.g., ESAR, SMR, SPART, fire departments), the County SAR Officer, the IC, may assign a Division Supervisor for all field teams. Normally, his/her decision will be based on the technical nature of the evacuation, resources available and condition of the subject(s). If there is any confusion in the field about who is in charge, the Field Leader or Team Leader should ask the ESAR Operations Leader to have this clarified.

Team Leaders or members without specific assignments should wait in a staging area with extra equipment until they are needed. If there are a large number of members in the staging area, it could be handled by a Staging Area Manager. The ICS is intended to be flexible. If modifications result in better subject(s) care/evacuation, rescuer safety and/or other efficiencies, these changes will be considered. Team Leaders will account for their team members at all times and be able to report their status at any time. This is important since some team members may be asked to help in different areas. It should go without saying that "freelancing" by anyone involved in an operation is not allowed. Those in charge are responsible for closely monitoring and evaluating unit capabilities and resources, both within ESAR and outside, that are available at regular intervals since they can change over time.

COMMUNICATIONS

The OL is responsible for designating a mission radio frequency(ies). Communications should always be in clear text and short/to the point. Regular reports/updates on progress or significant changes in situation(s) are expected. All groups or teams going into the field should carry a radio, spare battery and consider taking a cellular telephone, if available. In certain types of terrain a radio relay point may have to be established to talk with the base of operations.

MEDICAL PROTOCOLS AND PROCEDURES

Care should be provided according to your training. Basic first aid skills, standing orders and/or medical protocols do not change when you step off road and into the wilderness. You have to plan ahead since an aid car may be miles away. Furthermore, the time spent with and caring for the patient will increase dramatically compared to an accident in an urban setting. Whenever treating a patient "universal precautions," methods of control and exposure reporting, as discussed during airborne and blood borne pathogens training, will be followed.

If they choose to provide first aid, the person(s) with the highest level of medical training on scene will care for the patient. The general progression of training and authority is standard first aid, EMT-A, EMT-I, EMT-P, Nurse and Physician. Any change in care givers will be, face-to-face, include transfer of relevant patient care information, be orderly and through the ICS.

While treating a patient, you may find the need to improvise. For example, rather than using a commercial cardboard splint, which loses its effectiveness when damp, on a broken ankle, construct a splint from a closed cell foam pad or SAM splint. Some people use a waterproof triage/trauma tag or a Rite-in-the-Rain book to record medical information in the field since they are more durable and hold up better in adverse weather conditions. The important thing to remember is that the medical goals remain the same, only some tools or materials may be a little different. A very good and easy to read book on this subject is *Mountaineering First Aid*, published by the Seattle Mountaineers. Another reference text is [Wilderness Medical Society Practice Guidelines for Wilderness Emergency Care](#) by William W. Forgey MD.

For any person examined and/or treated by ESAR personnel, the following information will be taken and recorded:

Patient Age *	Emergency Care Provided *
Level of Consciousness (LOC) *	Transportation Priority (Red, Yellow, Other)*
Chief complaint (onset, duration, etc.) *	ETA/ETD *
Sex (male or female) *	Mechanism of Injury *
Level of distress *	Signs and Symptoms
Pulse (rate, quality) *	Pupils (equal, reactive?)
Respirations (rate, quality) *	Pertinent Past Medical History
Blood Pressure *	Pertinent Medications and Allergies
Lung Sounds *	Patient's Physician
Skin (color, temperature, moistness) *	Patient's Name and Address

Complete details of an incident are normally not spoken over the radio or telephone, unless they are necessary for patient care. The items above marked with an asterisk ("*") are normally included in a radio short report. Vital signs (e.g., pulse, respirations, LOC, blood pressure, [skin] temperature, lung sounds) are not complete unless you have taken at least two sets. Obviously, if those providing care do not have the

equipment or training to obtain some vital signs, they would not be expected to take them. Regular monitoring of a patient's condition throughout is important since it can change dramatically over time. Long evacuations make patient comfort, the potential for pressure sores, and side effects of constricting bandages other issues to be considered.

Patients may decline to be evaluated and/or refuse treatment any time. Should this happen, document the circumstances, names of witness(es) and relay this information through the chain of command. The SAR Officer, designated medical professionals and/or other search leadership will have the responsibility of determining whether the patient has made an "informed" decision and/or has the legal right to do so. Treatment of minors and notification of parent(s) and/or legal guardian(s) will follow established KCSO and King County medical guidelines.

"Excessive heat, cold, exposure to high altitude, and overexertion ... may lead to many painful but usually avoidable illnesses. Prevention of these illnesses (e.g., hypothermia, frostbite, heat exhaustion, (shock), and stroke) are based in knowledge of the mechanisms leading to illness, adequate care in consumption of food and water, strong physical conditioning, and a continual awareness of changes taking place within and around ..." ¹ in both patient and rescuer. Hypothermia, or at least its early stages, is usually a factor in many wilderness rescue situations. Remember that shock normally accompanies any serious injury or illness, also.

HELICOPTERS

"The helicopter has revolutionized (rescue). It has evacuated injured from cliffs, (wooded areas) and glaciers directly to hospitals quickly and efficiently, when by ground it would have taken considerable time. The helicopter is not, however, the 'magic machine' some people think it to be. The weather may be such that a helicopter cannot respond. It may be clear where you are, but fogged in at the takeoff point. There may not be any helicopter available or you may be too far from its base or the closet fuel supply. Operations in the mountains also are very hazardous to both the pilot and machine, and the operating costs ... are very high. Never assume that a helicopter can come to your rescue."²

The request for a helicopter is normally made through the IC or police dispatch center. There are specialized classes on helicopter operations required for those ESAR members working in the field. For them and others who find themselves working with one infrequently or unexpectedly, remember the following general rules:

- The pilot is in charge of the helicopter and will land/hover where he/she thinks it is safe. Follow the directions from the pilot or crew chief regarding seating position, emergency exits, equipment stowage, entry and exit from the aircraft, emergency procedures and any special equipment.

1. Carline, Jan D. et. al., Mountaineering First Aid, Fourth Edition, 1996, The Mountaineers, Seattle, Washington, page 82

2. Mountaineering First Aid, Fourth Edition, pages 125 and 126.

- Ground personnel should stay clear of the tail, rotors and only approach the helicopter when directed to do so by the pilot or crew chief. Approach and depart from the front or sides and, when possible, downhill side, if the helicopter has landed on a slope. The Black Hawk rotor turns at 200 mph. Do not approach this aircraft from the front or back since it tends to rock forward and backward when on the ground.
- Signaling devices should be placed clear of the actual landing zone. Also, avoid shining lights on the helicopter since this can blind the pilot and/or some of his instruments.
- Secure loose equipment in the area of the landing zone. When working near or under the aircraft, protect you and your patient(s) from rotor wash.
- Those working near the helicopter should be wearing appropriate protective clothing (e.g., eye and hearing protection, helmet).
- During hoist or long line operations, do not touch the cable until it has grounded itself or you risk an electrical (static) shock.
- No smoking.
- Radio antennas should be folded or off when working around the aircraft.
- Have only one trained person designated to be the helicopter radio contact. These communications should be on a predesignated radio frequency and any other traffic should be limited, especially during take off and landing.
- The Helispot Manager should be in control of the scene and people there should take directions from him/her. This person should be made aware of any hazards (e.g., wires, trees, hazardous materials) in the area.

EVACUATIONS

If an injured person is 400 yards up an established trail, it may be easy to organize a few people to carry the patient out to a waiting ambulance. Longer evacuations are labor intensive. Two rules of thumb for evacuating an "average" patient without physically burning out the rescuers are: [1] six to eight rescuers for each mile to be traveled out, or, [2] sixteen to twenty-four people, whichever is greater. Also, remember that the way you came in may not be the best way out; so, consider this possibility.

"After establishing a priority list for meeting the first aid needs of the patient(s), (rescuers) must consider what will need to be done to keep the group safe and ensure that the injured can get to appropriate treatment. One of the most difficult questions that must be answered is how the injured person will get ... (out). Will the group self-evacuate or request outside assistance? Several conditions must be considered before making the (final) decision:

- What is the extent of the person's injuries?
- What is the terrain that must be crossed?

- What is the weather?
- How far (away is the road)?
- What is the group/party strength?
- How much outside help is available and how long will it take to arrive at the accident scene?"³
- What equipment/tools are available/needed?

CRIME SCENE OR ACCIDENT GUIDELINES

Occasionally, you may find yourself in a crime, fatality accident or suspicious scene. Consider the safety of you and your team first. The option to stage away or out of sight until the scene is "secure" is always there. Patient care remains the number one concern. However, like a suspected arson fire, evidence must be preserved, as best as possible, for later investigation by appropriate authorities (e.g., police, coroner, accident investigator). Take notes on what you see, hear and do since a detailed written report may be required later. Taking pictures can also be helpful. An obviously deceased person should not be moved without permission from the coroner or police. In these cases, secure the area and provide aid/comfort to any others present in need.

Other general rules for dealing with activities at these scenes include, but are not limited to, the items shown below. These are intended to be a supplement to more formal, required, crime scene recognition training.

- Avoid destroying evidence by securing access to the scene, limiting the number of people in the area and using a single, safe, route to and from the patient, accident site or crime scene. Securing the area includes noting who has gone in/out of the area and controlling access to the scene.
- For known crime scenes, consult with police for directions on what and how to do your assigned tasks. This may be done for you by the OL or your Team Leader.
- Do not disturb anything at an accident scene unless told to do so by a responsible agency (e.g., police, coroner, medical examiner, federal investigator) or it is necessary for patient(s)/rescuer safety.
- During an evidence search, do not touch or disturb suspicious items.
- When medical treatment has been given, avoid cutting through any holes in the patients clothing, note the person's condition before and after treatment and establish the appropriate method for waste and/or debris disposal with the police.
- Be conscious of any comments made to others regarding your activities while on scene and later. The SAR officer may have some specific directions for you on this subject.

3. Mountaineering First Aid, Third Edition, page 102.

INCIDENT STRESS

Stress is normal and the body's natural response to physical and/or emotional challenge. Critical incident stress is any situation where you experience unusual or extreme emotional reaction that interferes with your ability to function normally. There are many physical, emotional, relational, spiritual and intellectual signs and symptoms of stress (e.g., fatigue, difficulty sleeping, frustration, loss of concentration, appetite changes and doubt).

As volunteers, we can always choose not to participate in certain types of missions or job assignments. However, during our work, we may nonetheless come across or assist in a situation that affects us. The SAR Officer or Operations Leader will arrange for a formal "defusing" or debriefing session(s) to discuss what has happened for some missions. Feel free to talk with the Operations Leader, Medical Director or other professional if you or someone else is adversely affected by an event.

A balance of good nutrition, exercise and relaxation will strengthen one's ability to deal with life's stresses. In addition, stress reduction can come through good mental health habits, understanding stress and recognizing when normal coping techniques have failed.

"Both sudden death and anticipated death cause great emotional reactions in people. By virtue of their profession, (SAR volunteers may encounter death). It is difficult for families and others to cope with sudden death, particularly suicide. The person expecting to die may go through a number of phases: denial, anger, bargaining, depression, and acceptance . . ." Family and others' reactions can be similar. Family members and volunteers are not frequently exposed to death. Therefore, their initial response may be one of disbelief, dismay or hysteria. "As family members, (friends or party members) realize what has happened, emotions of depression or anger may be evident. Anger may be directed at the volunteer. Realistic coping comes later. Some individuals react quickly; others react slowly over weeks . . ."

"The (SAR volunteer) can play a comforting role in situations of grief by expressing empathy. Empathy involves responding on a feeling level, using active listening skills to paraphrase, acknowledge, and validate others' feelings. This giving of 'emotional permission' for venting of intense feelings is very important. In addition, try to be realistic in the use of language about death in patients, family or friends . . . Acknowledge those feelings of denial and fear in a straightforward manner."⁴

REIMBURSEMENT CLAIMS

RCW Â§ 38.52 and WAC Â§ 118 govern the eligibility and processing of claims for fuel, tolls, ferry expense, loss or damage to personal property and personal injury claims. Contact the OL (Training Director for training missions) if you have a claim to submit; so, the appropriate claim form(s) can be completed. Notification of a claim's existence should occur before leaving the base of operations. Fuel expense claims will be accepted for both out of County missions and those over 50 miles one way. Claim forms go to the KCS SAR Coordinator before filing with the State.

4. Copass, Michael K., et. al., EMT Manual (Second Edition), 1991, W. B. Saunders Company, Philadelphia, Pennsylvania.

"Department of Labor workers' compensation forms shall not be used, nor shall medical expense claims be submitted to the (department . . . However,) compensation for injury, disability, death and related claims shall be adjusted and paid in accordance with Washington Department of Labor and Industries workers' compensation schedules . . ."5 based on the procedures outlined in RCW Â§ 38.52. Claims are subject to denial if they are caused by willful misconduct, gross negligence, intoxication or bad faith of the claimant.

5. WAC Â§ 118-04-320

Chapter 4

Other Things You Should Know

MEMBERSHIP

Membership Roster

The membership roster is available for download from the member's section of the ESAR web site, and is typically distributed once a year, at graduation. It contains information on all active field and support personnel in the organization, including current addresses, phone number(s), and email addresses. The roster is a very useful resource and many people keep a copy by their home telephone, in their briefcase and in their car. It is every member's responsibility to keep their information in the roster current and up to date.

Active Member Status

To be considered "active" in the organization, you have to participate in at least one SAR or training mission per year and be registered with Learning for Life. Exceptions will be reviewed and approved on a case by case basis by the Operations Director after consultation with the Training Director.

To go into the field on a mission, personnel must be trained to their job's basic level of competency and be on "active" status. For field team members, training includes graduation from basic training and an orientation to King County ESAR's standard mission operating procedures. This also includes (a) current first aid/CPR certification, (b) participation in at least one mission during the previous twelve month period, (c) completion of basic/intermediate helicopter course, crime scene recognition class and (d) other training prescribed by WAC and federal agencies. ESAR, KCSARA and some specialized programs have continuing education requirements too.

Insuring that continuing training requirements are met is the member's responsibility. Once initial training is completed, members maintain qualification under WAC in two general ways. First, continuing knowledge and proficiency in navigation, SAR techniques, outdoor living and physically/mental fitness is Unit determined and annually certified by the ESAR Chair. Mission experience usually satisfies this requirement. Second, the following specific continuing education classes need to be taken, at a minimum:

- First Aid
- CPR

- Basic/Intermediate Helicopter
- Crime Scene Recognition

Transfer

King County ESAR will accept a direct transfer of someone in good standing with another certified Washington Explorer Search & Rescue ("WESAR") unit. To be placed on active status, a person must be current on all training required by the WAC and federal mandates. Anyone transferring from a non-WESAR unit will be encouraged to complete the King County basic ESAR training program. Besides these criteria, all transfers from other units will require the approval of the Operations and Training Directors.

Reinstatement

Those people who are removed from active status due to inactivity or lapse in training prescribed by law may apply to be reinstated. Upon submission of proof of required training to the Operations and Training Directors, they will decide whether someone will be (a) unconditionally reinstated or (b) reinstated after successful completion of another Course III. Factors affecting the reinstatement decision are the length of inactivity, previous participation level and outdoor physical activities during the break in service.

ADVANCEMENT OPPORTUNITIES

For those with an active interest in field operations, there are many challenges and opportunities available.

Team, Field and Operations Leaders

The jobs of these people can be best summed up in one word: teamwork. To achieve a coordinated effort in the field requires people with varied training and experience at each level of the SAR organization. Extensive training programs have been developed for each field leadership position. Applications are reviewed by the Training staff and people one level above the one someone has expressed an interest in. After team members complete their first year and three missions, they may apply for advancement.

Advanced Team

Begun in 1968, the ESAR Advance Team is a hasty team organized to provide fast response, medical and technical support on missions. Members of the Advance Team are trained in rope rescue, mountaineering, winter travel and advanced search techniques. They can operate in rock and snow technical terrain. Advance Team members can help mountain rescue units or perform simple raises/lowers as may be required by mission circumstances.

Portions of the Advanced Team curriculum, including advanced snow training and the rigging course, are offered to those members who are not planning on becoming full

Advanced Team members. The Operations Leader may opt to use members who have completed these courses on technical missions that do not require all of the skills maintained by full Advanced Team members.

Emergency Medical Technician

People who are interested in expanding their medical training may be eligible for biannual emergency medical technician (EMT) 110 hour classes sponsored by the King County Emergency Medical Services Division. Minimum qualifications to apply include, but are not limited to, 18 years of age, high school diploma/GED, strength to perform EMT duties, current driver's license, American Heart Association BLS provider certification, and status as an "active" member of ESAR. The Director of Operations will only recommend people for this class if they have extensive mission participation and no outstanding disciplinary actions.

ELT Operations

Emergency Locator Transmitter (ELT) certified training was established by the King County Search and Rescue Association (KCSARA) in 1984 to ensure quality responses of trained personnel in emergencies involving downed aircraft. Technological advances have continued to improve response and search procedures relating to these emergencies. However, most ELT work is still done by teams operating on the ground.

Those certified to work on ELT teams have completed extensive KCSARA training in the use of ELT equipment, navigation, mapping, signal interpretation and mission operations.

OTHER OPPORTUNITIES IN ESAR

The following is a listing of other opportunities for service within ESAR and a brief description of their function. These are open to people depending on their qualifications, level of interest, availability and/or skill level. Generally, if someone has an interest in something, ESAR has an opportunity for you.

In Town Communications Operators

This is a network of trained persons who may conduct call outs by using the alphanumeric paging system and maintain communications between Seattle area resources and the operations in the field. With the need to keep track of personnel and update/monitor the status of missions, these people form the link between the field and town. While no field training is required for this adult position, completion of communications' training is required and amateur, military or commercial radio experience is desirable.

Training Staff

Under the supervision of the Training Director, these staff members develop, critique, present and update training programs. The core of the training program is team

member basic, team leader and field leader training. This is supplemented by Advanced Team exercises, first aid classes, helicopter training, continuing education search and rescue classes and other selected courses of interest to members and/or required under the WAC.

Van Drivers

The ESAR Van is our command center during search and rescue missions. It carries our portable radios, litters, maps, first aid kits, copier, computer and other mission equipment and supplies. In 2007, ESAR also purchased a 4-door rescue pickup truck, with radios, ropes, and other equipment to allow a quick response to smaller or shorter missions.

Van drivers are adults with valid Washington State drivers' licenses, who have successfully completed a vehicle orientation and driving skills test. Drivers do not need to be field trained, but must have a Department of Emergency Management civil defense number, be over 21 years old, and receive authorization from the ESAR Director of Operations and Director of Logistics.