**Standard Operating Procedures for Pacific County RACES Stations**

**1. This document:** comprises the Standard Operating Procedures (SOP) for Amateur Radio Stations, operating in the Radio Amateur Civil Emergency Service (RACES), installed at Fire Stations, Shelters and Public Gathering Places ("Fire Hall") to support Emergency and Disaster Communications within Pacific County, Washington (the County).

**2. Contact Person:** Every Pacific County RACES "Fire Hall" Radio Station must have a Contact Person with physical access to the radio station, responsible for security of the equipment and a strong liaison with the authorities in charge of the building. Equipment security in this instance includes not only protection from theft or damage, but also unauthorized use. The Contact Person does *not* have to be a licensed Amateur operator.

**3. Control Operator**: Every Amateur Radio Station is required (under CFR Title 47, Part 97), whenever it is transmitting, to have a Control Operator, holding a valid FCC-issued Amateur Radio License of an appropriate Class, who is personally responsible to ensure Rules compliance as pertains to radio station operation. This Control Operator may be a person who normally works or volunteers at the particular location, or a person brought in especially to run the radio, or both. Another similarly qualified licensed individual may relieve the Control Operator as necessary. If desired, local personnel may request assistance in obtaining an Amateur Radio license from Pacific County Amateur Radio Club. See Item 21 of this document.

**4. Authority and Direction:** Amateur Radio Operators in Pacific County may be requested to provide Emergency Radio Communications by an employee or representative of Pacific County Emergency Management Agency (PCEMA), or other Pacific County official with executive authority.

**5. RACES:** When such request has been made, the Amateur Radio Operators are said to have been "RACES Activated", and are operating under a State Mission Number and the authority of PCEMA. They are organized under the direction of the Pacific County RACES Radio Officer (RO). All personnel involved must be recorded, the hours/days they worked and any mileage they drove. This information is saved and passed to the RO in a timely manner to be reported to the County and State.

**6. ARES:** During times when Pacific County Amateur Radio Operators have not been "RACES Activated", they may still conduct drills, nets, or participate in communications exercises. During such times, they are operating under Amateur Radio Emergency Service (ARES), a civilian organization dedicated to Emergency Preparedness. They are under the direction of the Pacific County Emergency Coordinator (EC). The EC and RO may be the same individual.

**7. Non-Emergency Communications:** As long as normal communications services are operable, they will be used for all official communications. Only when normal

communications channels fail, is Amateur Radio to be used officially. Amateur Radio is never in competition with traditional communications means, but only operates as a back up, when no other means are available.

**8. Traffic Volume:** Amateur Radio has proven in the past to be a robust, flexible and reliable form of Emergency Communication. The capacity is limited, however, making it necessary at times to restrict the volume of traffic handled.

**9. During Emergency Communications:**

**A. Keep unnecessary chatter to a minimum.** Listening is more important than talking, most of the time.

**B. Monitor established Emergency Frequencies.** The operator must be listening in order to receive a call. Otherwise, valuable time may be lost.

**C. Avoid spreading rumors.** Transmit messages word-for-word as received. Never speculate, or spread misinformation on the air.

**D. Authenticate all messages.** Every message should be written and signed. Amateurs should avoid initiating emergency traffic on their own. We do the communicating for our served agencies. They should be the message originators.

**E. Strive for Efficiency.** Arrange for relief operators to avoid fatigue. Establish a rotation schedule, or if necessary, hours of operation for the radio station.

**F. Use all communications channels intelligently.** The primary purpose of Emergency Communications is to save lives and property. Everything else is incidental.

**G. Pause between transmissions.** Remember, only one station can transmit at a time. Circumstances can change quickly and there may be someone who needs to get their message through more than yours.

**10. Net Procedures:** In any RACES Activation, or ARES Exercise or Activity, there will usually be a "Net" established on local, intra-County VHF/UHF frequencies.

**A. NCS:** This Net will have a Net Control Station (NCS) directing its operation. The NCS is "always right". All contacts and traffic must go through NCS. The NCS should always keep a log of Net activity.

**B. Location:** The NCS may be located anywhere within the County. Since most of the traffic to and from an outlying "Fire Hall" station will probably be with the Emergency Operations Center (EOC) in South Bend, WA, it is important to note that the NCS is likely *not* to be at the EOC radio station.

**C. Traffic Handling:** The station holding traffic calls the NCS and requests a contact with the recipient. When NCS grants permission, the two stations may talk directly. The traffic may be handled on the Net frequency, or be moved to another frequency depending upon circumstances, and at the discretion of the NCS.

**D. Check in/out:** The NCS will periodically ask for Check-ins. If monitoring the Net, it is generally recommended a station be checked in. Be sure NCS has heard you (repeated your call sign back). Unless you indicate that you will leave the Net after a particular period of time, it will be assumed that you are continuously monitoring and ready to receive traffic. When leaving an active net, check out with NCS. Again, be sure you have been acknowledged by NCS.

**E. Pacific County Net Control Levels:** The Pacific County ARES/RACES organization has established four levels of escalating Net Control formality, dictated by the nature of the situation and whether we have been "Activated". These four levels are:

**1. Normal:** Everyday, non-emergency normal structure. No formal Net.

**2. Pre-Activation-Informal:** No formal Net or Net Control. Participating Amateurs commit to listening and occasionally making their presence known, subject to power limitations. Any traffic is handled as it comes up.

**3. Pre-Activation-Local Directed Net:** NCS established at a home station and runs regular formal directed Net. NCS relief is arranged and passed on the Net. Any participant event observations are collated by NCS to pass to DEM as requested. Any Amateur who deems it necessary can initiate this Net.

**4. Formal Activated Net:** Once "RACES Activated" by DEM request, a formal directed Net will continue, or be established, for coordination and communications support.

**11. Traffic Types:** During a Communications Emergency, there will be a certain amount of internal station-to-station tactical communication to support the activity, but most of the messages handled for our served clients will be in the form of Formal Written Traffic. Even when sending or receiving a brief message, it is our policy to write the message down. This provides a record of station activity, and makes it less likely that an important element will be left off. Once recorded, a message is never changed, but is sent exactly as filed. The written message may be passed to the receiving station by any means available; however, every effort should be made to use the best available means. In many cases, VHF/UHF voice may be the only choice. However, in some cases, packet radio or other means may be available, and may be superior to voice for many types of traffic.

**12. Message Format:** Most message traffic will be written, using the National Traffic System (NTS) format. This is also referred to as "ARRL" format, for the American Radio

Relay League, which sponsors NTS. The message format consists of three "Blocks"; the Header, Body and Signature. Even when a Message Form is not available, the message should be passed in the same order as the Form would indicate, to facilitate transcription to a standard Message Format the receiving end. See Annex 4a for an example message form. This form may be duplicated as necessary.

## 13. The Header Contains:

**A. Message Number** for reference purposes. This number is locally generated at the originating station. Along with the originating station's callsign, and possibly the date, this becomes a unique message identifier.

**B. Precedence** indicating the importance of the message. The Precedence is abbreviated with a single initial, except for EMERGENCY, where the entire word is spelled out:

**EMERGENCY**: Any message having life and death urgency to any person or group of persons, which is transmitted by Amateur Radio in the absence of regular commercial facilities. This includes official messages of welfare agencies during emergencies requesting supplies, materials or instructions vital to relief to stricken populace in emergency areas. If in doubt, do not use this precedence.

**(P) Priority:** This classification is for important messages having a specific time limit, official messages not covered in the emergency category, press dispatches and emergency-related traffic not of the utmost urgency.

**(W) Welfare:** This classification refers to either an inquiry as to the health and welfare of an individual in the disaster area or an advisory from the disaster area that indicates all is well. Welfare traffic is handled only after all emergency and priority traffic is cleared. The Red Cross equivalent to an incoming Welfare message is DWI (Disaster Welfare Inquiry).

**(R) Routine:** Most traffic in normal times will bear this designation. In disaster situations, traffic labeled Routine should be handled last, or not at all when circuits are busy with higher-precedence traffic.

**C. Handling Instructions**; completely optional and not often used in intra-County traffic. Generally not applicable to disaster-related traffic. Any special handling instructions should be spelled out in the body of the message.

**D. Station of Origin**, where message first entered the Amateur radio system, so it is possible to check back if a question arises. Also part of the unique message identification.

**E. Check:** the number of words in the body of the message.

**F. Place of Origin**, where the *message originator* is located, not necessarily where the station of origin is located.

**G. Filing Time**, ordinarily optional, but very important with emergency messages, the time the message was "handed" to the operator.

**H. Date of origin**.

**I. Address** to which the message is to be delivered. This should be as specific as possible, and include a phone number. In some cases, an email address is appropriate.

**14. The Body Contains:** The message itself. There may be 25 or 50 blank lines on a standard message form, arranged five-across. One word goes on each line. The number of words in this section is the "Check" or the "Count". Request that messages be kept as brief as possible.

**15. The Signature** contains the Name and Title of the originator. If the message is to be classed as EMERGENCY Precedence, the message must be signed.

**16. Sending a message by voice**, begins with contacting the receiving station and indicating that you have traffic. This should include the number and precedence of the traffic you hold for the, such as, "I have two Priority and one Routine". The receiving station indicates they are ready. Read the message slowly and clearly, at a speed that the receiving station will be comfortable writing down. There are certain words and phrases that are used in a specific way while passing written traffic by voice:

**PLEASE COPY**: Indicates you will be reading the message Header immediately following, sort of like saying "Ready! Set!…"

**FIGURES**: Indicates that a numerical sequence will follow.

**I SPELL**: Said after a word that will then be spelled out using the standard phonetic alphabet. Say the word, "I SPELL", the word in phonetics, and then say the word again and continue with the message. Proper names and any unusual word or spelling should be handled this way.

**BREAK FOR TEXT:** Indicates that you have finished the Header, including the Address and are breaking the transmission for the receiving station to either ask for repeats or fills on the Header, or tell you to continue with the Body of the message.

**BREAK FOR SIGNATURE:** Indicates that you are finished with the Body of the message. The receiving station counts the words, compares the count to the "Check', and if all is well, tells you to continue. Otherwise, the word count may need to be verified. This is best done by reading each line of five words, and breaking for confirmation.

**END OF MESSAGE:** Indicates that you have finished the Signature. Wait for the receiving station to tell you to go on before starting the next message. The receiving station should supply a "Time of Receipt" at this point.

**REPEAT**… Indicates the need to repeat a word or words. Use any of the following: REPEAT ALL AFTER, REPEAT ALL BETWEEN, REPEAT WORD AFTER, REPEAT WORD BEFORE… or any other phrase that describes what you need.

**17. Time of Receipt:** When a message has been properly received, the receiving station gives the transmitting station a Time of Receipt (TOR), which is recorded on the message form and in the log. Messages may be listed in the log and/or filed in chronological order by the TOR.

**18. Sending a message by Packet Radio**, or other digital format is in many ways easier and faster. The message is typed into a computer text file (off-line) and then sent to the receiving station. These messages may in some cases be ultimately delivered by Internet email. Not all RACES radio stations will be equipped with Packet Radio. The operation of Packet Radio is somewhat complicated by the fact that it requires a computer. Computer operation using various forms of emergency power can be quite problematic. Pacific County RACES policy is to recommend the addition of Packet Radio equipment as a "second tier", after the establishment of a voice station. A full digital tutorial is beyond the scope of this document. For those messages that will be passed within Pacific County, during an emergency, most will be delivered as Formal Written Traffic. Formatting may be difficult or not preserved in some digital modes. In this case, each part of the Header is labeled:

**MSG NUMBER:**
**PRECEDENCE:**
**HANDLING:**
**STATION OF ORIGIN:**
**PLACE OF ORIGIN:**
**TIME FILED:**
**DATE:**
**TO:**
**POSITION:**
**LOCATION:**
**FROM:**
**POSITION:**
**LOCATION:**
**MESSAGE TEXT:**
**END OF MESSAGE TEXT**
**RECEIVED TIME:**
**DATE:**
**BY OPERATOR:**

These additional words introduced into the communication are not part of the message itself, but merely labels clarifying the graphical blocks on the standard message form. These labels are not counted as part of the "check". If the message were read aloud, it should be indistinguishable from the same message read from a standard NTS message form.

**19. Logs**: Each station engaged in emergency communications should keep a log. This is important for a number of reasons. A log can be kept on a blank sheet of paper if a printed form is not available. At the top of each page should be entered the name of the station, the date, and the operator's name and callsign. If the operator or date changes, draw a line across the log sheet and enter the new data. Each entry should have a time, the call of the station heard or worked, and a brief notation of the nature of the transmission. When handling traffic, the message number, call of the station received from or transmitted to, and the Time of Receipt should be listed. Any communication with any other station should be noted in the log, even if only time and call. In some emergencies, the Amateur Radio Logs have turned out to be the only written chronological record of events.

**20. NCS Logs**: Net Control Station should keep a detailed log listing every station that checks in, and the time they did so. When they leave, that time should also be recorded. For any message traffic handled through the net, some record should be kept, at least the two station calls, the message number and TOR. If the stations move off the Net to handle traffic, that should also be recorded with the calls and time, and if known, the frequency to which they are moving.

**21. Pacific County Amateur Radio Club (PCARC):** Serves those who are, or would like to become Amateur Radio operators, by recruiting, training, and licensing, through classes, seminars and Volunteer Exam sessions. Although not directly connected with Pacific County government, PCEMA, ARES or RACES, the Club actively advocates within the Amateur community, promoting ARES and RACES membership. PCARC maintains an informational Website:  http://www.qsl.net/w7rdr

**22. Local Chain of Command:** The RACES radio station operator will accept messages from, or at the direction of, the local Person In Charge (PIC). This may be a Fire Chief, Shelter Boss or other official. Any other originator must obtain approval from the PIC or their designee. Generally, messages will be destined for the Pacific County Emergency Operating Center, through which all requests for supplies, information or assistance must go. Permission from the EOC must be obtained before the RACES operator would send a message directly to the State or other jurisdiction outside Pacific County. Messages will also generally come from the EOC, and must be delivered to the person to whom they are addressed. The RACES radio station operates at the pleasure of the PIC.

**23. Non-Amateur Frequencies:** While it is true that most modern Amateur VHF/UHF radios will tune to out-of-band Public Safety frequencies, the policy of Pacific County RACES is that no such non-Amateur frequency be entered into the RACES equipment.

Having such frequencies in the RACES radio will inevitably promote listening in on those channels, tending to make the monitoring of Amateur frequencies less efficient. The mission of the RACES station and operator is to facilitate Amateur emergency communications. Anything that detracts even slightly from that mission is to be avoided.

**24. Tactical Callsigns:** In emergency communications, the use of Tactical Callsigns is common. A tactical callsign is usually derived from the location or mission of the unit, such as, "South Bend EOC", or "Naselle Fire Station". The strength of this is that all on a Net know which unit is involved, not readily apparent from the FCC callsign. If the operator changes at a particular station, the FCC callsign may change, but the Tactical Callsign does not. Pacific County RACES policy is to use Tactical Callsigns during events and training involving multiple stations. The use of tactical callsigns *does not* relieve a RACES station operator of the requirement to also give their FCC callsign as required by regulation, at least every 10 minutes and at the end of a transmission or series of transmissions. This requirement can usually be met by including the FCC callsign at the end of an exchange, following the tactical callsign.