



**OPERATIONAL POLICIES OF THE
4X4 RESCUE COUNCIL,
INCORPORATED**

AS REVISED AND AMENDED

AUGUST 2001

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SECTION 1

TRAINING STANDARDS

1. PURPOSE:

To define the minimum requirements that are necessary to become a field-qualified search and rescue member of the Corporation and the King County Office of Emergency Management as specified in the Washington Administrative Code (WAC) and/or King County Office of Emergency Management.

2. INFORMATION:

In order to meet the state, county and Corporation qualification requirements, each member of the Corporation must be able to demonstrate that he/she has a thorough knowledge of these requirements.

3. RESPONSIBILITIES:

It will be the responsibility of the VPO to monitor the status of each member, and notify each member of his/her status at least once a year. The VPO will provide for the proper training and testing of those members seeking field eligibility. The VPA shall maintain the Corporate member database, which includes training records.

4. IMPLEMENTATION

The VPO will establish a training schedule which will provide training for both new members and members being re-qualified. The training will be in the form of formal classes, concurrent training, and/or field exercises.

5. STANDARDS

5.1 LAND NAVIGATION

Land Navigation is considered to be one of the more important standards because it overlaps into many other areas.

Members must be able to identify basic map symbols, (legend information, contour, grid system, scale, color, and distance).

Members must be able to identify and describe the difference between maps used for SAR. (for example, USGS, WEYERHAEUSER, GREEN TRAILS, FAA CHARTS, etc.)

Members must be able to locate terrain features using the various coordinate systems:

- UNIFORM MAP SYSTEM
- RANGE AND TOWNSHIP
- LATITUDE / LONGITUDE

Members must be able to identify the basic parts of a compass, how to hold a compass and how to take a compass bearing.

Members must be able to convert a true azimuth to a magnetic azimuth and vice versa. Members must be able to determine distance and azimuth from a map and transmit it to the field.

Members must be able to determine their location on a map, by terrain features, and by triangulation.

Given two or more azimuths, members must be able to plot bearings on a map to determine what is located at that point.

Members must be able to switch between maps of different scales and be able to find the same landmark using UMS

5.2 RADIO COMMUNICATIONS

Members must be able to identify:

- (a) Radio frequencies that the Corporation is authorized to transmit on, the Corporate call sign (KNDR611), when it is to be transmitted, and individual radio identifiers.
- (b) The basic call signs and frequencies of the other SAR units.
- (c) How to use the radio phonetic alphabet.
- (d) Basic non-technical radio terms.

5.3 BASE CAMP PROCEDURES

Members must be able to describe how a base camp is set up, who is responsible for its operation, chain of command, roster procedures, field reporting, and check-out procedures.

5.4 DRIVING SKILLS (Vehicle Operators Only)

Members must be able to demonstrate how to use their vehicle in a search and rescue environment. This includes, but is not limited to, winching techniques, towing, mapping of roads and terrain, driving under all road and weather conditions, and vehicle maintenance and safety.

5.5 ELECTRONIC SEARCH

Members involved in electronic search must be qualified in the basic concepts of electronic search, as established by the ELT team (a separate SAR entity).

This knowledge will include but not be limited to:

- (a) Knowing the definition of the acronyms EPIRB, ELT, and L-PER.
- (b) Defining an interferometer team and its function.
- (c) How data is collected and transmitted to base
- (d) What the tasks are of the base team.

- (e) Defining an integration team and its function.

5.6 AIRCRAFT OPERATIONS

Members must be able to demonstrate the proper procedures for boarding and exiting different types of aircraft used in SAR and must take WAC required Helicopter Training.

5.7 SEARCH STRATEGIES

Members must be able to describe the fundamentals of road searching (both day and night) and electronic searching. Members must be able to identify other search strategies (urban, grid searches, river searches, snow/avalanche searches, dog searches, tracking, horses, etc.).

5.8 INTERVIEWS

Members must be able to collect information and be able to interview witnesses.

5.9 FIRST AID

As a minimum, each member will have to complete an approved First Aid and CPR course, and keep certification current.

5.10 GENERAL PROCEDURES

Members read and comply with Corporate policies and procedures.

5.11 WAC TRAINING STANDARDS

KC4X4SAR, in agreement with the King County Sheriffs Office (KCSO) and King County Search and Rescue Association (KCSARA) Unit Leaders, agrees to recognize any King County approved WAC training conducted by any KCSARA unit with regard to the following eight (8) identified WAC 118-04 required subjects:

First Aid

CPR

Blood Borne Pathogens

Crime Scene

Helicopter

Map & Compass

SAR Techniques

SAR Survival

To retain field eligible status, each member must have completed all required SAR classes, or refresher training, within the prescribed time period. If a member's training expires within 60 days prior to a scheduled SAR Academy, their expiration date will automatically be extended until that Academy.

New members are granted a one year “grace period” in which to obtain the required WAC training. During this period, new members who have not yet completed all of the required WAC training may participate in field missions, both actual and training, under the direct supervision of a fully field qualified and experience member. “Under direct supervision” means either riding with the experienced member, or driving a separate vehicle within visual range of an experienced member and having radio communications with the experienced member. This exception to normal policy has been granted by the KCSO SAR Coordinator, and only applicable KCSO representatives are authorized to change or waive it. Once a new member has obtained all WAC and unit required training, this limitation is no longer applicable, regardless of how long they have been a member. For example, a new member who satisfies all WAC and unit required training during the first month of membership is fully field qualified. There is no requirement to wait one year to achieve that status.

SECTION 2

RADIO COMMUNICATIONS

A. PURPOSE:

To define the requirements that are necessary to properly operate communications equipment in a Search and Rescue environment.

B. DEFINITIONS:

Amateur Radio (HAM). A radio service operating in specified amateur radio frequency allocations, and using appropriate amateur radio equipment.

Commercial Radio. Business band radio equipment and frequencies as authorized by FCC licenses.

Citizen Band Radio. 40 allocated channels in the 26 and 27 MHz bands, which require no license to operate on.

Family Radio Service (FRS). An unlicensed UHF radio service that uses 14 frequencies and very low output power.

General Mobile Radio Service (GMRS). A licensed UHF radio service with specific frequencies. GMRS is not typically used in the SAR environment.

Multiple Use Radio Service (MURS). An unlicensed radio service in the VHF frequency band with 5 specific frequency assignments. MURS is not typically used in the SAR environment.

Repeater. A piece of equipment which receives radio signals on one frequency and immediately (simultaneously) re-transmits them on a different frequency. Repeaters extend the usable range of a radio.

Talk Around. Transmitting on the output frequency of a repeater.

Sub Audible (CTCSS) Tones. Low frequency tones which are sent continuously while the radio is transmitting for purposes of opening the squelch on a tone guarded receiver.

C. LICENSE REQUIREMENT

A HAM license is required to hold the position of Operations Leader (OL). Team Leaders (TL) are expected to obtain a HAM license within a year, or prior to advancing to OL. It is highly recommended, but not required, for all members.

D. MINIMUM RADIO STANDARD

The minimum radio standard is to have a commercial VHF Hi-band radio. The commercial VHF Hi-band radio allows you to transmit and receive on both commercial and amateur frequencies (with a ham license). A ham radio may not legally be used to transmit on the commercial frequencies.

To help members meet this requirement, there are some VHF radios available for loan to those members who become and remain active in field search and rescue missions. Members are encouraged to purchase their own radios when they are able to do so. Issuance of the radios is based on availability, and is solely at the discretion of the VPO.

E. CORPORATE POLICIES

The corporation has been granted a license to operate on several frequencies and has received authorization to operate on some KCSO frequencies, and other frequencies.

All radios operated on commercial or Sheriff frequencies under the corporate authorizations shall be FCC Part 90 type accepted. The owner of the radio is responsible for FCC frequency and deviation compliance. If the radio is found to be out of compliance or causing interference, it shall not be used until compliance with FCC rules are met.

Amateur (HAM) radios are NOT authorized to transmit on commercial or sheriff frequencies, except in an extreme emergency in order to prevent immediate loss of life. Normal Search and Rescue operations do NOT meet this criteria. It is corporation policy that use of a HAM radio on commercial frequencies may be cause for disciplinary action, to include termination of membership. Federal law provides penalties up to a \$10,000 fine for each illegal use of a HAM radio on commercial frequencies, as well as loss of license.

F. CORPORATE LICENSES

The corporation is licensed with the call sign of KNDR611 on the following frequencies:

VHF-Low: 47.66 MHz, Tone 123, 300 Watts maximum (linked to UHF). Primary Low Band Frequency.

VHF-Low: 45.96 MHz, Tone 123, 300 Watts maximum

VHF-High: 155.175 MHz, Tone 123, 50 Watts maximum. Primary High Band Frequency.

UHF: 462.9875 MHz, UHF Repeater & Cross Band Link Output

UHF: 462.9875 MHz, Tone 162.2, 2 Watts Maximum, UHF Simplex 1

UHF: 467.9875 MHz, Tone 141.3, 2 Watts Maximum, UHF Repeater Input

UHF: 467.9875 MHz, Tone 162.2, 2 Watts Maximum, UHF Cross Band Link Input

UHF: 467.9375 MHz, Tone 162.2, 2 Watts maximum, UHF Simplex 2

Only official corporate (e.g., search and rescue or related training) traffic is to be transmitted.

Members requiring further information or assistance should contact the VPO.

G. IDENTIFICATION

When you use one of the corporate frequencies, you must identify with both the call sign (KNDR611) and your unit assigned designator (e.g., "A4 KNDR611"). You must identify at the end of a transmission and at ten minute intervals.

When there is an established base of operations, the base will identify with the call sign, and other units will normally only use their assigned designator. For example “4X4 Base, this is A4” or “A4 clear”.

H. COUNTY FREQUENCIES

The corporation has also been authorized by other agencies (other Search and Rescue organizations and the King County Sheriff’s office) to use certain frequencies under their control. In this case, the corporation will authorize individual users on those frequencies with the following rules:

- 1) Mission related Search and Rescue traffic only.
- 2) Call sign will be your assigned designator with prefix of “4X4”, for example, “4X4 A4”.

The above rules are general in nature and may be modified as the need arises by the Operations Leaders in charge of any particular mission.

The county frequencies we are authorized to use under the above conditions are:

- | | |
|-------------|---|
| F2 Repeater | 154.965 MHz Output (you receive), 153.995 MHz Input (you transmit),
Tone 123 |
| F3 | 153.755 MHz, Tone 123 |
| F4 | 155.160 MHz, Tone 123 |

Note that these frequencies are programmed into King County’s dispatch center, and are recorded 24 hours a day. There is not normally a dispatcher monitoring these, but there could be. In addition, F2 is cross patched to the 800 MHz trunked system, and is available on all SAR officers radios.

I. HAM FREQUENCIES

The primary ham radio frequencies that are used are the 145.11 MHz repeater (145.11 MHz output - you receive, 144.61 MHz input - you transmit), and 146.44 MHz simplex. These are commonly referred to as “five one one” and “six four four”. The “five one one” repeater is intended as a very brief contact system when not being used for active search and rescue operations (make contact and move to another frequency, please do not carry on personal conversations). On the UHF ham band, 446.0 MHz (“four four six”) is a common simplex frequency. Use a sub-audible tone of 103.5 or 141.3 for the 145.11 repeater.

J. GENERAL OPERATING PROCEDURES

In addition to any specific requirements noted in this policy, the following general procedures apply to all radio operations.

1. When entering any command post, area, or van, turn your handheld radio audio down to prevent feedback or confusion.

2. All radio frequencies and channels are non-secure, and are routinely monitored by many people including the press. Never say anything on the radio that is not meant for the whole world to hear. Always think about what you are going to say before you say it.

3. In Search and Rescue, we deal with “Subjects”, NOT “Victims” (even if they are).

4. Don’t send information until you have established contact with the other party and they are ready to receive it. First call the other station and wait for them to reply. Then state you have traffic and wait for them to acknowledge. Then send the information. Keep radio transmissions as short as possible. Pass the necessary information, then wait for an acknowledgment from the other party. If you have a lot of information to pass, send it in short segments (never more than 30 seconds) with pauses (where you stop transmitting). Don’t ramble. Don’t hold the push to talk button down while you think about what you want to say.

5. Always press the push to talk button and hold it for about one second before you start talking. This allows time for repeaters to start working, and for the other party’s receiver to open if it is tone guarded. Failure to do this can cause the first syllable or word of your transmission to be cut off.

6. Always call another station by giving their call sign first, then giving your call sign.

For example:

N7ABC this is N7CBA.

4X4 Base this is Adam Four

Boy Two this is Charlie Three

7. Be aware of your microphone and the push to talk button. Don’t position it so that it can be accidentally pushed (including being sat on in your car). This causes a radio channel to become unusable (and could cause you a lot of embarrassment).

8. Do not call for generic “Base camp” or “Search base” when trying to reach the 4X4 OL or Van. Call specifically for “4X4 Base”, “4X4 Van”, or “4X4 OL” as applicable. Each unit has it’s own base, and you must be specific. Simply calling for “base camp” may result in no-one responding, as they don’t know who the call is for, or possibly the KCSO Command Van responding.

9. Use the phonetic alphabet when giving your unit designator, and whenever it is necessary to spell a word or give a series of letters. The phonetic alphabet is listed in this policy.

K. RADIO PHONETICS

The following phonetic alphabet is commonly used by local law enforcement agencies, and is the alphabet we should use.

It is important to effectively communicate. For example, to spell the word “FOUR” you would say “frank ocean union robert”.

Typical usage would be to say a word, then when necessary, spell it phonetically. For example “The last name is Smith, I spell Sam Mary Ida Tom Henry”.

A	ADAM	N	NORA
B	BOY	O	OCEAN
C	CHARLIE	P	PAUL
D	DAVID	Q	QUEEN
E	EDWARD	R	ROBERT
F	FRANK	S	SAM
G	GEORGE	T	TOM
H	HENRY	U	UNION
I	IDA	V	VICTOR
J	JOHN	W	WILLIAM
K	KING	X	XRAY
L	LINCOLN	Y	YOUNG
M	MARY	Z	ZEBRA

L. EXPANDED INFORMATION ON DEFINITIONS

1. Types of Radios and Radio Services

a. Ham Radios

Ham radios may be hand-held, or mobile. Hand held radios typically have 2 to 5 watts of transmitter power. Mobile radios typically have 25 to 50 watts of transmitter power and an external antenna. Mobile radios are also commonly used in base station applications with a 12 volt power supply. In general terms, maximum legal power limit on ham radios is 1,500 watts (there are lower power exceptions). Ham radios do not have to have “FCC Type Certification”. Almost any radio can legally be used within the ham radio service as long as it meets the specific technical requirements of the FCC regulations. It is the responsibility of the ham operator to make sure the radio is compliant. For this reason, it is perfectly legal and acceptable to use a “commercial” radio to talk on ham frequencies. All commercially manufactured ham radios are certified for ham use. HAM radio is covered by “Part 97” of the FCC regulations. Ham radios can generally be set to almost any frequency. It is the operators responsibility to ensure the radio is only operated where it is legal to do so. It is not legal to use a ham radio to transmit on non-ham frequencies.

Ham single band 2 meter. Operates on the 144.0 to 148.0 MHz frequencies.

Ham single band 440 MHz (70 centimeter). Operates on the 440.0 to 450.0 MHz frequencies.

Ham dual band. A single radio which covers both of the above bands.

Other ham frequencies. There are many other ham frequency bands, however they are not normally used within King County Search and Rescue.

b. Commercial Radios

Commercial radios must have what is known as “FCC Type Certification”. Each of the various radio services is defined in a different “Part” of the FCC regulations, and any radio that is used in one of those radio services must be “Type Certified” for use in that “part”.

The “Part” of the FCC regulations governing our VHF and UHF radio licenses is “Part 90”. This also governs most business and police commercial radio operations. It does not govern ham, CB, or marine radios (they are each different “parts”). Commercial radios that are permitted for use on our frequencies are “Part 90 Certified”. They must contain an identification sticker which shows the FCC identification number (a long number with both letters and numbers).

“Part 90” radios will (with one exception) be single band radios, either hand held or mobile. With commercial frequencies, your license specifies the maximum amount of power you can use, and the radios are programmed properly to comply with your license requirements. In our case, the maximum power limits vary between 2 watts on UHF, 50 watts on VHF-High, and 300 watts on VHF-Low.

Commercial radios are pre-programmed with specific frequencies in them. The user can only change the radio between the pre-programmed channels, which should be limited to those the user is licensed to operate on. Part of “Type Certification” is preventing the radio from being user programmable to other frequencies.

c. Citizen Band (CB) Radios (11 meter)

CB radios are useful in limited circumstances within the search and rescue environment, most commonly if we are operating on active logging roads. CB radios are not particularly useful for communicating between SAR members or to base camp. CB radios operate on 40 specific channels within the 11 meter frequency band, and are governed by Part 95 of the FCC regulations. CB radios must be Part 95 certified.

d. General Mobile Radio Service (GMRS)

A small group of UHF frequencies are designated for licensed family radio use. GMRS radios are FCC type certified for use in this application. There are seven frequencies that are shared between FRS and GMRS, but to use the higher GMRS power requires a specific GMRS license. We do not currently use GMRS within the SAR community. GMRS is governed by Part 95.

e. Multiple Use Radio Service (MURS)

This is an unlicensed Citizens Band radio service created in November 2000, which has several specific VHF frequencies which may be used with up to two watts of power without a license. Only FCC Part 95 Type Certified radios may be used on MURS frequencies. We do not currently use MURS frequencies within the SAR community. MURS is governed by Part 95.

f. Family Radio Service (FRS)

The Family Radio Service (FRS) is an unlicensed UHF radio service that uses 14 interstitial frequencies (in-between “regular” frequencies), and very low output power (1/2 watt effective radiated power).

FRS radios are used in base camp, and limited other search and rescue environments. Within King County, a standard of channel 7 (462.7125 MHz), and tone 27 (167.9 Hz) has been

established when using FRS radios. It is not legal to transmit on FRS frequencies using a ham radio.

FRS radios are commercially produced and have FCC type certification. Only properly certified FRS radios may be used on the fourteen FRS frequencies. There are very specific technical criteria for FRS radios. FRS is also governed by Part 95.

2. Repeater

A radio repeater is a piece of equipment installed on a tall building, hill, or mountaintop, which receives radio signals on one frequency and immediately (simultaneously) re-transmits them on a different frequency. Individual users set their radios to listen to (receive on) the repeaters output frequency, and to transmit on the repeaters input frequency. The use of a repeater allows users that are too far apart to communicate directly to still be able to talk to each other through the repeater.

The two primary repeaters that are used within KCSARA are the 145.11 MHz HAM repeater and the King County F2 repeater.

3. Talk Around

Talk Around refers to transmitting on the output frequency of a repeater. In the case of either of the above discussed repeaters, you could use talk around on the output of the F2 repeater, or on the output of the 145.11 ham repeater. This permits a user to talk directly to another user without going through the radio repeater.

It is corporate policy to NOT use talk around. When using either the F2 or 145.11 repeaters, you should communicate through the repeater. The only normal exception would be to make contact when you are unable to reach the repeater, and ask the other user to move to a direct or simplex frequency.

4. Sub Audible (CTCSS) Tones

Both commercial and ham radios are capable of transmitting what are referred to as sub-audible tones. These are continuous low frequency tones which are sent out while the radio is transmitting. Receiving equipment can be programmed to only operate when it receives the proper tone, and in this manner will not hear transmissions from radios that are not sending the proper tone.

These tones are referred to by several different names, including "Sub Audible", "CTCSS", and "PL". There is also a digital variation of this tone principal which is called Digital PL, or DPL. We do not currently use DPL within KCSARA, however it is in widespread commercial use.

The appropriate tones have been indicated for the various frequencies listed in this policy. In addition, as a rule of thumb, a tone of 103.5 Hz should be transmitted on any ham simplex frequencies (including 146.44 MHz). It is the individual users choice as to whether they tone guard their receivers to hear only transmissions with this tone, or all transmissions. Because some users do tone guard their receivers, they will not hear you if you do not send a 103.5 tone.

If you tone guard your receiver, you must always listen to the channel without the tone guard before transmitting to make sure it is not in use.

SECTION 3

NEWS MEDIA AND PRESS RELEASES

Statements to the media/press relative to search and rescue operations may be released only by the Operations Leader after approval from the County Duty SAR Officer. Statements relating to other corporate affairs will, in all cases, be released by or approved by the President.

It is extremely important that members DO NOT discuss operational activities with anyone other than corporate personnel. A great deal of finesse must be employed when discussing SAR Operations if it is possible that relatives or friends of the subject(s) may overhear.

Members are also reminded that information given out over the air (whether the frequency is amateur, county, or corporate) is not private and that many people monitor these frequencies. Care must be taken when relaying information.

SECTION 4
FIELD COMMITMENT

Members may be allowed (voluntarily) to go on foot into the field under all of the following conditions:

- a. There is a specific need for assistance that can be provided.
- b. Other resources are not available within a reasonable time frame.
- c. The member has the proper training, and is physically capable of safely traversing the terrain.
- d. The member has in his/her possession the proper articles of clothing and the proper equipment to traverse the terrain. Radio equipment to communicate with the OL must be available.
- e. The individual goes into the field as a member of team (not alone).
- f. The OL will make the final decision regarding the commitment of personnel away from their vehicle.

SECTION 5
NON-MEMBERS AND PETS ON MISSIONS

With Board approval, meetings, non-field training events and identified special events (e.g., the annual awards banquet, annual auction) may include family, friends or prospective members. If a training mission number has been assigned for the event, non-members shall not sign the roster.

Non-members are not permitted to participate on any actual, or field training missions (where a mission number has been assigned).

It is further understood that pets are not to attend or be included at any SAR functions (where a mission number has been assigned). The exception is a trained SAR animal or other animal as allowed by state/federal law, or as pre-approved by the Board.

SECTION 6

VEHICLE OPERATIONS

When members of the Corporation are participating in a search and rescue or training mission they shall abide by the following guidelines:

- Headlights on
- Seat belts fastened
- Speed consistent with road and weather conditions (and not over the posted speed limit)
- Maintain safe following distance.
- Operate the vehicle in a safe manner, with primary attention being on driving.
- Manual hubs engaged, as applicable, for off-pavement travel.

SECTION 7

OPERATIONS LEADER / TEAM LEADER SELECTION

Purpose

The role and purpose of Operations Leaders (OL's) and Team Leaders (TL's) within the corporation is to provide a trained, experienced, and qualified group of leaders to run mission operations; and to develop leadership skills and experience for and within the Corporation.

Conditions

Members requesting the position of either OL or TL shall be active Search Personnel (as defined in the Administrative Policies) for a minimum of one year.

Additional conditions for applying for the position of OL or TL:

Knowledge of policies and procedures.

Ability to work well with others.

Willingness to train and demonstrate a higher standard of knowledge and skills than is required for general membership within the Corporation.

Statement of their desire and qualifications for the position being sought, in writing, to the VPO.

Members shall have been an active TL for a minimum of one (1) year prior to becoming an OL. (This may be waived if an applicant has other SAR leadership experience.)

Upon receipt of an application for either position of OL or TL, the VPO shall review the application and the qualifications for the position. If qualified, the VPO shall then present the application and the applicant at the next Operations meeting for discussion. After a discussion of the qualifications of the applicant, the applicant shall be given a chance to speak on his/her behalf. The VPO shall make the final determination as to the appointment.

An applicant whose request for appointment is denied by the VPO may appeal the decision to the Board. The Board's decision shall be final.

Temporary Appointments

A member may be temporarily appointed to fulfill either the position of the OL or TL by the VPO, or his/her designee, if it is necessary and appropriate to do so in the best interest of the Corporation. The temporary appointment shall be for a specific mission, event, or period of time as specified by the VPO.

Removal

The VPO may remove an OL or TL for specified and just cause. Any member in good standing may recommend to the VPO (in writing) that an OL or TL be removed from their position for

specific and just cause. Just cause may include, but not be limited to, violation of the policies and procedures, inactivity as an OL or TL, or loss of field eligible status.

An OL or TL removed by the VPO may appeal that action to the Board. The Board decision shall be final.

Duties and Responsibilities

Operations Leaders shall run all 4X4 operations in Base Camp, be responsible for coordinating with the SAR duty officer and other unit OL's, establish and maintain all required logs, reports, rosters and documents, and assign duties to participating members.

Team Leaders shall perform field training, supervise field teams under the direction of the OL, assist the OL as required and perform OL duties in the absence of the OL. In addition, TL's are the primary resource for new member training and familiarization.

Operations Meetings

Operations Meetings shall be scheduled by the VPO, and shall be held at least quarterly. Notification shall be published in the corporate newsletter.

SECTION 8

MISSION RESPONSE, PAGING, AND CALL-OUT

Introduction

The corporation shall use pagers as a primary method for mission call outs and other member notifications.

Paging System

The Corporation shall use a wide-area service provider in the greater Puget Sound area for paging services. A single pager phone number shall be established as the Corporations primary means for member notification of missions and other Corporation related events. This shall also be used by King County as their primary means of notifying the Corporation to a mission requirement. Additional pager phone numbers may be acquired by the Council as determined by the VPO and within approved budget limits to serve specific functions (for example, for van drivers or for the board, etc.)

The Corporation shall, from time to time, purchase and inventory pagers for the purpose of issuing to members. All such pagers shall be under control of the VPO and will remain the property of the Corporation. Corporation owned pagers will only contain Corporation pager phone numbers unless approved by the VPO or Board.

Members may, at their own discretion, purchase or lease pagers for use on this system. Member owned pagers may contain individual/personal and/or other pager phone numbers that the member may desire in addition to the Corporations common pager phone number. **MEMBER OWNED PAGERS MUST HAVE THE ABILITY TO IDENTIFY THE SOURCE OF A PAGE (INDIVIDUAL OR CORPORATE).**

Initiating Pages

King County Sheriff's Office (KCSO), the Board, and designated personnel are authorized to initiate pages. Telephone access numbers shall only be provided to authorized personnel.

King County Callout of 4x4

KCSO will use the paging system to notify the Corporation of a mission requirement. Only the VPO or his/her designated representative should respond to the County page. A system shall be set up to insure that a County page is responded to.

Callout of Members:

The VPO or designee will issue a callout page to alert the members. Whenever possible an alphanumeric message will be sent.

Information or Test Pages:

Any Board member may authorize non-mission or test pages to be sent. Such pages should normally be sent only during daytime and early evening hours (9:00 am to 8:00 pm). Members needing to send an information or test page should contact a Board member. The use of such

pages should be very limited, so that members may reasonably expect their pager to normally go off only for official purposes.

Member Responsibilities for Corporate Pagers

Members who are issued a Corporate owned pager are responsible and accountable for the pager. Members may be responsible for loss or damages as a result of member negligence. Replacement batteries are the responsibility of the member.

SECTION 9
USE OF NON-ALL WHEEL DRIVE VEHICLES ON MISSIONS

Members are expected to either ride with an all-wheel drive owner/driver or be driving their own all-wheel drive vehicle.

Members may meet at a rendezvous location and form into teams, leaving the non all-wheel drive vehicle(s) in a secure location.

Members may also drive a non all-wheel drive vehicle to base camp.

Keys to any vehicle left at base camp should be left with the OL in the event that moving of the vehicle is required.

SECTION 10

BASE CAMP GUIDELINES

The first unit member arriving at Base Camp shall perform these functions until properly relieved.

1. Upon Arrival at Base Camp:

Check in with the SAR Officer/Incident Commander.

Start and fill out a SAR roster.

Start a mission and radio log.

Take control of base camp. Establish parking and staging areas and provide for traffic flow.

Fill out other forms as required.

2. Upon Completion of a Mission:

Total and sign the roster, and prepare a copy for our records.

Complete all mission logs, and prepare a copy for our records.

Write a mission summary statement stating what the mission was, your impressions of how the mission went, problems that require attention, and any other information deemed appropriate.

Provide the original roster and all mission logs and documentation to the SAR Officer/Incident Commander.

Provide copies of the roster and all mission logs and documentation to the VPO.

3. For Extended Missions:

Request relief personnel far enough in advance to allow for driving time and for call-out to effectively work.

Brief the relief OL and together, brief the SAR Officer/Incident Commander and unit personnel of the change in OL.

4. Out-of-County Operations:

During out-of-County operations, original documents are provided to the host county, copies to our County and the VPO.

SECTION 11

VAN OPERATIONS

The van is a mobile command and control center for the corporation. It is designed to provide communications, map plotting, and a briefing area. In some circumstances, the van may serve as the primary van for County or other SAR units.

1. Personnel

Operational management and control of the van shall be the responsibility of a single person, dedicated to the task, being the Van Director.

1.1 The Van Director shall be appointed by the VPO **with the advice and consent of the Board.**

1.1.2 Qualifications

Candidates applying for Van Director or Assistant Van Director must meet or exceed these qualifications:

Be a member in good standing.

During the time of appointment, must have a valid Washington State Driver's license.

Have some knowledge of maintenance management and mechanical skills.

Be able to manage and lead others in the operation and maintenance of the van.

Be knowledgeable of Search and Rescue (SAR).

Must have completed the van drivers training course, and be a certified driver.

If the van has exempt license plates, the van director must also meet all County requirements.

1.1.3 Responsibilities

1.1.3.1 The chain of command is:

The Van Director reports directly to the VPO and shall keep the VPO informed of all activities concerning the van, i.e. cost, mechanical problems, operational problems, etc.

1.1.3.2 Specific responsibilities of the Van Director are to:

Monitor the overall operation of the Van, such as cost, maintenance, and readiness.

Schedule driver training as required.

Provide supervision and support to the drivers, set up a driver schedule. Ensure that all duty drivers have the keys to the van, the log book, credit card and access to where the van is stored. Keep the drivers informed of all changes in the conditions of the van.

Set up a maintenance schedule. The schedule should show when and where maintenance is to be conducted (Major repairs, and non—mission events should also be shown on the schedule to minimize scheduling conflicts). A copy of the schedule should be provided to the VPO. The Van Director shall have the authority to conduct routine maintenance. For major repair expenditures

exceeding the van maintenance budget, the Van Director will submit to the Board a cost estimate and obtain Board approval, before repairs are performed.

Inspect monthly for the following:

- Review of the log book.
- Items in need of repair (corrective maintenance).
- Safety features.
- Preventive maintenance.
- Operational hours on the generator.
- Ensure van is clean and mission ready.

Maintain a record of operational maintenance cost and problems. Know when and where the van is deployed.

Review all the van trip tickets and log book entries. Establish a historical record on van usage and maintenance.

Have the authority to “DEAD LINE” (prohibit use of) the van if the van is unsafe. Outside organizations requesting the use of the van must submit a request (written or oral) to the VPO stating when, where and how the van is to be used. The VPO or the Van Director will notify the requesting organization, stating the conditions for which the van will be made available. Mission requirements will take precedence over all requests.

Maintain van training records (This information will be used to keep track of who is qualified, and those who need additional training). Persons not keeping their training hours current will be dropped from the drivers list. The Van Director should always be in the process of training a replacement person to take over the responsibility of Van Director.

If the van has exempt license plates, whenever the van is to be moved for non—mission requirements the Van Director or delegated representative will notify KCSO that the van is leaving county property, state the reason, location, and the estimated time of return.

1.2 Drivers

Proper selection and training of van drivers is essential to a safe and functional program.

1.2.1 Appointment

Drivers shall be appointed by the Van Director and/or VPO.

1.2.2 Qualifications

Drivers must be at least 18 years of age.

Drivers must have a valid Washington State Drivers License.

Drivers must be approved by KCSO for operation of any County licensed vehicle.

Drivers must have satisfactorily completed:

The basic Van Drivers Course.

Included in this course are:

Vehicle safety check, demonstrated driving skills and a basic knowledge of how the van operates at base camp. How to park the van at base camp and how to set up the van for base camp operations.

The advanced Van Drivers course.

During the course driver will:

Demonstrate driving skills in an off road environment. This will include turning the van around on a narrow logging road, parking the van on a narrow road. Drivers must demonstrate land navigation skills. Knowledge of all van contents and equipment, and their proper use.

1.2.2.1 To Retain Qualifications

Drivers must re-qualify every two years. The VPO may waive this requirement on a case by case basis. If the van has exempt license plates, all County requirements must be met.

1.2.2.2 Disqualification

A driver may be removed from the list of qualified van drivers for any of the following:

Unsafe driving or disregard for corporate property, procedures and policies.

Failure to complete all of the above courses.

Moving traffic violations.

1.2.3 Responsibilities

Drivers will respond to a callout via a page from the VPO or In Town OL (ITOL). For the duration of a mission duty drivers will be in a standby mode unless released by the VPO or ITOL. If the duty driver cannot respond for personal reasons he/she should notify the VPO or Van Director in advance as soon as possible.

The duty driver is obligated to drive the van and will not accept any other SAR assignment unless released by the VPO or the OL. In the field, the duty driver will not accept any assignment unless it is cleared by the OL.

The duty driver, before responding to any mission, will conduct a van pre-operational check (Operational check list can be found on the van trip ticket). If it is determined that the van is not safe to operate then the driver will declare the van "DEAD LINED". The van should remain parked, all systems shut down and the "DEAD LINED" sign (found in the log book) should be placed in the drivers seat. The reason(s) why the van is "DEAD LINED" must be entered in the van log book. Should the van break down while on a mission, the duty driver will not abandon the van unless in danger of bodily harm. The duty driver will contact the OL, VPO, or Van Director for assistance. They should set up road flares or safety triangles. The driver is responsible for safeguarding the van and its' contents. The OL or the duty driver should request a backup vehicle to follow the van to and from a mission. If the driver finds the "DEAD LINED" sign in place when responding to a mission, do not operate the van, check the log book for possible cause and contact the VPO, OL, or Van Director for guidance.

The van will always be driven within the legally posted speed limit, or slower, as weather conditions permit. Traffic citations (moving violations) issued while driving the van will be the responsibility of the driver. Drivers are obligated to report to the VPO any moving traffic

violations they have committed, within the last three years (the van or own private vehicle). All van accidents are to be reported immediately, the driver is obligated to request a KCSO Supervisor to investigate the accident. Do not discuss the events of the accident with anyone except the investigating Officer and Board Members as appropriate. Answer all questions truthfully. Do not volunteer any information or offer your opinion. Accident reporting forms and procedures can be found in the van log book.

Upon arrival at base camp, the driver will report directly to the OL. The OL shall provide direction on where to park the van. In case the OL is not available, the driver will contact the SAR Officer and request direction. Once the van is situated, the driver will set up the van in an operational mode. The driver can request other SAR duties during the mission if the OL has no other requirements. Upon termination of the mission the driver and OL will close down the van and prepare to depart base camp.

Upon returning from the mission, the driver will refuel the van and conduct post operational checks (see Van Trip Ticket). Save the fuel receipt(s), for submission to the treasurer. Note receipt number and fuel usage in the log book. Clean the interior of the van and sweep the floor. Any problems or comments should be noted in the van log book. Van trip tickets should be turned in to the VPO or the Van Director as soon as possible. Always park the van in its specified parking slot, shut down all systems, radios, lights etc.). Conduct the post operational checks, make sure the keys are in the pre-designated place, lock and check all doors, and set the alarm system, and secure the area as appropriate. As soon as possible brief the Van Director relative to van performance during the mission.

It is the drivers responsibility to provide required personal equipment.

2. Operations

Do a quick walk through of the van to determine what office supplies and equipment are on board. Look through all the storage spaces. If items are missing or need to be replaced, note this in the log book.

It will be the responsibility of the OL and driver to monitor the various systems of the van, to minimize van failures. The key things to keep track of are:

- a. Fuel usage of the generator (it draws its fuel from the main tank).
- b. Monitor all batteries (don't let them run down excessively).
- c. Do not leave the van unattended. If you are alone and must leave, shut down and secure the van, or request assistance from another member to stand watch. If the van driver must leave the area (without the van) notify the VPO or ITOL.
- d. Keep track of all keys, i.e., don't walk off with the ignition keys.

3. Training

This outline provides the minimum training topics for van operations.

3.1 Driver Qualifications (See Section 1.2.2)

- Driving record.
- Physical condition.
- Traffic citations.
- Accident reports.
- 3.2 Driving Policies
 - Moving the vehicle.
 - Notification Procedures.
 - Review paper work requirements.
- 3.3 Pre-Mission Checks
 - Vehicle condition.
 - Required equipment on board.
 - Van Log Book Form.
 - Van Driver Trip Ticket.
- 3.4 Post-Mission Check
 - Fuel tank and check all fluid levels.
 - Log Book.
 - Note any supplies or items that need to be replaced. Repair requirements.
 - Holding tanks.
- 3.5 Driving
 - Road Flares or Triangles.
 - Low speed maneuvering.
 - Backing up - with and without a guide.
 - Mirror usage.
 - Highway Driving and off Road driving.
 - Use of a lead/trail vehicle.
 - Base Camp.
 - Tire chains.
- 3.6 Cautions
 - Low Overhangs.
 - Driver fatigue.
 - Inclement Weather operations.
 - Internal van ventilation (avoid carbon monoxide poisoning).
 - Personal Equipment.

- 3.7 Van Equipment Operation
 - Power management system.
 - Communications equipment.
 - Other installed equipment.

SECTION 12 **EQUIPMENT LISTS**

The required equipment identified in this section must be carried on all missions.

Required Vehicle Equipment:

King County detailed road map (Thomas Brothers or equivalent).

First Aid Kit.

Tire chains (for at least two wheels unless prohibited by manufacturer of vehicle).

Fire extinguisher (preferred type 1a, 10BC 2.5 pound).

Axe or saw.

Bucket (minimum 2.5 gallon).

Shovel (preferred 36").

Corporate and KCSARA decals on vehicle.

Flares.

Grid Ribbon and waterproof marking pen.

A minimum of a VHF Hi-Band radio (may be issued or personally owned).

Required Personal Equipment:

Rulers - USGS and Weyerhaeuser.

Food and water to last for expected duration of mission.

Flashlight.

Matches or lighter.

Knife.

Compass.

Clothing appropriate for the environment expected, to include a safety vest.

Recommended Equipment:

Tarp.

Cooking gear (stove and pot).

Roll Bar (soft top vehicles)

Spare oil.

Jumper cables.

Tow cable, chain or rope.

Spot light (hand held or mounted).

Blanket or sleeping bag.

Maps as listed on the map list.

Tire chains. (In addition to the ones on required list).

Helmet, goggles and hearing protection for helicopter operations.

Items that might be needed for Blood borne pathogens such as:

goggles/safety glasses.

heavy duty rubber gloves.

latex surgical gloves.

mask.

mouth to mouth barrier.

antibacterial swabs.

smock or jump suit.

Listing of Maps

This map listing is not a mandatory listing but rather reflects some of the maps you may find useful.

Thomas Brothers map book. (The tri-county, King, Pierce & Snohomish version is preferred however, you can easily get by with only the King County version).

USGS or Forest Service 7.5 minute maps showing all of King County.

Green Trail 15 minute maps for King County.

Maps for bordering counties.

Washington State Atlas and Gazetteer.

Washington State Highway map.

Weyerhaeuser Maps.

Computerized maps, such as DeLorme Street Atlas and/or Topo. (with GPS capability is a plus).

Any other map that you come across that you find useful should be carried by you.

Description of Other Selected Items

Below are some selected items which, as time goes on, you may decide that you want to purchase. You should not think of these items as mandatory or even recommended, rather they are things that some members have chosen to purchase.

NOTE: Please coordinate with a knowledgeable unit member before purchasing any of the following equipment to ensure you obtain equipment which is compatible with our operations, and can be acquired at the best price.

CB Radio. Commonly used for communications with log trucks while searching logging areas.

47 MHz (VHF low band) mobile transceiver. Additional frequencies used by SAR organizations.

2 meter amateur radio. You must be a licensed HAM to transmit on these frequencies however anyone may monitor the frequencies.

150 MHz mobile transceiver. Primary frequencies used by KCSARA units.

Pager. Alphanumeric pagers may be checked out or purchased.

Mobile Scanner. Monitors frequencies not covered by your own transceivers.

Front and/or rear mounted winch.

Light bar, strobe lights or other AMBER (only) warning lights. Used to draw attention to vehicle, provide escort to dog teams, traffic control and to draw lost subject toward the vehicle.

Off road driving lights. Not legal for use on public roads but helpful when searching on logging roads.

Global Positioning System (GPS). Used to identify the exact location of the receiver.

Chain saw. Used to clear downed trees which impede progress of search.

Siren/PA. It is illegal to use the siren on public streets. The PA system may be useful to call to a subject away from your vehicle.

L-Per. ELT receiver used to locate beacons from crashed planes.

Any other radio, equipment or personal item that you feel you would be better prepared for your mission.

SECTION 13

VEHICLE TRAILER CONNECTION

KCSO, Special Operations Division has defined a standardized trailer connection for the SAR community. It is recommended that you have the following trailer connection on your vehicle.

Vehicle Trailer Connection

BRAND:

BORG WARNER TC-101-F

OR

STANDARD PLUS TCP 61-F

These are 6 Pole Connectors

To Use: Each Male Connector Has Marked Pins On The Reverse.

These are:

RT = RIGHT TURN

LT = LEFT TURN

GD = GROUND

TM = TAIL LIGHTS/TRAILER MARKERS

DO NOT USE:

THE CENTER ACCESSORY PIN

THE "S" OR STOP PIN



STANDARD MOTOR PRODUCTS, INC.

WIRING CODE & TRAILER CONNECTOR MARKINGS TO
CONFORM TO S.A.E., A.T.A., AND CANADIAN STANDARDS
ASSOCIATION RECOMMENDATIONS

SEE TRUCK-TRAILER CONNECTORS IN LATEST S.A.E. HANDBOOK.

STANDARD
1235
COLE-HERSEE

TC 6206
NAPA

GROUND

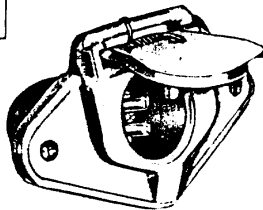
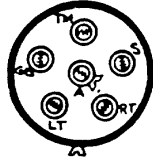
TAIL
AND
TRAILER
MARKING

LEFT TURN

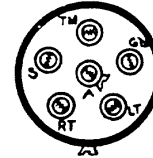
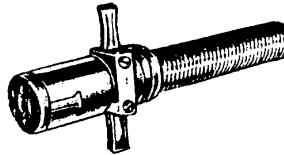
RT TURN

6 POLE TRAILER CONNECTOR PARTICULARS		
WIRE COLOR	CODE NO.	IDENTIFI- CATION MARKINGS
White	1	GD
Brown	2	TM
Yellow	3	LT
Red	4	S
Green	5	RT
Put Tail Lamp Load in with Marker Circuit #2		-
Black Or Dark Blue	6	A

6 POLE
SOCKET MARKING



6 POLE
PLUG — MARKING



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