**Primary Agency:**

State RACES Officer

**Support Agencies:**

Local Organizations

INTRODUCTION

**Purpose**

Provide guidance, establish responsibility and ensure coordinated operations between state of Washington government officials (state/local) and amateur radio emergency communications organizations during times when the safety of life and/or property are at extraordinary risk. Maximum benefits from amateur radio assets, through their organizations, can be obtained only through careful planning that identifies the organizations, agencies and individuals concerned and assigns a definitive role to each.

To encourage agencies and organizations with emergency communications responsibilities to include amateur radio organizations in local, county and state emergency plans and programs.

**Scope**

Tab D focuses on the established procedures and networks the Washington State Emergency Operations Center, Amateur Radio Emergency Services (ARES), local emergency operations/coordination centers and other amateur radio organizations can employ during regional, local or statewide emergencies. ARES operations support state agencies, county or city agencies, American Red Cross, National Weather Service and others throughout the state. Any organization or agency can request support of amateur radio by contacting the emergency management agency in their local jurisdiction.

**Policies**

Amateur radio operators supporting emergency communications for government agencies within the state of Washington must be registered as emergency workers in accordance with Chapter 38.52 Revised Code of Washington (RCW) and Chapter 118-04 Washington Administrative Code (WAC). This registration takes place at the city or county emergency management department level.

**SITUATION & ASSUMPTIONS**

**Situation**

The Amateur Radio Emergency Services (ARES), a program in the American Radio Relay League’s (ARRL) Field Organization, has supported public service and emergency communications, when called upon to do so, for the past 75 years.

**Assumptions**

Any Amateur Radio Operator who is called upon to provide communications support to any federal, state, county or city agency, shall comply with any specific training and certification that is required by the served agency.

**CONCEPT OF OPERATIONS**

**Amateur Radio Organizations and Government Programs**

Amateur Radio Emergency Service (ARES)

ARES is the primary or lead organization, in the state of Washington, for amateur radio emergency communications. ARES is a program of the Amateur Radio Relay League’s (ARRL) Field Organization. ARES is a 75 year old national organization with over 40,000 volunteers who dedicate their time, equipment and financial resources to providing emergency communications ‘When All Else Fails’.

Military Affiliated Radio Service (MARS)

MARS is an organization of amateur radio operators who provide specific communications assets for the United States Armed Forces. MARS operators are amateur radio operators who have undergone specific training and operate within the narrow constricts of the MARS mission. MARS units provide liason operators to coordinate any needed communications between MARS networks and normal amateur radio networks.

Radio Amateur Civil Emergency Service (RACES)

RACES is a program of the federal government which is overseen by the Federal Emergency Management Agency (FEMA) under which amateur radio operators function during very specific conditions. RACES is not an organization, but a set of rules and guidelines that may be invoked under very special conditions which may require very tight control and limited communications. RACES Rules may be found under Federal Communications Commission (FCC Rules and Regulations, Part 97, Subpart E Section 97.407 and FEMA Civil Preparedness Guide (CPG) 1-15 dated March1991

Washington State Emergency Net (WSEN)

WSEN is a statewide amateur radio network that is operated during statewide or regional disasters. The network is managed through a cooperative effort between the Eastern Washington and Western Washington ARRL Section Managers. The purpose of the network is to provide a wide area command and control of emergency amateur radio communications. During times of operation, the network will receive and direct routine, priority and emergency traffic, to the proper station and/or frequency. The WSEN establish its own Net Control Stations (NCS) and leadership.

Other Amateur Radio Organizations

The established amateur radio networks, listed in this plan, are open to all amateur radio organizations involved in emergency communications. It is recommended that all amateur radio organizations involved in providing emergency communications for government agencies and private organizations should familiarize themselves with this plan and participate in the regularly scheduled exercising of the networks. Through planning and exercise, comes efficiency and consistency.

**Direction & Control**

The State Emergency Operations Center (SEOC) or any County or City Emergency Operations/ Coordination Center (EOC/ECC) may request the use of available volunteer amateur radio communications equipment and personnel.

The SEOC may contact the State RACES Officer and request that the Camp Murray Amateur Radio Station supporting the SEOC bring up communications links between needed locations.

Once contacted, the State RACES Officer will implement this plan in coordination with the ARRL Section Emergency Coordinators (SEC) and, where appropriate, the ARES leadership in any area impacted by the emergency.

**ORGANIZATION**

Responsibility for updates, maintenance and management of this plan begins with the Military Department’s Telecommunications Division, through the State RACES Officer.

Under normal circumstances (those not requiring operations under RACES rules), the ARRL Section Managers(SM), Section Emergency Coordinators (SEC), District Emergency Coordinators (DEC) and local Emergency Coordinators (EC) are responsible for the activation of their respective networks. Under special conditions when amateur radio communications needs to be conducted using RACES rules,(specifics of operations to be directed by FEMA or Homeland Security) the Washington State RACES Officer (SRO) will notify the Assistant Radio Officers (ARO), the Regional RACES Coordinators (RRO) and the Local County/City RACES Officers (LRO) that the conditions exist and RACES Rules are in effect.

The local Emergency Coordinator (EC) serves as the liaison between the local ARES organization, other Amateur Radio organizations involved in emergency communications as well as the served agencies in their specific jurisdiction, recruits members for the ARES organization, and develops plans for the utilization by the organization in support of the agencies or organizations, which it serves. It is the responsibility of the EC to insure that the membership meets the training requirements of served agencies. All local units should be organized for operation under the Incident Command System (ICS).

All amateur radio organizations and/or individual operators within the State are encouraged to participate in the ARES program and other amateur radio emergency communications programs within their respective jurisdictions.

**ACTIONS**

**Response Activities**

Amateur Radio, through the ARES organizations/operators, should be prepared to support the following tasks/missions at the state and local levels:

* Back-up emergency communications between the state EOC and local government Emergency Operations Centers (EOC).
* Back-up emergency communications within local jurisdictions.
* Back –up warning communications between state and local government agencies.
* Back-up emergency communications between a state agency headquarters and its respective district/region/area headquarters.
* Back-up emergency communications between district/region/area headquarters and field units where communications are limited or non-existent.
* Back-up communications between the State EOC, local EOC, and respective designated staging areas and base camps.
* Back-up emergency communications between the state’s EOC, FEMA Regional Operations Center (ROC), and the FEMA Disaster Field Office (DFO).
* Back-up emergency communications for federal agencies (i.e. US Forest Service, Department of Energy and others), as needed.
* Communications and video (if available) support, as needed, for conduct of search and rescue operations, damage assessment, or other state and local government assigned tasks.
* Back-up emergency communications for shelters, emergency worker centers, sheriff and police departments, sheriff/police/fire dispatch centers, 9-1-1 centers, fire departments/districts, and other requirements designated by the local emergency management office.

When activated to conduct the above tasks/missions, amateur radio assets, organizations/ operators, will be employed in the network levels depicted in Annex A, Network Levels.

Network and frequency assignments are identified at Annex A, Appendix 3, Network Assignment and Frequencies. Message traffic should be sent/received using any message form that may be used by various EOCs. The amateur radio operator shall convert the message to the appropriate form used in the Camp Murray amateur radio station.

Should additional amateur radio resources be needed for the above tasks/missions, requests for resources should be made through the State EOC per Annex C, Communications Resources and Personnel Order.

This plan recognizes that amateur radio, primarily through ARES organizations/operators, will continue to support requirements for American Red Cross, hospitals, the business community, other non-government agencies, and the general public. If needed, the State RACES Officer will coordinate with the ARES SEC’s and DEC’s for employment of ARES organizations to support possible requirements identified above.

**RESPONSIBILITIES**

**Primary Agency**

State RACES Officer

* Maintaining, updating and executing this plan as needed.
* Identifying and coordinating the operation of amateur networks to support the operational requirements identified above.
* Identifying and/or designating the Amateur Radio Regional Coordinator and Region Net Control Station.
* Coordinating with local ARES officials, ARES SEC, and/or ARES DEC, the use of local amateur operators and equipment, in support of state agencies, federal agencies, and other organizations located within a local jurisdiction.

**Support Agency**

Local Organizations

* Ensuring that the local team has a leadership structure. In the case of ARES, that there is an LEC as the point of contact.
* Developing and implementing a local emergency communications plan for the use of amateur radio within the jurisdiction as an integral part of the local Comprehensive Emergency Management Plan. The local plan should complement this state plan.
* Maintaining, an amateur radio station capable of communicating on appropriate and assigned amateur frequencies that are normally used within the state and local jurisdiction, for emergency communications.
* Being prepared to provide amateur radio communications with state, federal, and other organizations located within the jurisdiction.
* Preparing and submitting to State EMD, an Amateur Radio Resource List (Annex E ) of amateur radio personnel who are available to support emergency communications missions away from home jurisdiction.
* Being prepared to send and receive traffic, to and from the general public (licensed independent stations) over local emergency networks.

**TABS**

1. Network Levels
2. Regional and State Wide Frequencies
3. Recommended Message Form
4. Requesting Mutual Assistance
5. Amateur Radio Resource List
6. Camp Murray Amateur Radio Station
7. Recommended Pro Words and Phrases

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**NETWORK LEVELS**

**PURPOSE**

To describe and provide guidance on the implementation of the state and local level networks using amateur radio.

**CONCEPT OF OPERATIONS**

Upon activation of the State EOC Amateur Radio Station, the CMD 1 nets to affected region(s) will be established.

The State RACES Officer will coordinate with ARES Region Coordinators and/or local ARES officers and as needed establish the CMD 2 and 3 nets to support state agencies with emergency communications.

Region(s) NCS's will establish OPS 1 nets with affected counties and other government agencies, as needed.

County and City EOC's will establish respective OPS 2 and 3 nets, as needed.

**Network Levels**

State and local network levels will be established for network management and control, as needed, to ensure emergency back-up communications are planned/coordinated for and are available to support emergency/disaster operations of the state. Three network levels at both the state and local level have been identified and are defined below.

* Washington State Emergency Network
* State Command 1 (CMD 1) - As depicted at Appendix 1 the CMD 1 network provides communications between the Net Control Station (NCS), State EOC, the nine (9) Region NCS's, and County EOC's
* State Command 2 (CMD 2) - As depicted at Appendix ,1the CMD 2 network provides emergency back-up communications between a specific state agency ( i.e. Department of Health, Washington State Patrol, Washington National Guard, Department of Natural Resources etc.) headquarters and their respective district/region offices. CMD 2 networks are initiated only at the request of the State, County or Local Served Agency.
* State Command 3 (CMD 3) - As depicted at Appendix 1, the CMD 3 network is similar to CMD 2, but provides emergency back-up communications between Federal Agencies and their respective District/Regional/Field Offices, which operate within the State of Washington. CMD 3 Networks are initiated only at the request of the Served Federal Agency.
* Local Level
* Local Operations 1 (OPS 1) - As depicted at Appendix 2, the OPS 1 network provides communications between the Region NCS and the county EOC's within respective regions.
* Local Operations 2 (OPS 2) - As depicted at Appendix 2, the OPS 2 network provides emergency back-up communications between the county EOC, respective local jurisdictions (cities), and county agencies/districts/command posts (i.e. Sheriff, fire department/district, 9-1-1 Center, public works department, staging areas/base camps, incident command post, and other government offices).
* Local Operations 3 (OPS 3) - As depicted at Appendix 2, the OPS 3 network provides emergency back-up communications between county agencies/districts/command posts and city EOC's and their respective units/elements that are in the field supporting emergency/disaster operations.
* Other networks may be needed for special purposes and may be requested as needed by Federal, State and or Local officials. Those special networks will be named as implemented, ie. LOG1, etc.

**Network Coordinating Instructions**

Network assignments and frequencies are at Tab B. Use of the HF frequencies by OPS 1 through OPS 3 networks within affected areas must be coordinated by respective net control stations.

When transmitting/receiving traffic, stations should use the message form identified by the Served Agency as their message form. Operators should be familiar with various message forms and the procedures for converting messages from one for to another.

Figure 1 - Command 1 (CMD 1) State Level Network

Figure 2 - Command 2 (CMD 2) State Level Network

Figure 3 - Command 3 (CMD 3) State Level Network

Figure 4 - Operations 1 (OPS 1) Local Level Network

Figure 5 - Operations 2 (OPS 2) Local Level Network

**RESPONSIBILITIES**

**State RACES Officer**

* As directed, activate and supervise the operation of the Amateur Radio station at the State EOC and the out-stations that will serve as traffic relay stations on the CMD nets.
* Assure CMD 2 and 3 networks are activated as needed.
* Coordinate augmentation and requests for assistance, from the regions, counties or cities, for Amateur Radio resources, including equipment and/or operators.

**State Amateur Radio Station**

* Under the supervision of the Station Manager, monitor the CMD 1 nets on the primary amateur frequencies as listed in Appendix 3, and guard the primary Washington Emergency Net HF frequency.
* Monitor the CMD 2 nets. Identify stations that serve as the NCS's for the CMD 3 nets, as needed.
* Send and receive message traffic for the State EOC using standard message handling procedures.

**State Net Control Station (NCS)**

* Serve as Net Control Station (NCS) of the CMD 1 network.
* Manage and control traffic in accordance with standard net control station procedures.
* As needed direct the movement of traffic according to precedence between the regions and to the State EOC.
* Identify and designate the primary and alternate frequencies (HF, 2-meter, etc. ) for the CMD 1 network.

**Regional Coordinator**

* As directed, activate and supervise the operation of the station identified to serve as the Region Net Control Station (NCS) for the OPS 1 net.
* Assist the State RACES Officer in identifying and establishing CMD 2 and 3 network stations located within the region.
* Assist the State RACES Officer and local jurisdiction Emergency Coordinators, in identifying amateur resources within the region that may be needed to augment local operations.
* Assist local jurisdiction ARES Officials and organizations in the development of local ARES plans to support OPS 2 and OPS 3 nets.

**Region Net Control Station (NCS)**

* Serve as Net Control Station (NCS) of the OPS 1 network. Assist in transmitting "Priority" traffic as needed within the region and to the state. Tab C, Recommended Message Form, defines a timeframe for processing traffic.
* Monitor and serve as a relay on the state CMD 1 net for County EOC's which are not able to or are having difficulties in contacting the State EOC to pass "Emergency" traffic. "Emergency" traffic are those messages where lives are gravely impacted/endangered and a response is required immediately or within a timeframe to ensure that lives are no longer further endangered. Annex B, General Message Form defines a timeframe for processing priority and emergency traffic.
* Identify and designate the primary and alternate frequencies (HF, 2-meter, other) to be used on respective OPS 1 network. Upon identification of frequencies, the Region NCS will provide assignment to the State ARES Officer.
* Serve as NCS of the state CMD 1 network, when designated by the State ARES Officer.
* Manage and control traffic in accordance with net control station procedures.

**Local County/City Emergency Coordinator**

* As directed, activate and supervise the operation of the Amateur Radio Station at the county/city EOC.
* Assist respective local jurisdictions and county agencies/districts/command posts in establishing OPS 3 networks.
* Coordinate and submit requests for additional amateur radio resources that may be needed to augment local operations to the State Emergency Management Division office.

**County/City EOC Amateur Radio Station**

* Send and receive message traffic for the City/County EOC using standard message handling procedures.

**REGIONAL AND STATEWIDE FREQUENCIES**

**State Level**

Command 1 (CMD 1)

The CMD 1 network will be comprised of the following stations:

* State EOC
* State NCS
* ARES Region 1 (NCS)
* ARES Region 2 (NCS)
* ARES Region 3 (NCS)
* ARES Region 4 (NCS)
* ARES Region 5 (NCS)
* ARES Region 6 (NCS)
* ARES Region 7 (NCS)
* ARES Region 8 (NCS)
* ARES Region 9 (NCS)
* County EOC's

Primary Frequency: 3.985 MHz

 7.245 MHz (Alternate)

HF Packet: 3.624 MHz

Command 2 and 3 (CMD 2/CMD 3)

CMD 2 and 3 networks will be comprised of stations identified to provide support to the following:

* State Agency Headquarters (NCS for CMD 2)
* Federal Agency District/Region Office (NCS for CMD 3)
* State Agency District/Region field units/command posts

The State EOC NCS and appropriate Region NCS will serve as NCS of CMD 2 and 3 networks, if needed.

**Region and Local Level**

Operations 1 (OPS 1)

OPS 1 network will be comprised of the following stations within the region. The regions coincide with the Washington Homeland Security Regions.

|  |  |
| --- | --- |
| **Region 1** | ESCA EOC Island County EOCSan Juan County EOC Skagit County EOCSnohomish County EOCWhatcom County EOC |
| **Region 2** | Clallam County EOCJefferson County EOCKitsap County EOC |
| **Region 3** | Grays Harbor County EOCLewis County EOCMason County EOCPacific County EOCThurston County EOCCity of Centralia EOC |
| **Region 4** | Clark County EOCCowlitz County EOCSkamania County EOCWahkiakum County EOC |
| **Region 5** | Pierce County EOC |
| **Region 6** | King County ECCCity EOCs |
| **Region 7** | Chelan County EOCDouglas County EOCGrant County EOCKittitas County EOCOkanogan County EOC |
| **Region 8** | Benton County EOCFranklin County EOCKlickitat County EOCWalla Walla County EOCYakima County EOC |
| **Region 9** | Adams County EOCAsotin County EOCColumbia County EOCFerry County EOCGarfield County EOCLincoln County EOCPend Oreille County EOCSpokane County EOCStevens County EOCWhitman County EOC |

**Frequency Assignment**

The State, Region, and/or County Net Control Stations may operate the networks previously discussed using any frequency within the amateur spectrum taking into consideration the capabilities of the stations within respective nets. The following listings are recommended

**Regional Coordination Frequencies**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Region/User | Frequency | PL Tone | Name | Lat/Long |
| Region 1 | 145.190 | 127.3 | Lyman Hill | 48.35.42N/122.09.35W |
| 444.500 | 103.5 | Lyman Hill | 48.35.42N/122.09.35W |
| 224.780 | 103.5 | Lyman Hill | 48.35.42N/122.09.35W |
| 53.090 | 100.0 | Lyman Hill | 48.35.42N/122.09.35W |
| Region 2 | 53.370 | 100.0 | Blyn Mountain | 48.05.24N/122.58.21W |
| Region 3 | 145.470 | 100.0 | Capitol Peak | 46.58.22N/123.08.17W |
| 224.040 | 118.8 | KO Peak | 46.27.00N/123.31.16W |
| Region 4 | 224.720 | 100.0 | Larch Mountain | 45.00.50N/122.22.30W |
| 3.825 MHz | LSB |  |  |
| Region 5 | 145.370 | 136.5 | Grass Mountain | 47.12.15N/121.47.42W |
| Region 6 | 147.080 | 103.5 | West Tiger | 47.29.18N/121.56.49W |
| Regions 7, 8 & 9 | 3.990 MHz | LSB |  |  |
| Medical Services Team | 146.900 | 103.5 | VA Hospital Seattle | 47.33.22N/122.05.24W |
| 443.550 | 103.5 | VA Hospital Seattle | 47.33.22N/122.05.24W |
| 444.825 | 103.5 | NW Hospital Northgate | 47.42.50N/122.20.15W |
| 443.675 | 103.5 | Tacoma General Hospital | 47.15.34N/122.27.08W |
| 440.550 | 103.5 | St. Peter Hospital | 47.03.08N/122.50.50W |
| 442.625 | 103.5 | Mt Baldi | 47.13.18N/121.50.58W |

**Primary Washington Emergency Net Frequencies**

3.985 MHz State EOC - CMD 1 Net HF (Initial check-in and EMERGENCY SEOC traffic)

7.245 MHz Alternate Washington Emergency Net Frequency

3.624 MHz HF Packet (Pactor)

**Other HF – 60 Meter Operations**

5.330.5 MHz Regional Coordination with surrounding sections/states

5.346.5 MHz Coordination with Montana/Oregon

5.357 MHz Coordination with Idaho

5.403.5 MHz National/International coordination

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**MESSAGE FORM**

**PURPOSE**

Identify and establish guidance for use of the message form when transmitting and receiving message traffic between stations.

**USE OF THE MODIFIED ARRL RADIOGRAM**

It is recommended that the ARRL Radiogram should be used by stations on State Command 1 to 3 networks (CMD 1/CMD 2/CMD 3) and the Local Operations 1 to 3 networks (OPS 1/OPS 2/OPS 3) for passing of voice message traffic. If capability exists, the message form should be used via PACKET as well. (Though the ARRL Radio Gram is the recommended form for message traffic, forms generated and in use by federal, state, and local jurisdictions are acceptable.) It is recognized that many message forms are being used by various agencies and organizations; an amateur radio operator should be familiar with how to convert a message from one form to another.

To ensure messages are handled in an efficient manner, three levels of precedence have been established. The general criteria for choosing the appropriate precedence is explained in the instructions for the form. Message drafters are responsible for choosing the appropriate precedence. The precedence levels are:

EMERGENCY (E)

Message concerns a situation where lives are endangered or gravely impacted and immediate action/response is required. Action/response should occur within 30 minutes to one (1) hour "after receipt" of message. Emergency messages will be transmitted ahead of any priority or routine messages.

NOTE: An EMERGENCY precedence message must first be approved and initialed by responsible authority (i.e. EOC Supervisor, elected official or designated representative) prior to transmission. PRIORITY and EMERGENCY messages should not exceed the maximum of 10 lines, 5 words per line, of uppercase 10-point typed letters or handwritten uppercase block lettering.

PRIORITY (P)

Message concerns a situation where a timely operational response is required that would ensure that lives are not further endangered. Action/response should occur within four (4) to six (6) hours "after receipt" of message. Priority messages will be transmitted ahead of any routine messages.

ROUTINE (R)

Message(s) that reflect routine data reference operational, logistical, and administrative concerns. Action/response should occur within twelve (12) to (18) hours.

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**REQUESTING MUTUAL ASSISTANCE**

When local ARES resources are unavailable or overloaded due to civil or natural emergency, additional communications assistance can be obtained through the ARES Management Structure. The local ARES Emergency Coordinator shall make a request for additional team support through the local Emergency Operations Center (EOC), which in turn will forward the request to the State Emergency Operations Center (SEOC). The SEOC shall contact the State RACES Officer or his/her designee, who will in-turn arrange for the assistance and report the result to the originating EOC.

Before requesting assistance from teams in the Western Washington Section, all efforts shall be made to obtain assistance from the other teams in the District where the requesting team resides. Information contained in each request shall include but not limited to:

* Name of Requesting Jurisdiction and Point of Contact
* Phone # and email for Point of Contact
* Number of Persons needed
* Any Specific qualifications required
* Type of equipment needed
* Estimated time of assignment
* Address/description of reporting point
* Will personnel be responsible for their own food and lodging?
* Will personnel need any special equipment/supplies

The following reports are required when leaving and returning to home jurisdiction:

* All persons being deployed because of a Mutual Assistance Assignment shall always report their departure to the local Emergency Manager and report their return to their local jurisdiction to the Emergency Manager.
* All persons being deployed because of a Mutual Assistance Assignment shall report their total hours served and total miles driven, for the assignment, to the local ARES Emergency Coordinator.

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## AMATEUR RESOURCE LIST

### STATE AND LOCAL PLANS

LOCAL JURISDICTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

POINT OF CONTACT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PHONE NO. \_\_\_\_\_\_\_\_\_\_\_\_\_

 (24-Hr Number)

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CERTIFICATION: Individuals listed have met the requirements to be registered as Emergency Workers within this jurisdiction.

EM Director and/or POC Initials: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

INSTRUCTIONS FOR COMPLETING INFORMATION

|  |  |
| --- | --- |
| Jurisdiction | County or City |
| Point of Contact | Provide the name of the person who will be the primary contact for coordinating use of personnel and/or equipment. |
| Phone Number | Provide a 24-hour contact number of the POC. |
| Name | Provide name of individual (last name, first name, middle initial). |
| Call Sign | Provide amateur radio call sign of individual. |
| License | Indicate highest level of amateur radio license obtained. Levels (lowest to highest) are Technician, General, Advanced, and Extra. |
| Type Equipment | Using letter designator below, indicate type of equipment(s) individual can operate and/or has available for use.1. 2-meter voice
2. 2-meter packet
3. APRS
4. 6-meter voice
5. 40-meter voice and/or pactor
6. 80-meter voice and/or pactor
7. 220 and/or 440 MHz voice
 |
| Mobile/Port | Using letter designator above, indicate which equipment is available for use in mobile and/or portable configurations. |

CAMP MURRAY AMATEUR RADIO STATION

The Amateur Radio Station is located in Room 110A in the Washington State Emergency Operation Center, at Camp Murray. The station is under the supervision of the Washington State RACES Officer and the RACES Station Manager.

The station utilizes approximately 20 volunteer radio operators, who are assigned to various tasks within the station. Although Amateur Radio is the primary mode of communication, the station is equipped with various commercial and government radio systems, which a volunteer may be called upon to operate. The Camp Murray Station also has a number of ‘out stations’ located in various parts of the Pacific Northwest, that act as Net Control and relay points, thus allowing for coverage in and out of an area effected by an emergency.

When operators are needed, the RACES Officer or RACES Station Manager, will page the team by sending a message through MyStateUSA. Upon receipt of the message, each volunteer should contact the Station to receive his/her assignment and shift. In the event that the RACES Officer or RACES Station Manager are not available, the EOC Duty Officer or a member of the Telecommunications Staff can initiate the paging of the volunteer team.

The station has several operating positions that cover frequencies in the 75 meter band up through the 900 MHz frequencies allocated for Amateur Radio. The main HF position (operating from 75 meters through 10 meters) has the capability of operating up to 1 Kilowatt of power. This radio is routed to an antenna patch panel for the proper antenna selection.

The station has three operating positions that have the capability to send and receive on various VHF and UHF bands. These radios have antennas located at different elevations on the tower, allowing the operator to choose the best antenna to minimize multipathing or to take advantage of different propagation characteristics.

Redundancy is a very important characteristic of the station. The station has a second HF radio position that has the same radio as the primary HF position. Should the primary radio fail, the secondary radio can be patched into the antenna system. The secondary radio can be patched to a separate antenna, allowing it to operate on one band while the primary operates on another.

The station can also operate MARS, CAP, FNARS, OSCAR and CEMNET. Other Amateur, Commercial and Government services can be added as needed.

As an adjunct to the fixed station in the EOC, we maintain a communications trailer with the same frequency agility but a reduced level of operating positions. The trailer is available for deployment upon request to the Telecommunications Section of the Emergency Operations Center.

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RECOMMENDED PRONUNCIATION OF ALPHABET, NUMBER

AND PRO-WORDS/PHRASES

|  |
| --- |
| ITU Radio Phonetic Alphabet |
| **Character** | **Phonetic** | **Character** | **Phonetic** |
| A | Alfa | N | November |
| B | Bravo | O | Oscar |
| C | Charlie | P | Papa |
| D | Delta | Q | Quebec |
| E | Echo | R | Romeo |
| F | Foxtrot | S | Sierra |
| G | Golf | T | Tango |
| H | Hotel | U | Uniform |
| I | India | V | Victor |
| J | Juliet | W | Whiskey |
| K | Kilo | X | X-Ray |
| L | Lima | Y | Yankee |
| M | Mike | Z | Zulu |

|  |
| --- |
| ITU Radio Phonetic Alphabet |
| **Number** | **Phonetic** |
| 0 | ZEE-RO |
| 1 | WUN |
| 2 | TOO |
| 3 | THU-REE or THREE |
| 4 | FOW-ER |
| 5 | FI-IV or FIFE |
| 6 | SIX |
| 7 | SEV-EN |
| 8 | ATE OR A-IT |
| 9 | NINER |
| ITU Radio Phonetic Alphabet |
| **Punctuation** | **Phonetic** |
| Decimal | DAY-SEE-MAL |
| Period | PEERY-ID |
| Question Mark | QUEARY |

**Anomalies and Idiosyncrasies**

* To distinguish “Z” from “C” on phone, it is common practice to say “zed” (an old British phonetic) for “Z”, especially when saying a call sign. “Zed” is shorter (one syllable vs. two for “zulu”.) However, in formal traffic, the ITU: “ZULU” is more correct and proper.
* ROGER” (an early phonetic) is still used for “received” (equivalent of sending “R” in Morse) - It does NOT mean “yes” or “affirmative”. It only means: “I have received your message completely.”

Words and Phrases

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| PROWORD | Explanation | Equivalent To PROSIGN |
| ALL AFTER | The portion of the message to which I have reference is all that which follows \_\_\_\_\_\_. | AA |
| ALL BEFORE | The portion of the message to which I have reference is all that which precedes \_\_\_\_\_\_. | AB |
| AUTHENTICATE | The station called is to reply to the challenge which follows |   |
| AUTHENTICATION IS | The transmission authentication of this message is \_\_\_\_\_\_. |   |
| BREAK | I hereby indicate the separation of the text from other portions of the message. | BT |
| BROADCAST YOUR NET | Link the two nets under your control for automatic rebroadcast. |   |
| CALL SIGN | The group that follows is a call sign. | PT |
| CORRECT | You are correct, or what you have transmitted is correct. | C |
| CORRECTION | An error has been made in this transmission.  Transmission will continue with the last word correctly transmitted.  | EEEEEEEE |
| An error has been made in this transmission (or message indicated).  The correct version is \_\_\_\_\_\_. | C |
| That which follows is a corrected version in answer to your request for verification. | C |
| DISREGARD THIS TRANSMISSION -- OUT | This transmission is in error.  Disregard it.  This PROWORD shall not be used to cancel any message that has been completely transmitted and for which receipt or acknowledgement has been received.  | E E E E E E E E AR |
| DO NOT ANSWER | Stations called are not to answer this call, receipt for this message, or otherwise to transmit in connection with this transmission.  When this PROWORD is employed, the transmission shall be ended with the PROWORD "OUT". | F |
| EXECUTE | Carr out the purpose of the message or signal to which this applies.  To be used only with the executive mode. | IX{5 second dash} |
| PROWORD | Explanation | Equivalent To PROSIGN |
| EXECUTE TO FOLLOW | Action on the message or signal which follows is to be carried out upon receipt of the PROWORD "EXECUTE".  To be used only with the delayed executive method. | IX |
| EXEMPT | The addressees immediately following are exempted from the collective call. | XMT |
| FIGURES | Numerals or numbers follow. |   |
| FLASH | Precedence FLASH | Z |
| FROM | The originator of this message is indicated by the address designator immediately following. | FM |
| GROUPS | This message contains the number of groups indicated by the numeral following. | GR |
| GROUP NO COUNT | The groups in this message have not been counted. | GRNC |
| I AUTHENTICATE | The group that follows is the reply to your challenge to authenticate. |   |
| IMMEDIATE | Precedence IMMEDIATE. | O |
| IMMEDIATE EXECUTE | Action on the message or signal following is to be carried out on receipt of the word EXECUTE.  To be sued only with the Immediate Executive Method. | IX |
| INFO | The addresses immediately following are addressed for information. | INFO |
| I READ BACK | The following is my response to your instructions to read back. |   |
| I SAY AGAIN | I am repeating transmission or portion indicated. | IMI |
| I SPELL | I shall spell the next word phonetically |   |
| I VERIFY | That which follows has been verified at your request and is repeated.  To be used only as a reply to VERIFY. |   |
| MESSAGE | A message which requires recording is about to follow.  Transmitted immediately after the call.  (This PROWORD is not used on nets primarily employed for conveying messages.  It is intended for use when messages are passed on tactical or reporting nets.) |   |
| PROWORD | Explanation | Equivalent To PROSIGN |
| MORE TO FOLLOW | Transmitting station has additional traffic for the receiving station. | B |
| NET NOW | All stations are to net their radios on the unmodulated carrier wave which I am about to transmit. |   |
| NUMBER | Station Serial Number | NR |
| OUT | This is the end of my transmission to you and no answer is required or expected. | AR |
| OVER | This is the end of my transmission to you and a response is necessary.  Go ahead, transmit | K |
| PRIORITY | Precedence PRIORITY | P |
| READ BACK | Repeat this entire transmission back to me exactly as received. | G |
| RELAY (TO) | Transmit this message to all addressees (or addressees immediately following this PROWORD).  The address component is mandatory when this PROWORD is used. | T |
| ROGER | I have received your last transmission satisfactorily. | R |
| ROUTINE | Precedence ROUTINE | R |
| SAY AGAIN | Repeat all of your last transmission. Followed by identification data means "Repeat \_\_\_\_\_ (portion indicated)". | IMI |
| SERVICE | The message that follows is a SERVICE message. | SVC |
| SIGNALS | The groups which follow are taken from a signal book.  (This PROWORD is not used on nets primarily employed for conveying signals.  It is intended for use when tactical signals are passed on non-technical nets). |   |
| SILENCE(Repeated three or more times) | Cease transmission on this net immediately.  Silence will be maintained until lifted.  (When an authentication system is in force, the transmission imposing silence is to be authenticated). | HM HM HM |
| SILENCE LIFTED | Silence is lifted.  (When an authentication system is in force, the transmission lifting silence is to be authenticated). |   |
| PROWORD | Explanation | Equivalent To PROSIGN |
| SPEAK SLOWER | Your transmission is at too fast a speed.  Reduce speed of transmission. |   |
| STOP REBROADCASTING | Cut the automatic link between the two nets that are being rebroadcast and revert to normal working. |   |
| THIS IS | This transmission is from the station whose designator immediately follows. | DE |
| TIME | That which immediately follows is the time or date time-time group of the message. |   |
| TO | The addressees immediately following are addressed for action. | TO |
| UNKNOWN STATION | The identity of the station with whom I am attempting to establish communication is unknown. | AA |
| VERIFY | Verify entire message (or portion indicated) with the originator and send the correct version.  To be used only at the discretion of or by the addresses to which the questioned message was directed. | J |
| WAIT | I must pause for a few seconds | AS |
| WAIT -- OUT | I must pause longer than a few seconds. | AS AR |
| WILCO | I have received your signal, understand it, and will comply.  To be used only by the addressee.  Since the meaning of ROGER is included in that of WILCO, the two PROWORDS are never used together. |   |
| WORD AFTER | The word of the message to which I have reference is that which follows \_\_\_\_\_\_. | WA |
| WORD BEFORE | The word of the message to which I have reference is that precedes \_\_\_\_\_\_. | WB |
| WORDS TWICE | Communication is difficult.  Transmit (transmitting) each phrase (or each code group) twice.  This PROWORD may be used as an order, request, or as information. |   |
| WRONG | Your last transmission was incorrect.  The correct version is \_\_\_\_\_. |   |