MINNESOTA
STATEWIDE EAS PLAN
2023

Submitted via Alert Reporting System (ARS), November 2023, for FCC approval.

Introduction

This plan, required by the Federal Communications Commission in 47 C.F.R. §11.21, describes the organization and implementation of the State of Minnesota Emergency Alert System (EAS). It sets forth procedures for EAS Participants (broadcast, cable, wireline) and designated government officials (PSAPs) to issue messages for pending or actual emergencies.

This plan serves three basic purposes:

1. MN-EAS plan outlines how the Governor, the National Weather Service (NWS) and authorized State/Local government entities can provide emergency messages for the state of Minnesota;

2. MN-EAS plan provides guidance to EAS Participants for the execution of alerts from all sources;

3. MN-EAS plan outlines the framework for how emergency managers, public safety answering points (PSAP) and EAS Participants can work together to assure that Minnesota residents and residents in surrounding states can receive timely information, to protect life and property.

FCC Rules, Part 11, provide for the Emergency Alert System (EAS). Minnesota's EAS plan provides background and prescribes specific procedures for Statewide EAS Participants to transmit emergency information and warnings to the public, within the EAS Participants coverage area.

Prepared by the Integrated Public Alert and Warning System Committee (IPAWS) of the State Emergency Communications Board (SECB), this plan is prepared in cooperation with the following partners:

- Federal Communications Commission (FCC),
- National Weather Service (NWS) office in Chanhassen, Minnesota,
- Minnesota Public Radio,
- Twin Cities PBS,
- Minnesota Department of Public Safety,
- State and local officials,
- EAS Participants.

Reason for an EAS Plan

The State of Minnesota is subject to major emergencies and disasters, weather, technological and criminal, which can pose a significant threat to the health and safety of the public. The ability to provide residents of and visitors to Minnesota with timely emergency information is a priority of alert originators. The EAS was developed by the Federal Communications Commission (FCC) to provide emergency information to the public via television, radio, cable systems, wireless and wire-line providers.

IPAWS, initiated by the Federal Emergency Management Association (FEMA), is intended to aid in the distribution of emergency messaging to the public via the internet and mobile devices. Combined, the

mission of EAS and IPAWS is to provide a reliable warning and alerting utility for public consumers. This plan explains authorized alert originators and workflows for distributing EAS and IPAWS messages.

Purpose

When emergencies and disasters occur, rapid and effective dissemination of essential information can significantly help reduce loss of life and property. The EAS combined with IPAWS, is designed to provide emergency messaging. The purpose of this plan is to establish a coordinated, standardized, and integrated use of EAS & IPAWS messaging with protocols to facilitate the rapid dissemination of emergency information to the public.

MN EAS Plan Objectives

- Provide participating stations with the information they need to participate in the EAS;
- Describe the EAS administrative structure within Minnesota (page 1);
- Establish who has the authority to originate an EAS notification (page 1);
- Identify approved event codes for Minnesota (page 7);
- Establish standards for training, exercising, and testing of the EAS and IPAWS (page 20).

References

This plan was developed in accordance with Federal Communications Commission requirements, as well as State of Minnesota statutes from documentation including (but not limited to):

- Federal Telecommunications Act of 1996;
- Federal Communications Commission, Report & Order FCC 94-288;
- FEMA Executive Order 12472: Assignment of National Security and Emergency Preparedness Telecommunications Functions dated April 3, 1984;
- FEMA Executive Order 12656: Assignment of Emergency Preparedness Responsibilities dated November 18, 1988;
- FEMA Statement of Requirements for Presidential Communications dated September 15, 1995.
- Title 47 U.S.C. 151, 154 (I), 303 (r) and 606; 47 CFR Part 11, FCC Rules & Regulations, Emergency Alert System;
- Minnesota Statutes, Chapter 12, as amended.

Plan Review Schedule

The Minnesota EAS Statewide plan is reviewed annually with written re-submissions submitted in the fall for the following year. Having begun in 2021, the MN-IPAWS committee reviews and updates the plan as necessary. Changes are made to address updates to EAS goals and protocols at the local, state, and federal levels.

Revision Number	Date of Revision	Person(s) Responsible for Revision	Changes Made
1.0	4/16/2021		Total Revision
1.0	8/18/2022		Total Revision
1.0	8/15/2023	DH, JD, LM	Monitoring Assignments, grammatical edits.

Distribution

Agencies identified in this document will provide updated contact information as reflected in plan revisions. All plan revisions and distribution are conducted by the Minnesota EAS & IPAWS Sub-committee as coordinated by the Minnesota Division of Emergency Communication Networks (ECN). Additional copies of the plan are available by contacting the ECN representative from the MN-IPAWS (See Annex E for contact names).

Current copies of this plan are distributed to:

- All EAS participants in Minnesota;
- The FCC;
- The Minnesota Department of Public Safety and Local Public Safety entities;
- Any participating public or private organization contributing to the dissemination of EAS messages;
- Posted to the internet on the Emergency Communications Network and Minnesota Broadcasters Association web pages.

Signatures

_____
Vice-Chair MN EAS & IPAWS Committee, SECB
Lillian McDonald, Twin Cities PBS (TPT)

_____
SVP & Chief Technology Officer (CTO)
Nick Kereakos, Minnesota Public Radio

_____
Todd Krause, National Weather Service (NWS)
Chanhassen, MN

Emergency Alert System (EAS) Checklist for MN-EAS Participants

Minnesota EAS participants may use this fill in the blank checklist to verify station operations for testing and distributing EAS messaging are current:

- Our EAS Operational Area is (Page 15): _____
- Station Monitoring Assignment (#1) (Page 14): _____
- Station Monitoring Assignment (#2) (Page 14): _____
- NWS Monitoring Assignment (# 3) (Optional) (Page 14): _____
- Stations, please consult this resource for your Common Alert Protocol (CAP) Monitoring Point (www.fema.gov/apps)
- SAGE Endec url: https://www.sagealertingsystems.com/support-manuals.htm
- DASDEC Endec url: https://www.digitalalertsystems.com/

Mark YES/NO to verify use and capability:

_____ 1. FCC EAS Operating Handbook is immediately available. (https://www.fcc.gov/file/24607/download)

_____ 2. All personnel receive appropriate training in EAS procedures and in the use of EAS equipment.

_____ 3. EAS endec is installed and operating; software is current; and the factory password is updated.

_____ 4. Correct assignments monitored, according to State EAS plan.

_____ 5. Weekly and monthly EAS tests (RWT, RMT) received and logged.

_____ 6. Weekly EAS test transmissions (RWT) made and logged.

_____ 7. A copy of State EAS plan is immediately available.

_____ 8. A member of the station on the EAS List-serve (eas@eas.talklist.com).

For stations located in states bordering Minnesota, we recommend checking EAS plans for EAS guides in all coverage areas.

Table of Contents

SECC Governance Structure (State Emergency Communication Committee)

The Minnesota Statewide Emergency Communications Board (SECB) oversees the State Integrated Public Alert and Warning System (IPAWS) subcommittee, which oversees two subcommittees including: EAS/IPAWS and Alert Originators.

To accurately respond to EAS and IPAWS concerns in Minnesota, the EAS/IPAWS sub-committee includes representatives from the following organizations:

- Minnesota Broadcasters Association;
- Minnesota Cable Communications Association;
- Minnesota Public Radio;
- Minnesota Telecom Alliance;
- National Weather Service;
- Department of Public Safety;
    - Minnesota Homeland Security and Emergency Management
    - Emergency Communications Networks
- Twin Cities PBS;
- Other members as recruited from non-profit and commercial media entities (current membership of the MN-IPAWS is located in Annex E).

Alert Origination

Alerting Responsibilities:

Handbook

Part 11 of the FCC Rules and Regulations require that a copy of the EAS Handbook and State EAS Plan is to be maintained "at normal duty positions or EAS equipment locations for all EAS Participants." The current FCC EAS Handbook is available at https://www.fcc.gov/file/24607/download under the heading: HANDBOOK.

National Level Activation EAN Alert

National Emergency Alert Notification (EAN) / National Periodic Test (NPT)

In the event of a national emergency, the President of the United States or their designate, may decide to address the nation. The White House Communication Agency will transmit an Emergency Alert Notification (EAN) directly from the White House via FEMA to the Minnesota Primary Entry Point (WCCO

Radio), the NPR satellite system to the Minnesota State Relay, (MPR Radio) and XM radio to MPTA stations.

Periodically, FEMA will schedule a National Periodic Test (NPT) to test this part of the EAS system.

All Participating Nationals (PN) must install and operate a CAP certified EAS encoder/decoder. PN's must configure the decoder to receive three sources (see Monitoring Assignment: National), decode and monitor for the emergency activation notification (EAN) alert code and the NPT alert code. If an EAN is properly received/decoded, PN's must pre-empt programming and immediately broadcast the live incoming audio continuously until the End-Of-Message (EOM) code is received/decoded.

Statewide Activation

During a statewide emergency or test, authorized agencies may originate an EAS/IPAWS alert via the EAS or using the IPAWS-OPEN server. Incoming EAS/IPAWS alerts are relayed on WCCO AM radio and the Minnesota Public Radio state relay.

For Statewide emergencies, the authorized alert is delivered to the Primary Entry Point (WCCO AM radio); the State Relay (MPR radio), and FEMA IPAWS. Alert Originators can initiate BLU, CAE, RMT and RWT alerting codes.

Severe Weather Activation

Broadcasting severe weather alerts over the EAS is voluntary. The NWS local forecast office is responsible for originating severe weather alerts.

Local Activation

During a local emergency, authorized agencies may originate an EAS Alert using IPAWS.

Local Alert (CDW, CEM, EVI, NUW, RWT, and SPW)

As an alternative, the NWS local forecast office may distribute non-weather emergency messages, (NWEM) via local NOAA radio transmitters (legacy EAS) and/or the FEMA IPAWS server (CAP). Any NWEM alerts are issued in cooperation and agreement with the local public safety/emergency management office and the NWS local forecast office. Messages may be sent to the local NWS office via telephone, fax, email, 800 MHz radio.

See annex D for NWS contact information for your local NWS office.

EAS/IPAWS Operations Policies

EAS and IPAWS are not intended to be broadcast services providing continuous information. EAS and IPAWS are intended to alert the public with messaging that notifies them where to turn for further information. After an alert has been issued, participating news organizations should preempt programming and provide emergency information.

EAS and IPAWS alerts should be clear, concise, and used only when necessary to protect lives or property. To ensure accountability and responsible use of the EAS/IPAWS, EAS alerts may only be originated by those agencies with authority assigned by FEMA and the MN-IPAWS. Federal and state laws prohibit anyone without cause or authority from originating an EAS notification.

Emergency Alert System (EAS) Checklist for Emergency Response Personnel

In general, the following conditions should be considered in determining whether the issuance of an EAS alert is warranted:

EAS Activation Checklist

Yes	No	
___	___	Is this a sudden, unforeseen, or unpredictable situation?
___	___	Does the situation pose an imminent threat to life or property?
___	___	Does the situation have the potential to adversely impact a significant population or geographic area?
___	___	Does the situation require that the public be warned immediately to seek shelter or take other protective action?
___	___	Are other means of disseminating information adequate to ensure rapid delivery?

Important: Do not activate EAS or WEA if the answer to any of these questions is “No.”

False Alerts

As stated in part 11.45 Prohibition of false or deceptive EAS transmissions.

No person may transmit or cause to transmit the EAS codes or Attention Signal, or a recording or simulation thereof, in any circumstance other than in an actual National, State or Local Area emergency or authorized test of the EAS; or as specified in:

11.46 EAS Public Service Announcements.

EAS Participants may use the EAS Attention Signal and a simulation of the EAS codes as provided by FEMA in EAS Public Service Announcements (PSAs) (including commercially sponsored announcements, infomercials, or programs) provided by federal, state, and local government entities, or non-governmental organizations, to raise public awareness about emergency alerting. This usage is only permitted if the PSA is presented in a non-misleading and technically harmless manner, including with the explicit statement that the Attention Signal and EAS code simulation are being used in the context of a PSA to educate the viewing or listening public about emergency alerting.

11.61 Tests of EAS Procedures.

Additionally, any false alerts inadvertently transmitted should be reported within 24-hours to the Commission at the FCC Ops Center at FCCOPS@fcc.gov, informing the Commission of the event and of any details that the EAS Participant may have concerning the event.

Missed Alerts

For stations inadvertently or programmatically scheduled to be off the air during a scheduled EAS test or actual EAS alert issued by an Alert Originator, stations should document the time of the actual alert in the station EAS logs for reporting purposes within one week.

Header Codes

Note: The EAS protocol, including any alert codes, must not be amended, extended, or abridged without FCC authorization.

EAS Header Code Analysis

The FCC has mandated that an EAS Header Code contain the following elements sent in the following sequence:

[Preamble] ZCZC-ORG-EEE-PSSCCC+TTTT-JJJHHMM-LLLLLLLL – repeated 3 times, Attention Signal (8 seconds), Audio, Video, or Text Message, [Preamble] NNNN – repeated 3 times.

Note: The ASCII dash (-) and plus (+) symbols are required and may not be used for any other purpose. Unused characters must be ASCII space characters. FM or TV call signs must use a slash, ASCII character number 47 (/), in lieu of a dash.

Explanation (for a more detailed explanation visit: https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-11)**:**

[Preamble]= (Clears the system): Sent automatically by your Encoder.

ZCZC= (Start of ASCII Code): Sent automatically by your Encoder.

ORG= (Originator Code): Preset once by the message originator, then sent automatically by your Encoder. See section (a) below for codes.

EEE= (Event Code): Determined by the message originator, each time an alert is sent. See section (b) below for codes.

PSSCCC= (Location Code): Determined by the message originator, each time an alert is sent. See section (c) below for codes.

TTTT= (Duration of Alert): Determined by the message originator, each time an alert is sent. This indicates the valid time period of a message in 15-minute segments up to one hour and then in 30-minute segments beyond one hour, i.e., +0015, +0030, +0045, +0100, +0430 and +0600.

JJJHHMM= (Date/Time-of-Day): Sent automatically by your Encoder.

LLLLLLLL= (8-Character ID, identifying the EAS Participants, Weather Service Office, or Civil Authority operating that Encoder): Preset once by message originator, then sent automatically by your Encoder. See section (d) below for the format to be used in constructing L-codes.
Attention Signal: Must be sent if an audio, video or text message is sent, duration 8 seconds.

[Preamble]= (Re-clears the system): The preamble must be transmitted before each header and End of Message code followed by: NNNN= (End-of-Message Code): End of Message (EOM) code sent as a string of four ASCII N characters. Usually initiated automatically at the end of every EAS Alert originated by all sources. If an EAS message fails to carry the EOM code, or an EAS encoder-decoder does not automatically release back to air at the end of the message, EAS Participants may clear their system by manually issuing a Required Weekly Test (RWT).

(a) Originator Codes (ORG) the following are the only Originator Codes to be used by sources in the state of Minnesota:

WXR – To be used by National Weather Services Offices.

CIV – To be used by Minnesota Emergency Management Agency, Minnesota Department of Public Safety, and all other Civil Authorities.

EAS – To be used by all EAS Participants. EAS Participants will almost always be relaying EAS messages originated by WXR or CIV. However, on rare occasions there may be an emergency condition that requires an EAS Participant, in coordination with emergency response authorities, to use their EAS equipment to originate an EAS message.

PEP – Primary Entry Point. Only used by federal authorities.

(b) Event Codes authorized in Minnesota (EEE) The only required EAS event codes are EAN, NPT, RMT and RWT (see chart page 7).

The following Event (EEE) codes are presently authorized for the state of Minnesota:

BLU - Blue Alert - A message issued by state and local authorities to warn the public when there is actionable information, related to a law enforcement officer who is missing, seriously injured or killed in the line of duty, or when there is an imminent, credible threat to an officer. A Blue Alert could quickly warn the public if a violent suspect may be in your community, along with providing instructions on what to do if the suspect is spotted and how to stay safe.

CAE - Child Abduction Emergency (AMBER Alert) – An emergency message, based on established criteria, about a missing child believed to be abducted. A local or state law enforcement agency investigating the abduction will describe the missing child, provide a description of the suspect or vehicle, and ask the public to notify the requesting agency if they have any information on the whereabouts of the child or suspect.

CDW - Civil Danger Warning – A warning of an event that presents a danger to a significant civilian population. The CDW usually warns of a specific hazard and gives specific protective action.

CEM - Civil Emergency Message – An emergency message regarding an in-progress or imminent significant threat(s) to public safety and/or property. The CEM is less specific than the Civil Danger Warning (CDW).

EVI - Immediate Evacuation – A warning where immediate evacuation is recommended or ordered according to state law or local ordinance.

NUW - Nuclear Power Plant Warning - A warning of an event at a nuclear power plant, classified as a Site Area Emergency or General Emergency as classified by the Nuclear Regulatory Commission (NRC).

RMT - Required Monthly Test - A test message that is generally originated by the state primary entry point (PEP) station, or a state emergency management agency. In Minnesota, these are issued by MN-DPHSEM and the BCA.

RWT – Required Weekly Test – A test message that consists, at a minimum, of the header and end-of-message tones. RWTs are also authorized to test the WEA system in the background by having your phone handset enabled to receive a test alert.

SPW – Shelter in Place Warning – A warning of an event where the public is recommended to shelter in place (go inside, close doors and windows, turn off air conditioning or heating systems, and turn on the radio or TV for more information).

FFW – Flash Flood Warning – A flood which occurs due to heavy or excessive rainfall, a dam or levee failure, sudden release of water impounded by an ice jam, or a debris slide or flow. A flash flood warning will also be issued if a previously issued flash flood warning needs to be extended in time.

SMW – Special Marine Warning – issued for near-shore areas for short-duration (2 hours or less) sustained marine thunderstorm winds or associated frequent gusts of 34 knots (39 mph) or greater; and/or hail 3/4 inch or more in diameter; and/or waterspouts. They are also issued for near shore areas with sustained non-thunderstorm short duration winds or associated frequent gusts of 34 knots or greater (gale force or stronger).

SVR – Severe Weather – Radar indication and/or reliable reports of wind gusts equal to or more than 58 mph and/or hail size of one-inch diameter or larger.

TOR – Tornado Warning – radar indication and/or reliable reports of a tornado or developing tornado.

SQW – Snow Squall Warning - radar or satellite indication and/or reliable reports of snow squalls with visibility 1/4 mile or less in snow with sub-freezing ambient road temperatures, and/or plunging temperatures behind an arctic front sufficient to produce flash freezes, along with a significant reduction in visibility from falling and/or blowing snow. Forecaster judgment regarding impacts including time of day, day of week, and other societal factors should be considered. If a blizzard or winter storm warning is already in effect, the SQW is not issued.

EAS Event Code programming recommendations

Event Code	Event Name	WEA Permitted	Recommended Priority	Originators	Relay Required	Address
	National Codes (Required):					
EAN [1]	Emergency Action Notification	Yes	High	PEP	Yes	000000 [2]
NPT	National Periodic Test	Yes	High	PEP	Yes	000000 [2]
RMT	Required Monthly Test	Yes	Low	CIV	Yes	All counties in local area
RWT	Required Weekly Test	Yes	Log Only	PEP, CIV, WXR	No	County in the city of license
	State and Local Codes (Recommended):					
BLU [3]	Blue Alert	Yes	High	CIV	Voluntary	Statewide
CAE [3]	Child Abduction Emergency	Yes	High	CIV	Voluntary	Statewide
CDW	Civil Danger Warning	Yes	High	CIV	Voluntary	Local Area
CEM	Civil Emergency Message	Yes	Medium	CIV	Voluntary	Local Area
EVI	Immediate Evacuation Notice	Yes	Medium	CIV	Voluntary	Local Area
NUW [4]	Nuclear Power Plant Warning	Yes	High	CIV	Voluntary	[4]
SPW	Shelter in Place Warning	Yes	Medium	CIV	Voluntary	Local Area
	National Weather Service (Recommended):					
FFW	Flash Flood Warning	Yes	High	WXR	Voluntary	Local Area
SVR	Severe Thunderstorm Warning		High	WXR	Voluntary	Local Area
SMW [5]	Special Marine Warning		High	WXR	Voluntary	091000
SQW	Snow Squall Warning	Yes	High	WXR	Voluntary	Local Area
TOR	Tornado Warning	Yes	High	WXR	Voluntary	Local Area

[1] Needs to be programmed in, per requirements of; CFR 47, §11.54 EAS operation during a National Level Emergency.

[2] See CFR 47, 11.51(m)

[3] Child Abduction Emergency (CAE) and Blue Alert (BLU) are initiated in the State of Minnesota specifically by the Department of Public Safety, Bureau of Criminal Apprehension.

[4] Nuclear Power Plant Warning (NUW) Limited to EAS Participants with coverage in the counties of Dakota, Goodhue and Pierce, Wisconsin (Prairie Island), or the counties of Sherburne and Wright (Monticello).

[5] Special Marine Warning (SMW) limited to EAS Participants with coverage in the Counties along the Lake Superior shoreline.

(c) Location Codes (PSSCCC) ANSI codes: 027000 Minnesota (entire state) and 091000 for Lake Superior (reference: https://www.weather.gov/nwr/county_coverage?State=MN).

County	Code	County	Code	County	Code
Aitkin	027001	Isanti	027059	Pipestone	027117
Anoka	027003	Itasca	027061	Polk	027119
Becker	027005	Jackson	027063	Pope	027121
Beltrami	027007	Kanabec	027065	Ramsey	027123
Benton	027009	Kandiyohi	027067	Red Lake	027125
Big Stone	027011	Kittson	027069	Redwood	027127
Blue Earth	027013	Koochiching	027071	Renville	027129
Brown	027015	Lac qui Parle	027073	Rice	027131
Carlton	027017	Lake of the Woods	027077	Rock	027133
Carver	027019	Lake	027075	Roseau	027135
Cass	027021	Le Sueur	027079	Scott	027139
Chippewa	027023	Lincoln	027081	Sherburne	027141
Chisago	027025	Lyon	027083	Sibley	027143
Clay	027027	Mahnomen	027087	St. Louis	027137
Clearwater	027029	Marshall	027089	Stearns	027145
Cook	027031	Martin	027091	Steele	027147
Cottonwood	027033	McLeod	027085	Stevens	027149
Crow Wing	027035	Meeker	027093	Swift	027151
Dakota	027037	Mille Lacs	027095	Todd	027153
Dodge	027039	Morrison	027097	Traverse	027155
Douglas	027041	Mower	027099	Wabasha	027157
Faribault	027043	Murray	027101	Wadena	027159
Fillmore	027045	Nicollet	027103	Waseca	027161
Freeborn	027047	Nobles	027105	Washington	027163
Goodhue	027049	Norman	027107	Watonwan	027165
Grant	027051	Olmsted	027109	Wilkin	027167
Hennepin	027053	Otter Tail	027111	Winona	027169
Houston	027055	Pennington	027113	Wright	027171
Hubbard	027057	Pine	027115	Yellow Medicine	027173

FCC rules specify the EAS/SAME Location codes in the PSSCCC format. The first digit ("P") is used to indicate one-ninth of a local jurisdiction such as a county, etc. as located in the CCC element.

P Digit Location 0 = Entire Area		
1 = Northwest	2 = North	3 = Northeast
4 = West	5 = Central	6 = East
7 = Southwest	8 = South	9 = Southeast

The second set of two digits ("SS") indicates the state. Therefore, a message targeted to the entire state of Minnesota would have the SS code of 27, and the EAS/SAME message PSSCCC code would be 027000.

The SS code is also used to designate offshore areas (marine areas). The offshore area code for Minnesota is SS code 91. The NWS description for code 91 is as follows: Lake Superior.

The third set of three digits ("CCC") indicate the county or local jurisdiction.

(d) EAS Participant Identification Codes (LLLLLLLL): This 8-character (LLLLLLLL) code is affixed to every EAS message originated or re-transmitted by every EAS Encoder. The code identifies the EAS message originator, including EAS Participants, NWS Offices, or civil authorities operating that encoder. "L-code" IDs must adhere to the following formats. No deviation from these formats is allowed, since using certain other characters would cause an error in the system.

EAS Participants: Single station: WXXX followed by four "space" characters. Two stations using a common EAS Encoder-Decoder: "WXXXWYYY". Three or more stations using a common EAS Encoder-Decoder: The call letters of one of the stations are sufficient. All other stations sending the alert should keep a log of alerts sent, as should the station whose call letters are used in the L-Code.

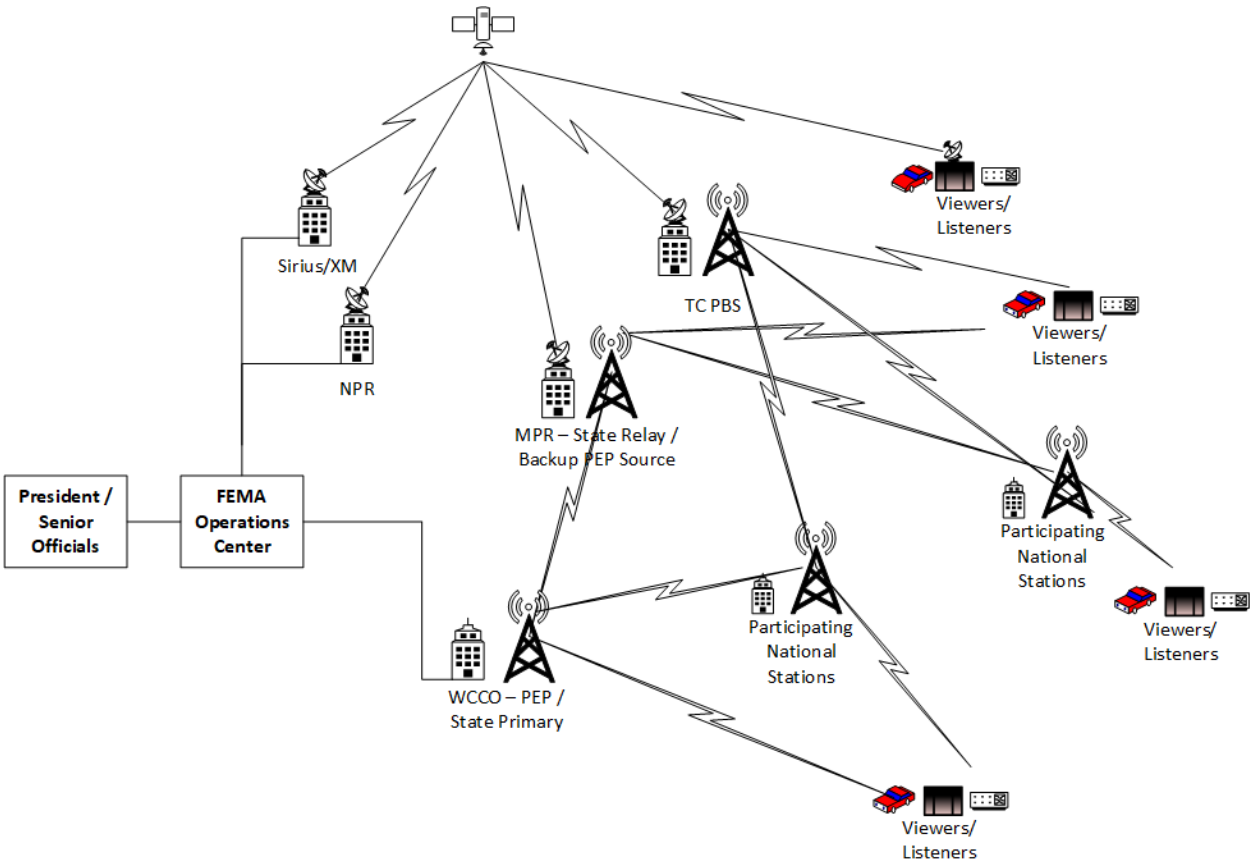
National Weather Service Offices: Use the letters "NWS" followed by the call sign of the NOAA Weather Radio (NWR) station sending the alert.

Civil Authorities: Use the letters "MN-DPSHSEM" and "MN-BCA" for identification when using EAS hardware solutions, all others will identify using a CAP assigned solution.

Monitoring Categories: National

Overview

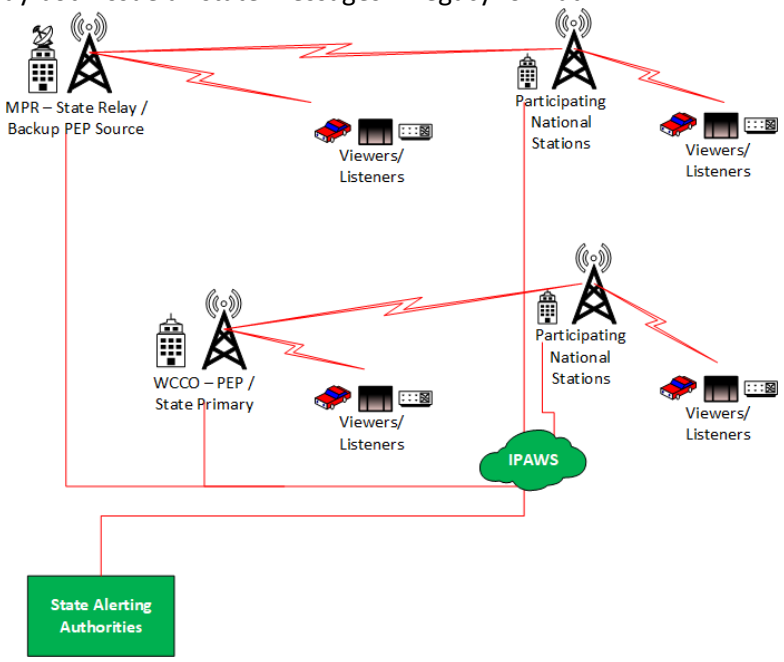
The national activation of the Emergency Alert System (EAS) for an Emergency Action Notification (EAN) and the National Periodic Test (NPT) must take priority over any other EAS message and preempt any broadcast in progress. During a national emergency, radio and television broadcast network program distribution facilities must be reserved exclusively for the dissemination of National messages per 47 C.F.R. 11.2(a).



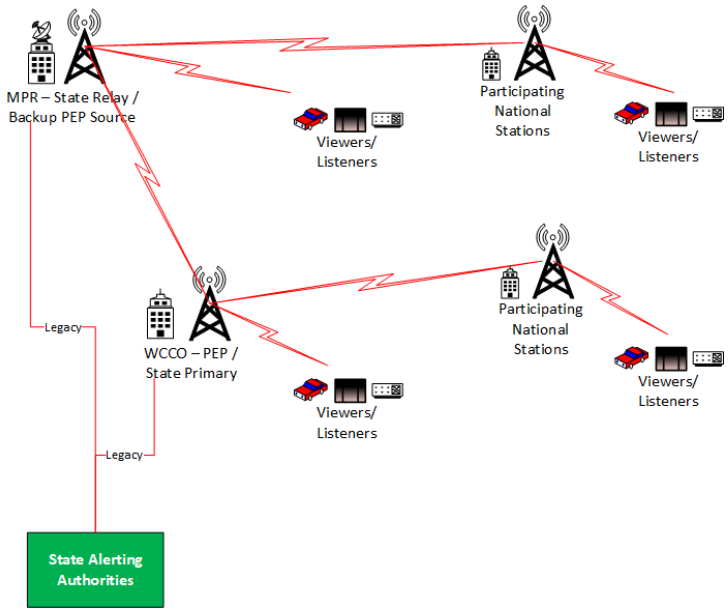
Note: TC PBS was added to the Minneapolis/St. Paul coverage area in 2023 for the EAN.

Monitoring Categories: State

State alerts will come from either the Bureau of Criminal Apprehension (BCA) or the State Emergency Operations Center (SEOC) operated by Department of Public Safety Homeland Security and Emergency (DPSHSEM). These agencies can issue EAS messages in CAP or legacy formats. The primary way to distribute a message is through IPAWS using CAP, as shown in the figure below. WCCO-AM and the Minnesota State Relay both issue all state messages in legacy format.

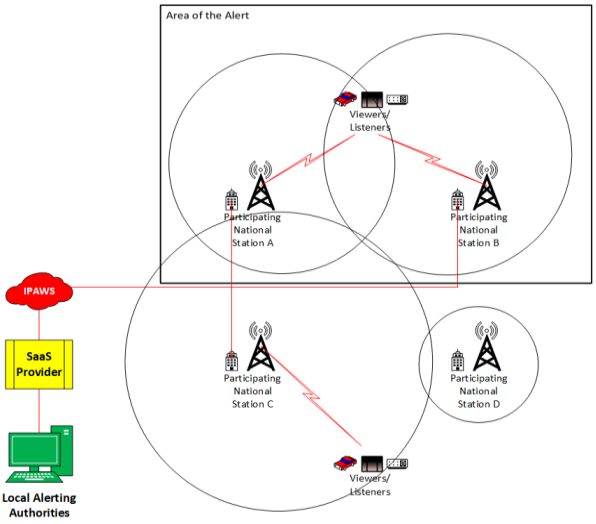


The secondary "legacy" method uses leased lines to send an audio message to the State Primary (SP) WCCO-AM and State Relay (SR) Minnesota Public Radio (MPR) as shown in the diagram below.



Monitoring Categories: Local

There are no local EAS plans. Alert Originators (AOs) are urged to use the Minnesota's State EAS plan for issuing guidance. Certified AOs issue EAS/IPAWS alerts on behalf of counties or cities of the First Class via the Common Alert Protocol (CAP). AOs may issue alerts after proper IPAWS Collaborative Operating Group (COG) authorization. EAS Participants must program their equipment accordingly.



Stations A, B and C receive the alert because they broadcast into the affected county, station D does not.

Monitoring Assignments:

All EAS participants are required to monitor assigned channels for inputs one (1), two (2) and four (4) on their EAS decoder. Inputs one and two are for your local Minnesota State Relay stations, input four is for your local MPTA station. It is recommended that input three (3) be tuned to your local National Weather Service station. The table below lists every Minnesota State Relay station, National Weather Service station, Minnesota Public Television station and the Primary Entry Point (WCCO), organized by operational area. Stations should tune EAS endecs to frequencies assigned to your operational area. If there is a stronger signal from a neighboring operational area, use that instead.

All Minnesota primary stations except WCCO, KNOW and KSJN are fed by the Minnesota state relay. The state relay is fed from the Minnesota Public Radio satellite uplink. The EAN source for the Minnesota state relay, KNOW and KSJN is the NPR squawk channel.

The Minnesota Public Television Association (MPTA) is providing a redundant path for EAN messaging on each of its independently operated stations. The EAN source for MPTA stations is XM Radio. MPTA stations are only providing EAN and NPT messages, not state or local messages.

WCCO is the Minnesota Primary Entry Point for EAS, its EAN source is FEMA.

Note: If your station or headend facility is unable to receive a monitoring assignment, they should send an email to eas@eas.talklist.com.

EAS Decoder Input 1 - This input is required by FCC rules, MN state relay 'Talk'

EAS Decoder Input 2 - This input is required by FCC rules, MN state relay 'Music'

EAS Decoder Input 3 - Local NWS, recommended by MN-IPAWS.

EAS Decoder Input 4 – MPTA (Public Television) Stations, recommended by MN-IPAWS.

CAP (Common Alert Protocol) Connectivity EAS receiver boxes must be connected to the CAP server maintained by FEMA. The URL for the FEMA server is: www.fema.gov/apps

	Tunning Assignments listed by Operational Area				
	Northwest	**Northeast**	**Central**	**Southwest**	**Southeast**
PEP			WCCO 830		
State Relay	KQMN 91.5	KBPN 88.3	KNOW 91.1	KNSW 91.7	KZSE 91.7
State Relay	KNTN 102.7	KBPR 90.7	KSJN 99.5	KRSW 89.3	KLSE 90.7
State Relay	KNBJ 91.3	WIRR 90.9	KNGA 90.5		KNSE 90.1
State Relay	KCRB 88.5	WIRN 92.5	KGAC 91.5		KXLC 91.1
State Relay	KCCD 90.3	WSCN 100.5	KNSR 88.9		
State Relay	KCCM 91.1	WSCD 92.9	KSJR 90.1		
State Relay	KNWF 91.5	WIRC 89.3	KNSE 90.1		
State Relay	KCMF 89.7	WLSN 89.7	KNCM 91.3		
State Relay	KRXW 103.5	WMLS 88.7	KRSU 88.5		
State Relay		KTIF 88.3			
State Relay		KGRP 89.7			
State Relay		WINH 91.9			
State Relay		WGRH 88.5			
/\					
MN PBS	KAWE Ch. 9	WDSE Ch. 8	KTCA Ch. 2	KSMN Ch. 20	KSMQ Ch. 15
MN PBS	KFME Ch. 13	WRPT Ch. 31	KWCM Ch. 10		
/\					
NWS	WXM99 162.425	KZZ84 162.450	KXI32 162.550	WNG702 162.425	KXI60 162.525
NWS	WXM64 162.400	KZZ29 162.400	WNG676 162.500	KXI31 162.450	WXJ86 162.550
NWS	WXK42 162.475	KIG64 162.550	KJY63 162.500	KZZ80 162.550	WXK41 162.475
NWS	WNG680 162.500	KZZ44 162.450	WNG673 162.525	WNG688 162.475	KXI68 162.450
NWS	WWF83 162.475	KXI44 162.500	WXK40 162.400	KXI50 162.500	
NWS	WNG707 162.400	WNG630 162.425	KEC65 162.550	WXM28 162.400	
NWS	WNG583 162.525	KXI43 162.450	KXI39 162.525	WXM41 162.425	
NWS	WWG98 162.475	KXI45 162.525	WNG685 162.425		
NWS	WXM38 162.400	WXK45 162.550	WNG711 162.400		
NWS	WWF45 162.450	WXJ64 162.550	WXM41 162.425		
NWS	WXK43 162.550	WNG678 162.425	KXI68 162.450		
NWS	WNG610 162.450	KZZ79 162.475	WXL65 162.400		
NWS		KZZ45 162.475	WXK44 162.475		

Operational Areas

Alerting Procedures

Overview

For the EAS to function properly, standard operating procedures (SOPs) must be outlined for all operators of EAS equipment, these SOPs must be adhered to consistently. This section will provide the information necessary for all EAS participants to perform their assigned tasks.

Assumptions

FCC Regulations require the use of the Emergency Alert System (EAS). This Plan covers all hazards regardless of emergency, disaster and/or event type. This Plan assumes all participants have received training in the utilization of the Emergency Alert System and are familiar with FCC Rules and Regulations. The following individuals or their representatives are authorized to initiate national, state, and local level activation of the Minnesota EAS.

- The President of the United States or designated official (National).
- Governor of Minnesota (State).
- Minnesota Department of Homeland Security and Emergency Management Director or designee (State).
- Meteorologist-In-Charge, National Weather Service, Chanhassen, or designee (Local).
- Superintendent of the Bureau of Criminal Apprehension or designee (State).
- Local Alert Originator or designee (Local).

National Weather Service

The NWS issues EAS weather alerts. Minnesota NWS forecast offices originate all weather emergency alerting via NOAA weather radio.

Transmission of warnings over NWR will include the 1050 Hz alert tone followed by the SAME/EAS preamble header code, the reading of the weather emergency message, and finally the end-of-message (EOM) code.

NOAA weather radio can also transmit non-weather emergency messages (NWEM). Under local agreement, if the local PSAPs/Public Safety or Emergency Management is unable, they can provide emergency messages to their local NWS office for broadcast on the NOAA Weather Radio. See annex D for NWS local office contact information.

Statewide Distribution

AMBER (CAE)

AMBER alerts are issued by Minnesota's Bureau of Criminal Apprehension (BCA). Information is posted to the BCA website. Criteria for issuing an alert can be viewed on the BCA website. Media organizations may provide updates on issued Amber alerts.

BLUE (BLU)

Blue alerts are issued by the Minnesota BCA upon request from a Minnesota law enforcement agency. The BCA maintains procedures for activation. Criteria for issuing an alert can be viewed on the BCA website. The BCA initiates the EAS and WEA messages through IPAWS. Media organizations may notify the public of an active Blue alert and provide updates, if available, until the alert is canceled.

Nuclear Power Plant Warning (NUW)

The NUW code is issued by Minnesota DPSHSEM in coordination with the power plant operators. If DPSHSEM is unable to issue a NUW alert, the BCA will act as a back-up. This is a warning of an event at a nuclear power plant, classified as a Site Area Emergency or General Emergency as classified by the Nuclear Regulatory Commission (NRC).

Local

Public Safety Answering Point (PSAPs) & Emergency Operation Centers (EOCs) may distribute EAS alerts the following ways:

- Purchase of third-party software that integrates with their current warning application. This "add-on" feature is activated after proper IPAWS COG authorization. It offers the ability to originate a CAP alert directly to FEMA IPAWS OPEN system.
- Partner with other local PSAP to centralize the alert origination process.
- Alerting authorities may also request that the servicing NWS send out non-weather emergency alerts to their local NWS radio system. See annex D for the NWS office in your local area and contact information.

Multilingual Alerting

It is recommended that stations be aware of non-English speakers in their audience. For stations that have more than 5% non-English speakers viewing or listening, the exploration of non-English language emergency alerts is encouraged.

Our recommendation is that each jurisdiction follow the Department of Justice (DOJ) "Limited English Proficiency initiative" and/or the following:

- Social media initiatives directing subscribers to health and safety resources noting that EAS alerting should not be distributed via social media favoring EAS alerting systems.
- Community outreach with key leaders willing to be part of a list-serve that, in turn, can help disseminate public health and safety information.
- Partnerships with local broadcast entities willing to support ELL public information services.

Annex A: Testing and Training

Testing

The following requirements regarding both RWTs (required weekly test) and RMTs (required monthly test) apply to all participating nationals. Even stations that have elected not to participate in local EAS alerts must still rebroadcast their local RMT. There are two exceptions to these rules:

1. Class "D" FM and LPTV stations don't need an EAS encoder, they must have an EAS decoder. These stations are exempt from issuing the RWT test. They must retransmit RMT tests as outlined below, minus the EAS Header Codes and Attention Signal. LPTV stations must present all EAS information visually, just as all other TV stations must do.

2. FM Translator and TV Translator stations which are not required to have any EAS equipment.

Wired and Wireless Cable systems participants should reference FCC rules and regulations, part 11 for testing responsibilities.

County-Location Codes:

All Minnesota EAS Participants must program their EAS equipment to designate, at a minimum, the county of their city of license as their local EAS area.

Required Weekly Test

All EAS Participants, except for those noted earlier, must transmit an RWT every week, on random days and times, except for the week of the Required Monthly Test. There are no time-of-day restrictions for transmitting the RWT. Reception of an RWT must be logged, but no further action is required.

Required Monthly Test

All Minnesota EAS RMT's will happen on the first Wednesday of the month.

Daytime	**Nighttime**
Jan, Mar, May, July, Sept, Nov	Feb, Apr, Jun, Aug, Oct, Dec
13:44	22:44

DPSHSEM and the BCA Duty Officer must follow this plan for timely distribution of the test. DPSHSEM issues the daytime RMTs, the BCA issues the nighttime RMTs and daytime tests when they fall on a holiday.

During the designated week for this test, all other EAS Participants are to stand by for this test and then retransmit it within 60 minutes of reception. Retransmission of the RMT within 60 minutes is an FCC requirement. Transmission of the RMT takes the place of the RWT for that week. Times should be logged for both the receipt and retransmission of an RMT. All incoming information, including audio, must be retransmitted exactly as received except for the location code portion of the digital preamble. Retransmission of an RMT is not required by a station that is off the air.

National Periodic Tests (NPT)

FEMA will schedule and originate the National Periodic Test (NPT). This test must be retransmitted immediately after reception. The results of this test must be filed with the FCC using the EAS Test Reporting System (ETRS):

- Part 1 On or before 11:59 p.m. EDT the day of the test,
- Part 2 Within 24 hours of the test,
- Part 3 Within 45 days after the test.

Missed Tests

If you miss a RWT or RMT, follow these steps:

- Check operational status of the EAS encoder decoder unit.
    - Check system logs,
    - Confirm receivers are working OK for good signal,
    - Good audio level, and
    - No audio distortion of the incoming broadcast.
- Check for IPAWS OPEN connectivity.

Post an inquiry to the Minnesota EAS list server (eas@eas.talklist.com)

- See if other PN have experienced similar issue(s).
- Try to determine if the source of the test did in fact broadcast it.
- Log any information gleaned from the above steps into the EAS log.

Logging

A log must be kept of all EAS messages received and sent. The log must be checked for the required tests received from your assigned monitoring sources, as well as your originated tests, and signed weekly by the participant's Chief Operator, or designee. This log may be requested for inspection by

agents of the FCC or Alternative Broadcast Inspection Program personnel in the normal course of their duties. Logs must be kept for two (2) years.

Failure to receive or send any of the above test alerts requires that your Chief Operator, or their designee, investigate the cause and then remediate and take measures to make sure it does not reoccur (assuming remediation of the problem was on the end of the receiving station). This series of events must be documented and included with the station's EAS log for that month including explanations from your assigned monitoring sources**.** A discussion of missed or impaired alerts can be viewed on the **eas@eas.talklist.com** list service.

Training

Proper training must be maintained for the EAS to succeed. Alert Originators are required to complete, at a minimum, the FEMA IS-247 course. It is recommended that all other EAS Participants take the training for an overview of the IPAWS program. See FEMA training website for details on courses, 247b.

https://training.fema.gov/is/courseoverview.aspx?code=IS-247.b&lang=en

Annex B: Security Recommendations

Overview of EAS Equipment Installation and Configuration, Device General Best Practices

Alert Authentication

- Ensure CAP 1.2 is enforced and signature is enforced.

Account Management

- Change your EAS equipment's password from the factory default password.
- If your facility receives alerts from other EAS participant relays, as described in your State EAS Plan, ensure that you are receiving their RWT and RMTs (check the device's logs or printouts).
- If you are not receiving these test messages, alert your EAS source stations and check your receiver/tuner and other source devices.
- If your receiver/tuner is working properly, contact your relay or activation source and let them know you are not receiving their RWT/RMTs.
- Ensure your patch management (firmware) is up to the equipment manufacturers' recommendations.
- Ensure that the appropriate Originator and Event Codes are programmed for forwarding/relay.
- Check the EAS device for Automatic/Manual message relay setting. Set to your facility's desired action.
- Check auxiliary or other necessary external equipment, such as distribution amplifiers, audio switching equipment and text crawl generators for proper connections and operation.
- Check and adjust all audio levels to and from the device to minimize distortion and noise.
- Ensure that your monitoring source (tuner/receiver, etc.) is feeding clear audio to the EAS device.

Annex C: Memorandum of Understanding (MOU)

MEMORANDUM OF UNDERSTANDING BETWEEN MINNESOTA PUBLIC RADIO (MPR) AND THE MINNESOTA INTEGRATED PUBLIC ALERT WARNING SYSTEM TEAM (MN-IPAWS)

Memorandum of Understanding

Introduction

The Emergency Alert System (EAS) was designed to provide citizens with timely emergency information for major emergencies and disasters, both natural and technological, which pose a significant threat to the health and safety of the public. The Federal Communications Commission (FCC) developed the EAS to facilitate the communications infrastructure, set up standard rules, and mandate EAS Participants to acquire and install the necessary EAS hardware and to "voluntarily" participate in EAS.

Purpose

This Memorandum of Understanding between Minnesota Public Radio (MPR) and the Minnesota Emergency Alert System Team (MN-IPAWS) establishes a broad framework of cooperation with the Emergency Alert System under Part 11 of the FCC rules and regulations.

Recognition

MN-IPAWS recognizes that MPR is a tax-exempt non-profit organization whose mission is to produce and to acquire radio programming of community value; to combine these programs into a non-profit radio service of the highest quality for broadcast through a network of radio stations to the people of Minnesota and its border communities; and to reflect the culture, events, issues and ideas of Minnesota and its people in radio broadcasts designed for national and international audiences.

MPR recognizes that MN-IPAWS is made up of representatives of committed EAS Participants, State and Local Emergency Management agencies, the National Weather Service, and other public and private organizations that have a role with the EAS/MN-IPAWS. MN-IPAWS is responsible for coordination of the Emergency Alert System for the citizens of Minnesota.

Principles of Cooperation

So that communications facilities of the Minnesota Public Radio network may be utilized to the extent required by the Minnesota Statewide EAS Plan, and to the extent permitted or required by law and regulation, Minnesota Public Radio and the Minnesota Emergency Alert System Team have agreed with the following:

1. MPR will provide their radio network for immediate transmission of the National Level Emergency Action Notification (EAN) and Emergency Action Termination (EAT) which originate from the office of the President of the United States.

2. MPR will provide their radio network for transmission of the scheduled Required Monthly Test (RMT) which originates from sources authorized by the Minnesota EAS Statewide Plan.

3. MPR will provide their radio network for transmission of all Statewide EAS alerts originating from the Governor or his or her authorized representative, the Minnesota Bureau of Criminal Apprehension and Minnesota Homeland Security and Emergency Management.

4. MPR will continue to maintain audio paths from the Primary Entry Point (PEP) station (WCCO) and the State Emergency Operations Center to MPR HQ.

5. One representative of MPR will become a member of the MN-IPAWS. He/she will sit on the main team and the Technical Sub-committee.

6. MN-IPAWS will distribute copies of this agreement through channels to its own organization, and other organizations, both public and private, which may have an active interest in the distribution of National and State level EAS alerts and tests. In addition, this agreement will be included in the official EAS state plan.

7. MN-IPAWS will hold MPR harmless from any liability MPR may incur due to MPR's activities hereunder.

Implementation

This memorandum shall take effect upon its signing by authorized representatives of the MPR and the MN-IPAWS. This memorandum may be amended by mutual agreement of both parties and will remain in effect until terminated. MPR and MN-IPAWS will review this agreement and coordinate such revisions as may be necessary on an annual basis or as needed. Upon 90 days written notice, this memorandum may be terminated by either party.

Annex D: Minnesota National Weather Service Contact Information

Grand Forks, ND: Telephone: (701) 795-5119 (answered 24/7) (701) 772-0720 (General)
Fax: (701) 772-0751
Email: nws.grandforks@noaa.gov

ARMER: SEMTAC and Grand Forks Weather Talk Groups.

Duluth, MN: Telephone: (218) 729-0653 (answered 24/7) (218) 729-0651 (General)
Fax: (218) 729-0690
Email: nws.duluth@noaa.gov

ARMER: SEMTAC and Duluth Weather Talk Groups.

Aberdeen, SD: Telephone: (605) 225-5547 (answered 24/7) (605) 225-0519 (General)
Fax: (605) 225-7417
Email: nws.aberdeen@noaa.gov

SD Radio Patch to Aberdeen

Minneapolis, MN: Telephone: (952) 361-6671 (answered 24/7) (952) 361-6670 (General)
Fax: (952) 361-6668
Email: nws.twincities@noaa.gov

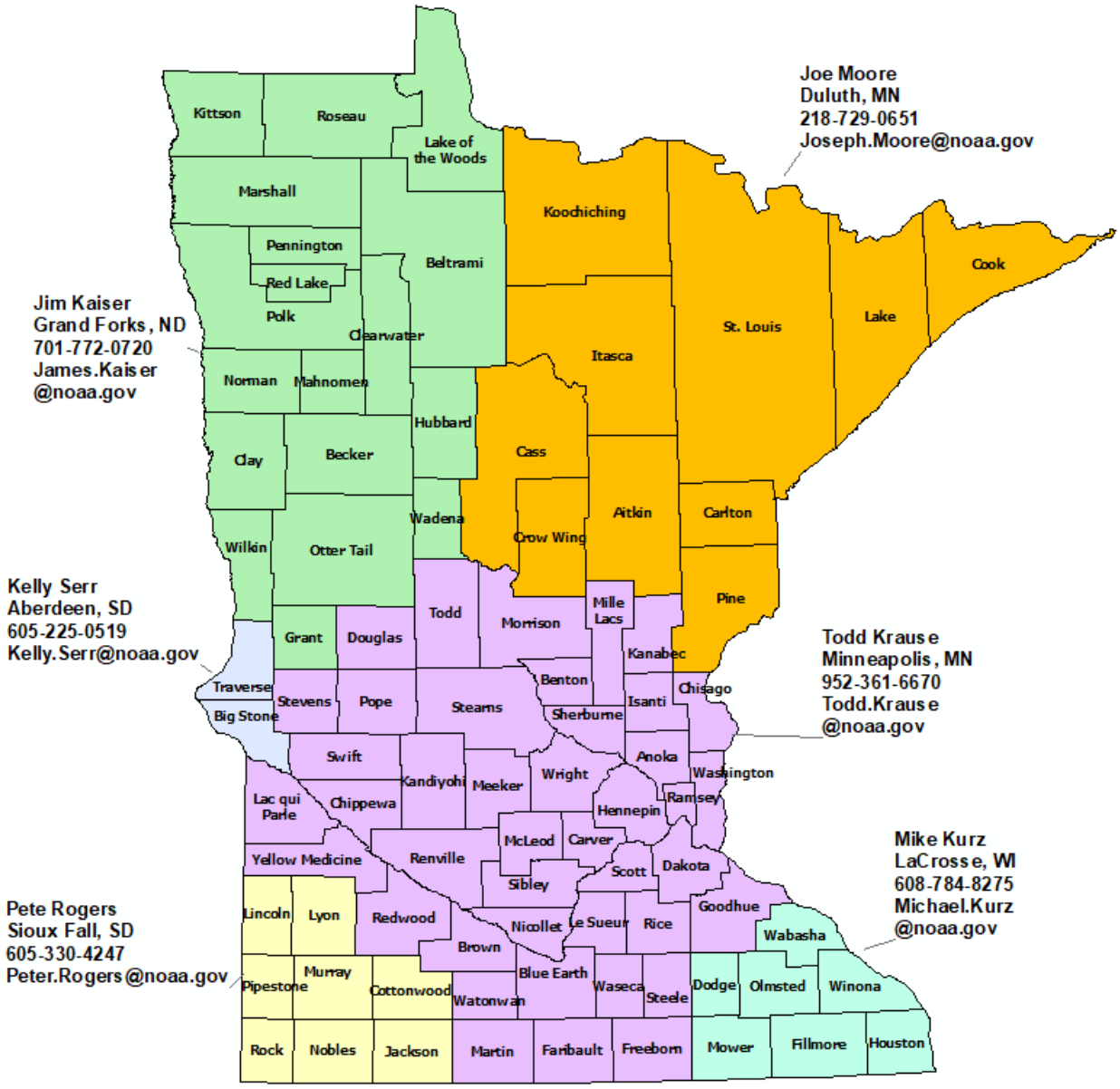
ARMER: SEMTAC, METEM, and Chanhassen Weather Talk Groups.

Sioux Falls, SD: Telephone: (605) 330-4398 (answered 24/7) (605) 330-4247 (General)
Fax: (605) 330-4248
Email: nws.siouxfalls@noaa.gov

ARMER: SEMTAC and Sioux Falls Weather Talk Groups.

La Crosse, WI: Telephone: (608) 784-8292 (answered 24/7) (608) 784-8275 (General)
Fax: (608) 784-8238
Email: nws.lacrosse@noaa.gov

ARMER: SEMTAC and La Crosse Weather Talk Groups.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Roseau
Lake of the Woods
Koochiching
Cook
Lake
St. Louis
Marshall
Pennington
Red Lake
Polk
Beltrami
Clearwater
Itasca
Norman
Mahnomen
Hubbard
Cass
Clay
Becker
Wadena
Aitkin
Carlton
Crow Wing
Wilkin
Otter Tail
Pine
Todd
Morrison
Mille Lacs
Grant
Douglas
Kanabec
Traverse
Stevens
Pope
Stearns
Benton
Isanti
Chisago
Big Stone
Sherburne
Swift
Anoka
Washington
Kandiyohi
Meeker
Wright
Lac qui Parle
Chippewa
Ramsey
Hennepin
McLeod
Carver
Yellow Medicine
Renville
Scott
Dakota
Sibley
Lincoln
Lyon
Redwood
Nicollet
Le Sueur
Rice
Goodhue
Wabasha
Brown
Murray
Blue Earth
Pipestone
Cottonwood
Watonwan
Waseca
Steele
Dodge
Olmsted
Winona
Rock
Nobles
Jackson
Martin
Faribault
Freeborn
Mower
Fillmore
Houston

Annex E: Contact Information

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Todd Krause
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National Weather Service Chanhassen, Minnesota
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(todd.krause@noaa.gov)

Lillian McDonald Co-Chair Policy Committee IPAWS
Senior Managing Director, Emergency Response Systems
Twin Cities PBS
Telephone: 651 229-1304
(lmcdonald@tpt.org)

Annex F: Glossary of Terms

AO – Alert Originator

CAP - Common Alerting Protocol

COG - Collaborative Operating Group

DPSHSEM – Department of Public Service Homeland Security Emergency Management for Minnesota.

EAS - Emergency Alert System

EAS Participants - Entities required under the Commission's rules to comply with EAS rules, e.g., analog radio and television stations, and wired and wireless cable television systems, DBS, DTV, SDARS, digital cable and DAB, and wireline video systems.

EAN - Emergency Action Notification alert

EAT- Emergency Action Termination

EM - Emergency Manager

EOC - Emergency Operations Center

ESL – English as a Second Language

FCC - Federal Communications Commission (http://www.fcc.gov)

FEMA - Federal Emergency Management Agency (http://www.fema.gov)

HSEM – Homeland Security Emergency Management

IP – Internet Protocol

IPAWS – Integrated Public Alert Warning System (https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system)

IPAWS-OPEN - Integrated Public Alert Warning System – Open Platform for Emergency Networks

LP - Local Primary (Station)

MN-DPSHSEM – Department of Public Service Homeland Security Emergency Management for Minnesota

MPTA – Minnesota Public Television Association

NAB - National Association of Broadcasters http://www.nab.org

NASBA - National Alliance of State Broadcaster Associations www.nasbaonline.net

NCMEC - National Center for Missing & Exploited Children http://www.ncmec.org

NCTA - National Cable and Telecommunications Association www.ncta.com

NEMA - National Emergency Management Association www.nemaweb.org

NIMS - National Incident Management System www.fema.gov/emergency/nims

NOAA - National Oceanic and Atmospheric Administration www.noaa.gov

NPR – National Public Radio

NPR Cue Channel - A non-program channel to Public Radio stations which carries National EAS messages and tests as a PEP station. Also known as the “Squawk” channel.

NPR Squawk - also known as NPR Cue Channel

NPT – National Periodic Test

NWEM - Non-weather emergency message

NWR - NOAA Weather Radio

NWS - National Weather Service (http://www.nws.noaa.gov)

NWPS - National Public Warning System aka PEP

PEP – Primary Entry Point, a special station used for POTUS EAN alert code

PN – Participating Nationals, all media organizations operating under FCC part 11 rules.

R&O - Report and Order

RBDS - Radio Broadcast Data System

RMT - EAS Required Monthly Test

RWT - EAS Required Weekly Test

SaaS – Software as a Service

SAME - Specific Area Message Encoding

SBE - Society of Broadcast Engineers www.sbe.org

SCTE - Society of Cable Telecommunications Engineers www.scte.org

SECB - State Emergency Communications Board

SECC - State Emergency Communications Committee (now the IPAWS Committee of the SECB)

SP - State Primary. Stations that are the entry point for State messages.

SR – Statewide relay for EAS distribution

WFO – Weather forecast office

Wireline Video Systems - The system of a wireline common carrier used to provide video programming service.