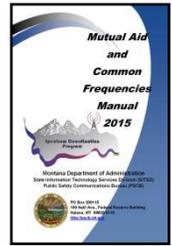




FACTSHEET: Mutual Aid Frequencies for Fire Service Agencies



Introduction: Most fire agencies in Montana use two-way Land Mobile Radios (LMR) for day-to-day and emergency communications. Radio frequencies are an essential—but limited—resource for LMR communications. The State of Montana holds statewide licenses with the Federal Communications Commission (FCC) for more than 20 mutual aid frequencies. These licenses are held to allow other eligible public safety users access to these shared frequencies. Mutual aid frequencies can enhance your communications and help ensure an effective public-safety response. It is essential, however, that responders from other jurisdictions have the ability to communicate with each other using Standard Operating Procedures (SOPs). This factsheet outlines a few key SOPs and policies for the use of Montana’s mutual aid radio frequencies for fire service agencies.



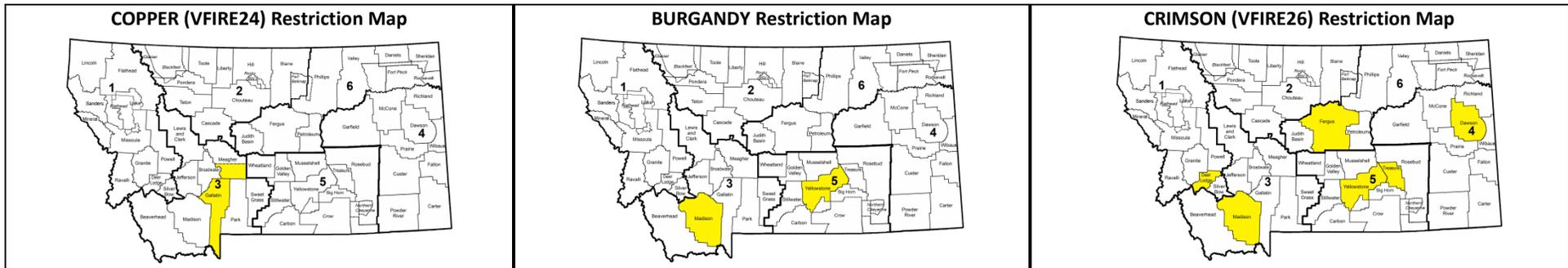
Authorization to Use Mutual Aid Frequencies: Fire service and other public safety entities must have a valid permit from Montana’s Dept. of Administration (DOA) giving them permission to use specific mutual aid frequencies. BEFORE mutual aid frequencies are programmed in your radios, you should have a permit. Fortunately, applying for one is easy. Simply visit this site, <https://app.mt.gov/mutualaid/>, and follow the three steps. Permits are issued electronically and are valid for five years. All users are subject to FCC regulations and SOPs as outlined in the *Mutual Aid and Common Frequency Manual*, 2015 Edition. The latest version of the Manual is available at this website: <http://sitsd.mt.gov/mutualaid.aspx>. All VHF mutual aid frequencies are narrowband.

Fire & General Use Mutual Aid Frequencies and Usage: The Montana fire mutual aid frequencies are established exclusively for interagency emergency and itinerant fire services communications. Nine fire service mutual aid frequencies are listed in Table 1 below along with three other frequencies, **GOLD**, **TAN** and **NEON**, which have been established for general public safety use, including fire services. The color designations presented here are used as a simple naming convention in place of the actual frequency or descriptive name. However, agencies are now being encouraged to use both the color name and the National Interoperability Designator (VFIRE, VLAW, VMED).

All fire mutual aid frequencies should use CTCSS tone control of 156.7 Hz on the transmit side.

Table 1: Montana Mutual Aid Fire & General Use Frequencies

Frequency (MHz)	Color Name & National Designator	Usage/Restrictions/Notes	Frequency (MHz)	Color Name & National Designator	Usage/Restrictions/Notes
Fire Mutual Aid Frequencies					
153.8300	RUBY	<p>State Fire Repeater</p> <ul style="list-style-type: none"> The primary use of RUBY paired with GARNET is for mobile-mobile communications. Licensed for temporary mobile relay and meant to be paired for mobile relay use with GARNET. RUBY is the output frequency of the relay (or fixed base for talk-around use) and GARNET is the control or input frequency. 	154.2725	COPPER (VFIRE24)	<p>State Fire Ground #3</p> <ul style="list-style-type: none"> Available for on-scene interagency communications where incident scope requires additional ground channels. Maximum mobile power is 100 watts ERP Secondary to adjacent 7.5kHz licensed channels where applicable (See Restriction map on the back)
159.3450	GARNET	<p>State Fire Repeater Control</p> <p>Licensed for control station use. Meant to be paired with RUBY</p>	154.2875	BURGUNDY (VFIRE25)	<p>State Fire Ground #4</p> <ul style="list-style-type: none"> Available for on-scene interagency communications where incident scope requires additional ground channels. Secondary to adjacent 7.5 kHz licensed channels where applicable. (See Restriction map on the back)
154.0700	RED	<p>State Fire Mutual Aid</p> <ul style="list-style-type: none"> Should be the first choice for on-scene interagency communications. Not to be used within 75 miles of Bow Island, Alberta per FCC license. 			
154.2800	MAROON (VFIRE21)	<p>State Command and Control</p> <ul style="list-style-type: none"> Primary use is for base-mobile communications for interagency dispatch and multi-agency command and control. Commonly used for fire mutual aid by surrounding states. A shared operational resource between fire organizations and agencies. Hence, overlapping coverage of base stations and interference to some degree is anticipated. This channel is to be used for directing diverse resources to large-scale incidents as well as for on-scene command when not tied up with base-base traffic. 	154.3025	CRIMSON (VFIRE26)	<p>State Fire Ground #5</p> <ul style="list-style-type: none"> Secondary to adjacent 7.5kHz licensed channels where applicable. (See Restriction map on the back)
154.2650	CORAL (VFIRE22)	<p>State Fire Ground #1</p> <p>Available for on-scene interagency communications where incident scope requires additional ground channels.</p>	172.2250	ALPHA	Interagency Fire Use Only
154.2950	SCARLET (VFIRE23)	<p>State Fire Ground #2</p> <p>Available for on-scene interagency communications where incident scope requires additional ground channels.</p>	172.3750	BRAVO	Interagency Fire Use Only



Secondary status to existing co-channel use and 7.5 kHz adjacent stations.

Frequency (MHz)	Color Name & National Designator	Usage/Restrictions/Notes	Frequency (MHz)	Color Name & National Designator	Usage/Restrictions/Notes
General Use Frequencies					
153.9050	GOLD	<p>General Mutual Aid and Coordination</p> <ul style="list-style-type: none"> Available to all Montana public safety and emergency responders. Designated for inter-discipline communications. Used for both emergency and administrative (non-emergency) traffic; however, administrative traffic can be preempted by a higher priority need. 	157.4250	NEON	<p>General Mutual Aid and Coordination</p> <p>Note: EMS Priority during mass-casualty incidents. On-scene incident management per SOP (Triage Group)</p> <ul style="list-style-type: none"> 40-Watt mobile limit Not available within 120 Km of Coumts, AB including the following jurisdictions: Blackfeet Reservation and Glacier, Liberty, Pondera and Toole Counties. Not available in: Daniels, McCone, Richland, Roosevelt and Valley Counties or on the Fort Peck Reservation due to co-channel use. (See Restriction map below)
155.3400	TAN (VMED28)	<p>Primary Use: State Air-to-Ground Coordination</p> <ul style="list-style-type: none"> For use by rotary or fixed wing aircraft to communicate with ground response units at emergency scenes. Its use includes landing assistance and emergency coordination. <p>Secondary Uses: EMS communications and medical staging at an incident scene.</p> <ul style="list-style-type: none"> For Hospital-to-Hospital and Hospital-to-Ambulance communications or for EMS interagency communications at an incident scene. <p>Note: All airborne use of this frequency is restricted to below 5280 feet and 10-watt ERP.</p>	<p style="text-align: center;">NEON Restriction Map</p> <p style="text-align: right;">Restricted by the FCC and existing use.</p>		

Table 2: Permissible Uses of Fire/General Use Mutual Aid Frequencies

This table presents three usage classes with their permissibility—all communications are considered two-way.

Channel Name	Base - Mobile	Base - Base	Mobile - Mobile	Type of Use	Channel Name	Base - Mobile	Base - Base	Mobile - Mobile	Type of Use
RUBY	YES	NO	YES	COMMAND	SCARLET (VFIRE23)	NO	NO	YES	TACTICAL
GARNET	YES	NO	YES	CONTROL	COPPER (VFIRE24)	NO	NO	YES	TACTICAL
RED	NO	NO	YES	TACTICAL	BURGUNDY (VFIRE25)	NO	NO	YES	TACTICAL
MAROON (VFIRE21)	YES	YES (secondary)	YES (secondary)	COMMAND	CRIMSON (VFIRE26)	NO	NO	YES	TACTICAL
CORAL (VFIRE22)	NO	NO	YES	TACTICAL	NEON	NO	NO	YES	TACTICAL