

WA-PAWS-Tab F10	Auxiliary Emergency Communications Support for EAS Messaging	7.26.25
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MISSION: Providing coordinated, prompt, reliable, and actionable information to the whole community through clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard is a core emergency management capability. Best practices suggest that public warnings be disseminated using multiple systems to effectively reach the population at risk.¹

IPAWS, EAS, WEA, and NWEM, along with other public warning systems, are critical tools to warn citizens of Washington about imminent threats to life safety, property, and the environment.¹

Key organizational components of Auxiliary Emergency Communications Support for Public Alert and Warning Messaging include:

- I. Emergency Management Agency (EMA)
- II. Electronic Media
 - A. Radio Stations
 - (1) Terrestrial
 - (2) Satellite
 - B. Television Stations
 - C. Cable Systems
- III. Amateur Radio Services (ARS) Alternate Communications
 - A. Amateur Radio Emergency Service® (ARES®)
 - (1) American Radio Relay League® (ARRL®)
 - B. Auxiliary Communications Systems
 - (1) Umbrella names for consolidated Emergency Communications (EMCOMM) that is managed and supervised by an EMA
 - C. Radio Amateur Civil Emergency Service (RACES)
 - (1) Managed and supervised by an EMA
 - (2) Operates under the authority of 47 CFR 97.407

Amateur Radio: A Valuable News Source Especially During Emergencies

An outstanding article written by Mike Langner, K5MGR, Posted in Management & Operations that validates the use of Amateur Radio Service volunteers during a large emergencies or disasters is available at:

<https://www.thebdr.net/ham-radio-a-valuable-news-source-especially-during-emergencies/>

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Key operational components of WA-PAWS include:

I. Amateur Radio Service Emergency Communications (EMCOMM) is comprised of Formal and Informal message traffic.

A. Formal Message traffic

- (1) Guidance for amateur radio message preparation and processing is provided by
 - a. Radio Relay International (RRI): radiorelay.org/about/
 - b. ARRL National Traffic System (NTS): arrl.org/nts
- (2) Formal message traffic is prepared one of two formats
 - a. FEMA ICS-213 General Message format
 - b. National Traffic System (NTS) format
- (3) Precedence for Formal Message traffic is
 - a. Routine (R)
 - b. Welfare (W)
 - c. Priority (P)
 - d. EMERGENCY (Spelled out in full)
- (4) Emergency Management Agencies and media facilities will benefit by using amateur radio messaging when the LRN or SRN have been overly affected or rendered inoperable. During large emergencies or disasters, every EMA needs to create an audit trail and the formal message will provide the vital documentation that may be needed later. If the emergency manager decides the situation is critical and time is of essence, they can opt to use informal/tactical messaging. It will be necessary for the EMCOMM team to accurately log the transmissions in a communications log, such as the ICS 309 form.

B. Informal or Tactical Message Traffic is passed at the local level

- (1) Informal/Tactical Message Traffic is recorded on the form decided upon by the EMA Director or Deputy Director.

C. Auxiliary Communications Systems

- (1) High-Speed wide bandwidth data communications: Amateur Radio Emergency Data Network (AREDN): arednmesh.org/about-us

Provide the Amateur Radio Community with a quality solution for supporting the needs of high-speed data in the Amateur Radio and Emergency Communications field.

(2) Not all ARS EMCOMM teams are using AREDN, but may use HamWAN: hamwan.org *A non-profit organization (501c3) developing best practices for high speed amateur radio data networks. HamWAN also runs the Puget Sound Data Ring, which is a real-world network implementation of the proposed designs.*

(2) And not all ARS EMCOMM teams use HamWan. They use other frequencies.

a. Frequencies commonly used

- (i) 3.5 MHz – 4.0 MHz/80 Meters Band
- (ii) 7.0 MHz – 7.3 MHz/40 Meters Band
- (iii) 14.0 MHz – 14.35 MHz/20 Meters Band
- (iv) 144.0 MHz – 148.0 MHz/2 Meters Band
- (v) 420.0 MHz – 450.0 MHz/70 centimeters Band

b. Methods

- (i) Data
 - (a) WinLink

(is a network of amateur radio and authorized government stations that provide worldwide radio email using radio pathways where the internet is not present.)

(b) VARA

(is a proprietary software modem used for transmitting and receiving data over amateur radio. It is a digital communications mode generated and decoded using a computer sound card. It is commonly used for connecting to other stations and accessing the Digital Traffic Network (DTN) hub.)

(c) Other software programs

- (ii) Image
- (iii) Voice

(a) Frequency Modulation (FM)

- (b) Single Sideband (SSB)

II. Emergency Alert System (EAS) ²

The Emergency Alert System (EAS) is the primary means for providing the public with critical alert information about an emergency or disaster. Under EAS requirements, radio, TV and cable TV stations must participate at the National level or specifically request a waiver from the Federal Communications Commission (FCC). Further, they are encouraged to voluntarily participate in state and local EAS plans.

III. SHARed RESources (SHARES) High Frequency HF Radio Program

SHARES is an HF Radio Program operated by Cybersecurity & Infrastructure Security Agency (CISA).

The main benefit of SHARES is that encrypted data/sensitive information” can be distributed through the network.

Interoperability, backup emergency communications, and situational awareness are the main uses. Operations include nationwide and regional radio nets for voice and data communications, and there is a nationwide HF email network that operates with or without the conventional internet, fully automatically. All SHARES HF channels are authorized for use throughout the U.S. and Possessions.

Access to the SHARES networks requires registration with the SHARES Program Office. Government agencies of federal, state, county, and major cities are eligible, as are operators of critical infrastructure and key resources, and national or regional (multi-state) disaster relief organizations.

SHARES is a government radio network. It is not amateur radio, and registration is not open to amateur radio operators (hams). (The point has been argued back and forth in a couple of different quorums. Bottom line is that it is available to amateurs that are associated with an EMA.)

Do not wait for an emergency to try to arrange access to SHARES. Learn about the program now at cisa.gov/shares and if you are interested and eligible, contact the SHARES Program office via shares@cisa.dhs.gov or +1-703-235-5329.

Currently, SHARES is a source for county EOCs to communicate with the WA EMD State EOC.

IV. Local Emergency Communications Committee (LECC)3

LECCs oversee the EAS in their respective Operational Areas. As part of that oversight, LECCs recommend best practices for determining when and how to originate and disseminate local public alert and warning messaging utilizing EAS, Wireless Emergency Alerts (WEAs) and other related warning systems. It is important for LECCs to remember that these warning systems are the tools whose purposes are (1) to ensure public safety and (2) preserve life and property when an emergency occurs.

An important duty of the LECCs is to create, maintain and periodically the operational area's Local Alert and Warning Plan, or simply Local Area Plan, and to routinely discuss policies and procedures that govern its use along with the warning systems that are described within the plan.

LECC Membership includes staff from the local EMA and electronic media. It is beneficial to include volunteers from the local amateur radio EMCOMM in the LECC.

V. Local Relay Network (LRN)⁴

The LRN consists of the local EMA and electronic media facilities in the city, county, tribal reservation, or region.

Local EOCs will be able to activate their local area plan through a Local Relay Network (LRN) that allows the local broadcast media to receive and disseminate the message if they so choose.

VI. State Emergency Communications Committee (SECC)⁵

The SECC is a volunteer non-governmental organization, the Washington SECC is an independent body, that reports to the Director of the Washington Military Department's Emergency Management Division (EMD).

State Emergency Communications Committees, or SECCs, are volunteer non-governmental organizations that develop plans for administering the Emergency Alert System in each state. The Federal Communications Commission (FCC) encourages the chief executive of each State to establish a State Emergency Communications Committees (SECC) to review the composition and governance of the SECC. Though defined in federal statute, the Code of Federal Regulations does not give SECCs any explicit authority.

VII. State Relay Network (SRN)⁶

Washington's SRN is a network of regional broadcast stations with the hub at Washington Emergency Management Division's (WA EMD) Emergency Operations Center (EOC) at Camp Murray, Pierce County, WA.

The network diagram can be found at the Washington Integrated Public Alert & Warning System (WA-PAWS) website, Tab C4, State Relay Network.

VIII. Wireless Emergency Alerts (WEA)

Wireless Emergency Alert (WEA) is a system that enables authorized governmental and tribal authorities to send geo-targeted emergency alerts to the public via broadcast messages to compatible cell phones and mobile devices. WEA is a component of FEMA's "Integrated Public Alert & Warning System" (IPAWS).

Authorized national, state, or local government alerting authorities may generate Wireless Emergency Alerts regarding public safety emergencies – such as severe weather, missing children, or the need to evacuate – using the WEA system via IPAWS.

Details can be found at the Washington Integrated Public Alert & Warning System (WA-PAWS) website, Tab C6, Wireless Emergency Alerts.

Keeping the public and partners informed

The mission of EMA professionals, electronic media professionals and Amateur Radio EMCOMM support volunteers is to keep the public informed when they need accurate information the most.

"In the absence of data, we will always make up stories"⁷ is something that emergency communications providers and broadcasters must keep in mind in the effort to keep the people of Washington State better informed during emergencies and disasters. Social Media and others who are NOT involved in emergencies and disasters may create rumors and spread misinformation. This only compounds the emergency or disaster. Sometimes the community may never recover from inaccurate information that often takes on a life of its own.

Key elements of keeping people informed:

1. All team members having situational understanding
2. Collaboration
3. Coordination
4. Communications

It is the EMA that collects, analyzes, develops situational understanding, and disseminates or shares information with their partner in the electronic media. EMAs share information through the State Relay Network (SRN), the Local Relay Network (LRN) or by amateur radio EMCOMM volunteers when the SRN or LRN are overwhelmed or not functioning. Amateur radio communication can take place in real time without overloading traditional methods of information sharing.

Sharing critical or time perishable information during an emergency or disaster requires teamwork, trust, and mutual respect. It is through collaboration that we can insure accurate and timely information is provided to the public.

Coordination with the responsible EMA ensures that we're all focused on the proper goals and objectives.

Communications is the key to providing quality services to our partners and the public. Don't sacrifice brevity and conciseness for quickness in preparing your documents.

In the realm of emergencies and disasters, drilling and exercising is important. As we train, drill, and exercise we need to remember a great saying from Vince Lombardi:

"Practice does not make perfect. Only perfect practice makes perfect."

References:

¹ WA-PAWS Letter of Promulgation

² WA EMD Emergency Alert System (EAS) Web Site

³ WA-PAWS – Tab D1

⁴ WA EMD Emergency Alert System (EAS), WA EMD Web Site

⁵ WA-PAWS – Tab B4, SECC Governance

⁶ WA-PAWS – Tab C4, State Relay Network

⁷ Brown, Brené. Rising Strong. The Rumble. The Revolution., August 25, 2015