

# **Washington State Incident Field Operations Guide**

## **COMMUNICATIONS**

### **Introduction**

This Radio Communications Guide is based on cooperative agreements for use of radio frequencies between the Washington State Fire Chiefs Association, the Washington Department of Natural Resources, and the Washington Department of Emergency Management who permit the mutual use of radio channels during mutual aid events.

VHF is the radio frequency band utilized by most public safety and wildland fire agencies in Washington. Therefore, this Communications Guide is predicated on the use of VHF as the mutual aid radio system in Washington.

Page 4-5 of this guide lists the frequencies that should be preprogrammed into all VHF radios used by fire service agencies providing mutual aid in Washington.

Fire service agencies whose normal radio operating system is other than VHF should ensure that their UHF or 800 MHz radios contain the interoperability channels contained in the channel plan on page 4-5. These agencies, which normally respond to wildland fire events, should be equipped with VHF capabilities or obtain VHF radios at the event.

### **Travel Net**

The National V-Call 10 frequency of 155.7525 (narrow band) may be utilized as a travel net in the simplex, direct mode by entities requested to respond to a mutual aid event outside of the agency's home region.<sup>1</sup> A CCTCS transmit tone of 156.7 should be used. V-Call 10 does not use a PL tone on receive – it receives carrier squelch.<sup>2</sup>

### **Narrow-Banding**

The National Telecommunications and Information Administration (NTIA) mandated that federal agency VHF frequencies be narrow-banded by January 2005.

1. Entities responding within their own region should use the response channel as designated in the regional communications plan.

2. If the user can enable/disable the receive tone without reprogramming the radio, the indicated CTCSS tone should also be programmed for receive if the user knows how and when to enable/disable.

FCC rules provide that most state and local government frequencies are not required to be narrow banded until 2013, however, some state and local jurisdictions have narrow banded some frequencies.

All federal agency and DNR channels (including USFS, BLM, NPS and NIFC National Incident Radio Support Cache radios) are now narrow-banded.

Radios that are not capable of narrow-band technology should be taken out of service and not placed into service on any mutual aid incident where the possibility of utilization of any narrow band frequency exists. For the purpose of this guide it is to be assumed that on any mutual aid incident narrow band frequencies will be used and no radio should be deployed that is not narrow-band capable.

### **Guidelines**

- A. Those frequencies listed on the channel plan on page 4-5 should be programmed into radios that would be used for mutual aid responses. With the exception of the V-Call and V-Tac channels, the user must:
  - (1) be authorized by the FCC to transmit on those frequencies, or
  - (2) have a radio use agreement or MOU with the agency that is licensed for the channels, or
  - (3) be assigned to an incident with that channel/talk group listed in the Incident Radio Communication Plan. (ICS 205 form)
- B. Any agency requesting mutual aid will advise responding agencies of an initial contact channel for the incident. Generally, this initial contact channel will be V-Call. Incident Communications Centers and Staging Areas should monitor V-Call or another specified initial contact channel to assist resources arriving at the incident.
- C. Local policy will dictate the radio channel/talk group assignments for an incident until the Incident Commander or a Communications Unit Leader (COML) establishes the Communications Plan (205).
- D. The IC or, if assigned, the COML is responsible for managing assigned radio channels/talk groups and must clear the use of local, state and federal frequencies with the controlling agencies prior to inclusion in the Communications Plan.
- E. Clear text should be used for all communications. Codes shall not be used.
- F. Data communications or data signaling shall not be used outside an agency's normal area of operations.

- G. Vehicular repeater systems shall not be used outside an agency's normal area of operations.
- H. The use of gateways must be specifically authorized based upon an approved Communications Plan.
- I. Family Radio Service (FRS) radios are prohibited from use on Federal Incidents. Use of any radio or use of a frequency/talk group not identified in the Communications Plan or approved by the COML is prohibited on any incident.
- J. The use of any frequency outside of an agency's normal, licensed area of operation is prohibited by FCC rules and may likely cause harmful interference to other users.
- K. Every portable and mobile should include the National V-Cal and V-Tac interoperability channels that are within the same band of operation as the basic radio. Interoperability channels are available in all of the public safety bands and are designed to allow folks to communicate anywhere in the country, within each frequency band.

## STATEWIDE MUTUAL AID CHANNEL PLAN

Regardless of the radio system used on a daily basis, all Washington Public Safety agencies should maintain an adequate number of VHF mobile and portable radios to support mutual aid operations. In addition to the VHF interoperability channels, UHF and 800 MHz interoperability channels are also available to support mutual aid and all-risk incidents.

The following is a guide to programming designated interoperability channels into existing radios. Due to space limitation it may not be possible to program all of the OI/O channels into all radios. In that case the national calling channel (VCALL10) and the first national tactical channel (VTAC11) should be programmed as a minimum.

### VHF Radios

<u>Channel (MHz)</u>	<u>Tone</u>	<u>Short Name</u>	<u>Description/Use</u>
153.830 (W)	127.3 tx	Red Net	Travel/Fire Tactical
156.135 (W)	203.5 tx	OSCCR	Tactical
151.415 (N)	103.5 tx	DNR Common	Travel/Tactical
151.310 (N)	103.5 tx	DNR Tac 1	Tactical (Oregon White Net)
151.340 (N)	103.5 tx	DNR Tac 2	Tactical (Oregon Red Net)
155.7525 (N)	156.7 tx	VCALL 10	National Calling/Incident Travel Net
151.1375 (N)	156.7 tx	VTAC 11	National Tactical
154.4525 (N)	156.7 tx	VTAC 12	National Tactical
158.7375 (N)	156.7 tx	VTAC 13	National Tactical
159.4725 (N)	156.7 tx	VTAC 14	National Tactical
155.160 (W)		WSAR	Tactical
155.070 (W)		LERN	Law Tactical
		MARS	Tactical
155.475	155.475	V-law 21 (NLEC)	Law Tactical

### UHF Radios

<u>Channels (MHz)</u>	<u>Tone</u>	<u>Short Name</u>	<u>Description/Use</u>
458.2125	156.7 tx	UCALL 40	National Calling
453.2125	156.7 tx	UCALL 40D	National Calling
458.4625	156.7 tx	UCALL 41	National Tactical
453.4625	156.7 tx	UCALL 41D	National Tactical
458.7125	156.7 tx	UCALL 42	National Tactical
453.7125	156.7 tx	UCALL 42D	National Tactical
458.8625	156.7 tx	UCALL 43	National Tactical
453.8625	156.7 tx	UCALL 43D	National Tactical

**800 MHz Radios**

<b><u>Channel (MHz)</u></b>	<b><u>Tone</u></b>	<b><u>Short Name</u></b>	<b><u>Description/Use</u></b>
806.0125	mobile	8CALL 90	National Calling
851.0125	base/mobile	8CALL 90D	National Calling
806.5125	mobile	8TAC 91	National Tactical
851.5125	base/mobile	8TAC 91D	National Tactical
807.0125	mobile	8TAC 92	National Tactical
852.0125	base/mobile	8TAC 92D	National Tactical
807.5125	mobile	8TAC 93	National Tactical
852.5125	base/mobile	8TAC 93D	National Tactical
808.0125	mobile	8TAC 94	National Tactical
853.0125	base/mobile	8TAC 94D	National Tactical
852.5375	base/mobile	WAOPS1	Washington Tactical
852.5625	base/mobile	WAOPS2	Washington Tactical
852.5875	base/mobile	WAOPS3	Washington Tactical
852.6125	base/mobile	WAOPS4	Washington Tactical
852.6375	base/mobile	WAOPS5	Washington Tactical

**Usage notes for Communications Channel Planning**

1. The Washington State Red Net is used throughout the state but mutual aid interoperability use has precedence over most all other uses.
2. DNR Common is used throughout the state and is used regularly as a travel channel for DNR personnel and resources.
3. DNR TAC 1 and TAC 2 are frequently used tactical channels on wildland incidents. Their use requires coordination with the DNR.
4. The VCALL10 channel is designated as a travel channel and is available to all agencies for that purpose.
5. The VTAC channels would normally be used on an incident as tactical channels as per the approved Communications Plan.
6. An incident communication plan (205) will be developed by the COML on all mutual aid incidents and frequencies used on the incident will be those as assigned in the plan. Many of the frequencies will require authorization for their use. Frequencies not on the communications plan shall not be used on an incident without approval of the COML.