

Minnesota

Emergency Alert System

Statewide Plan



2014

I. REASON FOR PLAN

The State of Minnesota is subject to major emergencies and disasters, natural, technological and criminal, which can pose a significant threat to the health and safety of the public. The ability to provide citizens with timely emergency information is a priority of emergency managers statewide. The Emergency Alert System (EAS) was developed by the Federal Communications Commission (FCC) to provide emergency information to the public via television, radio, cable systems and wire line providers. The Integrated Public Alert and Warning System, (IPAWS) was created by FEMA to aid in the distribution of emergency messaging to the public via the internet and mobile devices. It is the intent that the EAS combined with IPAWS be capable of alerting the general public reliably and effectively. This plan exists to explain who can create and originate EAS alerts, and how and under what circumstances these alerts are distributed via the EAS and IPAWS.

II. PURPOSE AND OBJECTIVES OF PLAN**A. Purpose**

When emergencies and disasters occur, rapid and effective dissemination of essential information can significantly help to reduce loss of life and property. The EAS and IPAWS were designed to provide this type of information. However; these systems will only work through a coordinated effort. The purpose of this plan is to establish a standardized, integrated EAS & IPAWS communications system capable of facilitating the rapid dissemination of emergency public information.

B. Objectives

1. Describe the EAS administrative structure within Minnesota. (See Section V)
2. Establish who has the authority to originate an EAS notification. (See section V)
3. Identify approved event codes for Minnesota. (See VI A & B)
4. Identify who has the capability of activating EAS messages.(See section VI A, B & C)
5. Describe the concept of EAS and IPAWS operations. (See section VII)
6. Explain EAS integration with IPAWS and CAP (See section VII)
7. Establish standards for training, exercising, and testing of the EAS and IPAWS. (Annex C)

III. ORGANIZATION OF PLAN

The Minnesota Emergency Alert System Statewide Plan is divided into two major parts: a basic plan and supporting annexes.

A. Basic Plan

The basic plan contains the necessary guidance for the voluntary coordination between appropriate authorities (e.g., NWS, emergency management, local, state, or federal government, etc.) and the broadcast, cable and wireless industries to communicate to the general public during a national, state or local emergency situation.

B. Annexes

The annexes add detail to the basic plan and the procedural and technical information required for activation and testing of the EAS.

Annex A: Cable/Broadcast Monitoring Assignments

Annex B: EAS Event Code Recommendations

Annex C: Operating Procedures

Annex D: Testing and Training

Annex E: Organizational Charts

Annex F: MN IPAWS Policy Subcommittee Members

Annex G: Memorandum of Understanding

Annex H: Plan Review Schedule

Annex I: Glossary of Terms

Annex J: Description of CAP

Annex W: Minnesota National Weather Service Contact Information

IV. LEGAL REFERENCES

This plan has been developed in accordance with Federal Communications Commission (FCC) requirements, as well as State of Minnesota statutes. Legal bases and references include:

- A. Federal Telecommunications Act of 1996.
- B. Federal Communications Commission, Report & Order FCC 94-288.
- C. FEMA Executive Order 12472: Assignment of National Security and Emergency Preparedness Telecommunications Functions dated April 3, 1984.
- D. FEMA Executive Order 12656: Assignment of Emergency Preparedness Responsibilities dated November 18, 1988.
- E. FEMA Statement of Requirements for Presidential Communications dated September 15, 1995.
- F. Title 47 U.S.C. 151, 154 (I), 303 (r), 524 (g), and 606; 47 CFR Part 11, FCC Rules & Regulations, Emergency Alert System.
- G. Minnesota Statutes, Chapter 12, as amended.
- I. At the time of the writing of this document, authorities are considering adding multi lingual language alerts. Check with the IPAWS committee for further information.

V. EAS ORGANIZATION

Organizing the EAS to work within Minnesota is a cooperative effort of several agencies. The Minnesota State Emergency Board, AKA the IPAWS subcommittee (MN IPAWS), was created to replace the FCC created SECC. This committee worked together to organize and write this plan. The Minnesota Broadcasters Association, National Weather Service, MNDOT, Public Safety, Minnesota Emergency Management, Minnesota Public Radio and other interested parties are all represented in this group.

In order to update the Minnesota EAS plan, certain general considerations were addressed. Understanding why the average person would to turn on a radio or television, consult the internet, check their social media accounts, email or text messages, in a time of emergency, is considered vital to EAS/IPAWS operations. Educating the public about the EAS/IPAWS as an emergency communications tool and about the devices available to receive EAS/IPAWS information will be vitally important to making the EAS/IPAWS a viable system. Other characteristics of the public were also considered, including language differences and the special needs of hearing and visually impaired communities.

Procedures established within the state plan must ensure that all EAS/IPAWS links (radio, television, internet and mobile devices) act in a coordinated fashion. Agencies responsible for each link must be aware of their role and activation authority.

The MN-IPAWS is the statewide coordinating committee for the EAS and IPAWS. Local authorities will coordinate their EAS/IPAWS within a local operational area with MN-IPAWS.

The following agencies and organizations are suggested members for the state EAS/IPAWS teams:

Agencies and Organizations	MN-IPAWS Member
Association of Minnesota Emergency Managers (AMEM)	X
Association of Public Safety Communications Officials (APCO)	X
Cable industry	X
Division of Emergency Communications Network	X
Minnesota Broadcasters Association	X
Minnesota Premiere Stations (PEP)	X
Minnesota Public Radio (PEP & State Wide Relay)	X
Minnesota Public Television Association (State Wide Relay)	X
Minnesota Telephone Association	X
MN Department of Transportation	X
MN Homeland Security Emergency Management	X
MN State Patrol Division	X
National Weather Service offices	X
Police chiefs, fire chiefs	X
WCCO Radio (PEP)	X
Wireless telecommunications industry	X
Minnesota Bureau of Criminal Apprehension	X

A complete list of all current members of the MN-IPAWS is located in Annex E.

VI. ACTIVATION AUTHORITIES AND ASSOCIATED EVENT CODES

A. Activation Authorities and designated event codes.

The agencies listed below are the only sources authorized by the MN-IPAWS to originate an EAS notification for the emergency types listed. A complete list of recommended event codes is listed in annex B.

Level	Event Code	Emergency Type	Authorized Originators	Conditions
National	EAN	Emergency Action Notification	POTUS	By order of the President
Regional	Weather Codes	All Weather Types	National Weather Service	See Appendix W
State of Minnesota	CAE	AMBER	Bureau of Criminal Apprehension	Determined by BCA
	NUW	Nuclear Power Plant Accident	HSEM or BCA	Determined by HSEM
State and Local Authorities	EVI	Evacuate Immediately	NWS, State and Local Authorities	See IPAWS Flowchart
	SPW	Shelter in Place	NWS, State and Local Authorities	See IPAWS Flowchart
	CDW CEM <small>See note below</small>	Civil Danger Warning Civil Emergency Message	NWS, State and Local Authorities NWS, State and Local Authorities	See IPAWS Flowchart See IPAWS Flowchart

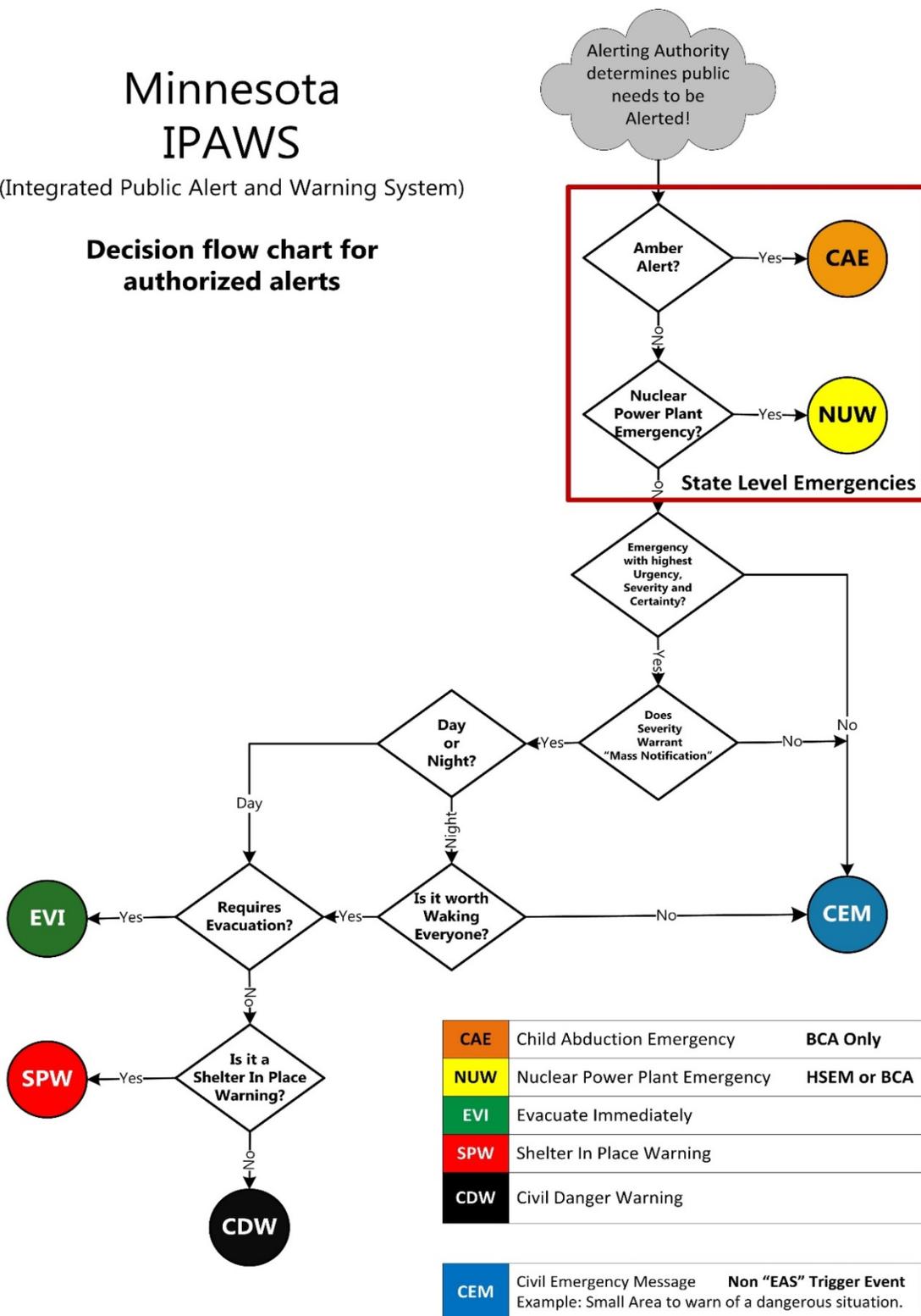
Note: Usage of a Civil Emergency Message (CEM) will activate Wireless Emergency Alerts (WEA) for small local area emergency messages when a mass notification is needed (but not to the extent of the wide area coverage) of a broadcast Emergency Alert System (EAS) message.

B. IPAWS decision matrix.

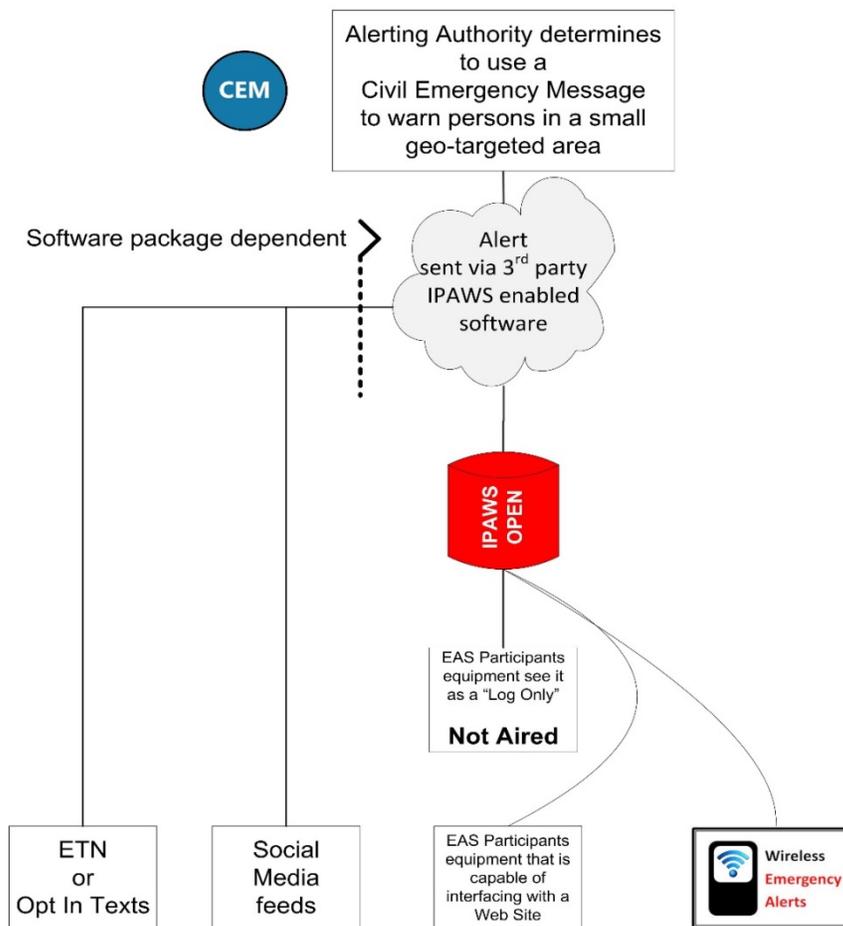
Minnesota IPAWS

(Integrated Public Alert and Warning System)

Decision flow chart for authorized alerts



Civil Emergency Message Intended for a small geo-targeted area



C. Event code decision matrix.

Emergency managers should use the event code decision matrix in addition to the flow chart when deciding what kind of event code to use. The codes listed below are primarily for local activation.

What Code to use

Urgency	Severity	Certainty	= Action Code
Immediate	Extreme	Observed	EVI, SPW, CDW, CEM*
Expected	Severe	Likely	EVI, SPW, CDW, CEM*
Future	Moderate	Possible	Advisory
Past	Minor	Unlikely	Advisory

* Using a CEM will activate Wireless Emergency Alerts, but not Emergency Alert System

D. Alerting Responsibilities:

National Level Activation EAN Alert

All media organizations, aka: participating nationals (PN), are mandated to install and operate a certified CAP compliant EAS encoder/decoder; mandated to configure the decoder to receive two sources (see Annex A), decode and monitor for the emergency activation notification (EAN) alert code, and if properly received/decoded, pre-empt programming and immediately relay broadcast the live incoming audio continuously till the end-of-message (EOM) code is received/decoded.

The executive branch of government (President) is the only authorized agency that can activate the EAN alert.

SAME Severe Weather Alerting

All SAME weather alerting over the EAS is optional and media organizations can select which alerts they intend to broadcast.

The NWS local forecast office is responsible for originating SAME severe weather alerts via a system of regional transmitters and/or FEMA's IPAWS program.

The NWS local forecast office may participate with distribution of non-weather emergency messages, (NWEM) via local NOAA audio only radio transmitters (legacy EAS) and/or the FEMA IPAWS program.

Local Activation

All media organizations are highly encouraged to configure the EAS decoder to receive and broadcast these listed alert codes (See page BP-5) for your coverage area(s). Forwarding of these local alerts are optional, media organizations can select which alerts they intend to broadcast.

IPAWS local area authorized (COG Certified) agencies, may activate IPAWS.

VII. CONCEPT OF OPERATIONS

A. Overview of the EAS, IPAWS and CAP operations.

IPAWS and EAS distribution circuits back each other up. The EAS and IPAWS use radio broadcast and the internet, respectively, to send out alerts, an audible data burst is used to encode EAS alerts, CAP (Common Alert Protocol) is used to encode IPAWS alerts. When an alert is sent, it goes out as audio, and as data. The audio alert goes out via the EAS, encoded header information describes the event, location and duration of the alert. For Minnesota, state and national messages are relayed via the MPR Satellite network to the entire state. At the same time, the same alert goes out via the internet using CAP, this message goes to the CAP server operated by FEMA, which then routes it to EAS receiver boxes in the location area of the alert.

B. EAS/IPAWS Operations Policies

EAS and IPAWS are intended to alert the public with a message that informs them where to turn for further information. After the alert has been issued, participating news organizations should preempt programming and provide emergency information. The EAS is not intended to be a broadcast service providing continuous programming and supporting information.

EAS and IPAWS alerts should be clear, concise, and used only when absolutely necessary to protect lives or property. To ensure accountability and responsible use of the EAS/IPAWS, the MN-IPAWS has determined that all EAS and IPAWS alerts may only be originated by those agencies with authority assigned by the FCC and/or the MN-IPAWS. **(See Section VI. above for details.)**
Federal and state laws prohibit anyone without cause or authority from originating an EAS notification.

C. Originating an EAS Alert

i. National (EAN)

In the event of a national emergency, the President may decide to address the entire nation. The White House Communication Agency will transmit an Emergency Alert Notification (EAN) directly from the White House and, through FEMA to the Minnesota Primary Entry Point (WCCO Radio) and through the NPR satellite system to the Minnesota State Relay, (MPR).

ii. Statewide (CAE, NUW, EVI, SPW, CDW and CEM)

During a statewide emergency, an authorized (COG Certified) agency may originate an EAS/IPAWS alert via the EAS or using IPAWS CAP method to include Wireless Emergency Alerts (WEA). Incoming EAS/IPAWS alerts will be

relayed on WCCO AM and the Minnesota Public Radio state wide network and distributed over the internet.

iii Local Alert (EVI, SPW, CDW and CEM)

During a local emergency, an authorized (COG Certified) agency may originate an EAS Alert using IPAWS CAP method to include Wireless Emergency Alerts (WEA). As an alternative, an alert can be sent to the local NWS office via telephone, fax, email, 800 MHz radio or HazCollect. See appendix W for NWS contact information for your local NWS office. The NWS will forward the alert using the NOAA Weather Radio network. Tuning an input to your EAS box to your local NWS station is recommended. Local alert areas conform to NWS local office coverage areas, see map in appendix W.

D. Broadcasting EAS Alerts

For national notifications, the EAS message is relayed from the origination point (in this case the National Primary) to the State Relay (MPR) the PEP (WCCO AM). For Statewide emergencies messages are sent to the State Relay (MPR) and the PEP (WCCO AM). Local emergencies will either be sent out via IPAWS or sent to the NWS.

VIII. PLAN MAINTENANCE AND DISTRIBUTION

The MN-IPAWS Committee has the authority and responsibility for maintenance of this plan. The plan will be reviewed and reviewed every 2 years, see appendix G for the schedule. Agencies identified in this document will provide updated information about their responsibilities so that plan revisions can be made. Changes to the plan will also be made to address deficiencies identified in reviews, tests and activation.

Current copies of this plan will be distributed to:

- A. All broadcast stations and cable systems in Minnesota with EAS responsibilities;
- B. The FCC, FEMA, HSEM, MN-DPS, Local Public Safety and NWS;
- C. Any participating private organization that contributes to the operation of the EAS system.
- D. Posted to the internet. (<https://dps.mn.gov/divisions/hsem/emergency-response/Pages/emergency-alert-system.aspx>)

All plan maintenance and distribution conducted by the MN-IPAWS Committee will be coordinated through the Minnesota Division of Homeland Security Emergency Management (HSEM). Additional copies of the plan are available by contacting a HSEM representative from the MN-IPAWS. **See Annex F for contact names.**

IX. APPROVAL AND CONCURRENCE

APPROVAL:

DIRECTOR, Minnesota Division of Homeland Security Emergency Management

CHAIR, Minnesota State Emergency Communications Board

CHAIR, Minnesota IPAWS Committee

VP & CTO, Technology & Music Services, Minnesota Public Radio

CHIEF, FCC, Public Safety and Homeland Security Bureau

CONCURRENCE:

WARNING COORDINATION METEOROLOGIST, National Weather Service,
Chanhassen, MN

PRESIDENT, Minnesota Broadcasters Association

PRESIDENT, Minnesota Cable Television Association

PRESIDENT, Minnesota Telco Alliance

Annex A: Station tuning assignments.**I. OVERVIEW**

All EAS participants are required to monitor the assigned channels for inputs one (1) and two (2) on their EAS decoder. This action will enable relay of the national level emergency action notification (EAN) alert. The spreadsheet that follows shows these required inputs. In addition, your local NWS station is also listed; it is recommended that it be tuned to input 3.

EAS Decoder Input 1 - This input is required by FCC rules.

EAS Decoder Input 2 - This input is required by FCC rules.

EAS Decoder Input 3 - local NWS, recommended by MN-IPAWS

EAS Decoder Input 4 -

II. MONITORING ASSIGNMENTS

Monitoring assignments are available at the Minnesota Broadcasters Association.

<http://www.minnesotabroadcasters.com>.

III. CAP (Common Alert Protocol) Connectivity

EAS receiver boxes must (by FCC ruling) be connected to the CAP server maintained by FEMA. The URL for the FEMA server is <https://apps.fema.gov/>

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City	Station	Frequency	Band	Input1	Freq1	Band 1	Input2	Freq 2	Band 2	Input3	Freq3
Ada	KRJB	106.3	FM	KNTN	102.7	FM	KQMN	91.5	FM	WNG610	162.450 MHz
Aitkin	KKIN	94.3	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ84	162.450 MHz
Aitkin	KKIN	930	AM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ84	162.450 MHz
Albany	KDDG	105.5	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Albany	KASM	1150	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Albert Lea	KCPI	94.9	FM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Albert Lea	KQPR	96.1	FM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Albert Lea	KATE	1450	AM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Alexandria	KXRA	92.3	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KXRZ	99.3	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KIKV	100.7	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KXRA	1490	AM	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KCCW	Chan. 207	TV	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KSAX	Chan. 42	TV	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KRWF	Chan. 43	TV	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Alexandria	KCCO	Chan. 7	TV	KNSR	88.9	FM	KSJR	90.1	FM	WNG707	162.425 MHz
Appleton	KRSU	88.5	FM	SR-1			KNCM	88.5	FM	KXI32	162.550 MHz
Appleton	KNCM	91.3	FM	SR-1			KRSU	91.3	FM	KXI32	162.550 MHz
Appleton	KWCM	Chan. 10	TV	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Austin	KMSK	91.3	FM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Austin	KAUS	99.9	FM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Austin	KNFX	970	AM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Austin	KAUS	1480	AM	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Austin	KSMQ	Chan. 15	TV	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Austin	KAAL	Chan. 6	TV	KNSE	90.1	FM	KZSE	90.7	FM	WXK41	162.475 MHz
Baxter	KBLB	93.3	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Baxter	KBKK	95.5	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Baxter	KUAL	101.5	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Bemidji	KCRB	88.5	FM	SR-1			KNBJ	91.3	FM	WXM99	162.425 MHz
Bemidji	KBSB	89.7	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KNBJ	91.3	FM	SR-1			KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	WBJI	98.3	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KLLZ	99.1	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KBHP	101.1	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KKBJ	103.7	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KKBJ	1360	AM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KBUN	1450	AM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KAWB	Chan. 22	TV	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Bemidji	KAWB	Chan. 9/22	TV	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Benson	KBMO	93.3	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Benson	KSCR	93.5	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Blue Earth	KBEW	98.1	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Blue Earth	KJLY	104.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Blue Earth	KBEW	560	AM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz

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Brainerd	KBPR	90.7	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	KFGI	103.5	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	WJJY	106.7	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	KLIZ	107.5	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	WWWI	1270	AM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	KVBR	1340	AM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Brainerd	KLIZ	1380	AM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ45	162.475 MHz
Breckenridge	KBMW	1450	AM	KCCD	90.3	FM	KCCM	91.1	FM	WNG680	162.500 MHz
Breezy Point	KLKS	104.3	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ84	162.450 MHz
Browerville	KXDL	99.7	FM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Buffalo	KRWC	1360	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Buhl	WIRN	92.5	FM	SR-1			WIRR	90.9	FM	KIG64	162.550 MHz
Cass Lake	KOJB	90.1	FM	KNBJ	91.2	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Chandler	KSMN	Chan.20/1 5	TV	KNSW	91.7	FM	KRSW	89.3	FM	WNG702	162.425 MHz
Cloquet	WKLK	96.5	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Cloquet	WMOZ	106.9	FM	WSCN	100.5	FM	WSCD	92.9	FM	KEC64	162.550 MHz
Cloquet	WKLK	1230	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Cold Springs	KMXK	94.9	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Coleraine	KGPZ	96.1	FM	WSCN	100.5	FM	WSCD	92.9	FM	KZZ29	162.400 MHz
Collegeville	KNSR	88.9	FM	SR-1			KSJR	90.1	FM	WXL65	162.400 MHz
Collegeville	KSJR	90.1	FM	SR-1			KNSR	88.9	FM	WXL65	162.400 MHz
Collegeville	KJNB	99.9	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Crookston	KQHT	96.1	FM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
Crookston	KROX	1260	AM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
Deer River	KBAJ	105.5	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Detroit Lakes	KRCQ	102.3	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXM64	162.400 MHz
Detroit Lakes	KDLM	1340	AM	KCCD	90.3	FM	KCCM	91.1	FM	WXM64	162.400 MHz
Duluth	WNCB	89.3	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KDNI	90.5	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WWAX	92.1	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WSCD	92.9	FM	SR-1			WIRR	90.9	FM	KIG64	162.550 MHz
Duluth	KQDS	94.9	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KDAL	95.7	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KDNW	97.3	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KTCO	98.9	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WSCN	100.5	FM	SR-1			WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KLDJ	101.7	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KRBR	102.5	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KUMD	103.3	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KZIO	104.3	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KKCB	105.1	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KAOD	106.7	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KBMX	107.7	FM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WEBC	560	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz

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Duluth	KDAL	610	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WDSM	710	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WWJC	850	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KXTP	970	AM	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WDIO	Chan. 10	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WIRT	Chan. 13	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KQDS	Chan. 21	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KDLH	Chan. 3	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	KBJR	Chan. 6	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
Duluth	WDSE	Chan. 8	TV	WSCN	100.5	FM	WSCD	92.9	FM	KIG64	162.550 MHz
East Grand Forks	KYCK	97.1	FM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
East Grand Forks	KZLT	104.3	FM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
East Grand Forks	KCNN	1590	AM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
Eden Prairie	KZJK	104.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Eden Prairie	KNTF	950	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Eden Prairie	KMSP	Channel 9	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Edina	KTTB	96.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Edina	WXPT	104.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Ely	WIRC	89.3	FM	SR-1			WIRN	92.5	FM	KXI44	162.500 MHz
Ely	WELY	92.1	FM	WIRC	89.3	FM	WIRN	92.9	FM	KXI44	162.500 MHz
Ely	WELY	1450	AM	WIRC	89.3	FM	WIRN	92.9	FM	KXI44	162.500 MHz
Eveleth	WEVE	97.9	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Eveleth	KRBT	1340	AM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Fairmont	KFMC	106.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Fairmont	KSUM	1370	AM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Fargo, ND	KQWB	105.1	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz
Fargo, ND	KLTA	98.7	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz
Fargo, ND	KPFX	107.9	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz
Fargo, ND	KQWB	1660	AM	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz
Fargo, ND	KBRR/ VRR	Chan. 15	TV	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz
Faribault	KQCL	95.9	FM	WCCO	830	AM	KNO W	91.1	FM	WXK41	162.475 MHz
Faribault	KDHL	920	AM	WCCO	830	AM	KNO W	91.1	FM	WXK41	162.475 MHz
Fergus Falls	KCMF	89.7	FM	SR-1			KNWF	91.5	FM	WNG680	162.500 MHz
Fergus Falls	KNWF	91.5	FM	SR-1			KCMF	89.7	FM	WNG680	162.500 MHz
Fergus Falls	KJJJ	96.5	FM	KNWF	91.5	FM	KCMF	89.7	FM	WNG680	162.500 MHz
Fergus Falls	KZCR	103.3	FM	KNWF	91.5	FM	KCMF	89.7	FM	WNG680	162.500 MHz
Fergus Falls	KJJJ	1020	AM	KNWF	91.5	FM	KCMF	89.7	FM	WNG680	162.500 MHz
Fergus Falls	KBRF	1250	AM	KNWF	91.5	FM	KCMF	89.7	FM	WNG680	162.500 MHz

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Forest Lake	WLKX	95.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Fosston	KKEQ	96.7	FM	KNTN	102.7	FM	KQMN	91.5	FM	WNG610	162.450 MHz
Fosston	KKCQ	107.1	FM	KNTN	102.7	FM	KQMN	91.5	FM	WNG610	162.450 MHz
Fosston	KKCQ	1480	AM	KNTN	102.7	FM	KQMN	91.5	FM	WNG610	162.450 MHz
Glencoe	KARP	106.9	FM	KNOW	91.1	FM	KSJN	99.5	FM	WNG685	162.425 MHz
Glenwood	KMGK	107.1	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG673	162.525 MHz
Golden Valley	KQRS	92.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Grand Forks, ND	KNOX	94.7	FM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
Grand Forks, ND	KNOX	1310	AM	KNTN	102.7	FM	KQMN	91.5	FM	WWF83	162.475 MHz
Grand Rapids	KGRP	89.7	FM	SR-1			WIRN	92.5	FM	KZZ29	162.400 MHz
Grand Rapids	KMFY	96.9	FM	KGRP	89.7	FM	WIRN	92.5	FM	KZZ29	162.400 MHz
Grand Rapids	KAXE	97.1	FM	KGRP	89.7	FM	WIRN	92.5	FM	KZZ29	162.400 MHz
Grand Rapids	KOZY	1320	AM	KGRP	89.7	FM	WIRN	92.5	FM	KZZ29	162.400 MHz
Granite Falls	KKRC	93.9	FM	KNCM	88.5	FM	KRSU	91.3	FM	WNG711	162.400 MHz
Hastings	KDWA	1460	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Hibbing	KADU	90.1	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hibbing	WTBX	93.9	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hibbing	KMFG	102.9	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hibbing	WMFG	106.3	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hibbing	WKKQ	650	AM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hibbing	WMFG	1240	AM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Hutchinson	KDUZ	1260	AM	KNSR	88.9	FM	KSJR	90.1	FM	WNG711	162.400 MHz
International Falls	KTIF	88.3	FM	SR-1			KNBJ	91.3	FM	WXK45	162.550 MHz
International Falls	KXBR	91.1	FM	KTIF	88.3	FM	KNBJ	91.3	FM	WXK45	162.550 MHz
International Falls	KBHW	99.5	FM	KTIF	88.3	FM	KNBJ	91.3	FM	WXK45	162.550 MHz
International Falls	KSDM	104.1	FM	KTIF	88.3	FM	KNBJ	91.3	FM	WXK45	162.550 MHz
International Falls	KGHS	1230	AM	KTIF	88.3	FM	KNBJ	91.3	FM	WXK45	162.550 MHz
Jackson	KRAQ	105.7	FM	KNSW	91.7	FM	KRSW	89.3	FM	KXI31	162.450 MHz
Jackson	KKOJ	1190	AM	KNSW	91.7	FM	KRSW	89.3	FM	KXI31	162.450 MHz
LaCrescent	KQEG	102.7	FM	KLXC	91.1	FM	KZSE	90.7	FM	WXJ86	162.550 MHz
Lake City	KMFX	102.5	FM	WCCO	830	AM	KNO W	91.1	FM	WXK41	162.475 MHz
Lakeland	WDGY	630	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Lakeland	WMIN	740	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Litchfield	KLFD	1410	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXK44	162.475 MHz

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Little Falls	WYRQ	92.1	FM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Little Falls	KFML	94.1	FM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Little Falls	KLTF	960	AM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Long Prairie	KEYL	1400	AM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Luverne	KLQL	101.1	FM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz
Luverne	KQAD	800	AM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz
Madison	KLQP	92.1	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Mankato	KMSU	89.7	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KXLP	93.1	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KDOG	96.7	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KEEZ	99.1	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KRRW	101.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Mankato	KYSM	103.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KYSM	1230	AM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KTOE	1420	AM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Mankato	KEYC	Channel 12	TV	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Marshall	KARZ	107.5	FM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz
Marshall	KKCK	99.7	FM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Marshall	KARL	105.1	FM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Marshall	KBJJ	107.5	FM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Marshall	KMHL	1400	AM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Mehnommen	KRJM	101.5	FM	KCCD	90.3	FM	KCCM	91.1	FM	WNG610	162.450 MHz
Minneapolis	KTNF	950	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KBEM	88.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KMOJ	89.9	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KFAI	90.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KNOW	91.1	FM	WCCO	830	AM	NPR Squak			KEC65	162.550 MHz
Minneapolis	KXXR	93.7	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KNOF	95.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KTCZ	97.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KSJN	99.5	FM	WCCO	830	AM	NPR Squak			KEC65	162.550 MHz
Minneapolis	KDXL	99.7	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KTLK	100.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KDWB	101.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KEEY	102.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WLTE	102.9	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WGVX	105.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz

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Minneapolis	WGVY	105.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WGVZ	105.7	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KUOM	106.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KQQL	107.9	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KFXN	690	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KUOM	770	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WCCO	830	AM	PEP			KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KKMS	980	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WCTS	1030	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KFAN	1130	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WWTC	1280	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WLOL	1330	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KLBB	1400	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KDIZ	1440	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KLBP	1470	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KYCR	1570	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KARE	Channel 11	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KTCI	Channel 17	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KTCA	Channel 2	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	KSTC	Channel 23	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WFTC	Channel 29	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minneapolis	WCCO	Channel 4	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Minnetonka	KRVY	97.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Montevideo	KMGH	105.5	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Montevideo	KDMA	1460	AM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Monticello	KMOM	1070	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Moorhead	KCCD	90.3	FM	SR-1			KCCM	91.1	FM	WXK42	162.475 MHz
Moorhead	KCCM	91.1	FM	SR-1			KCCM	91.1	FM	WXK42	162.475 MHz
Moorhead	KVOX	99.9	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXK42	162.475 MHz

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Mora	KBEK	95.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Morris	KUMM	89.7	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Morris	KKOK	95.7	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Morris	KMRS	1230	AM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
New Prague	KRDS	95.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
New Prague	KCHK	1350	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
New Ulm	KNUJ	860	AM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Northfield	KRLX	88.1	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Northfield	KCMP	89.3	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Northfield	KYMN	1080	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Olivia	KOLV	100.1	FM	KNCM	88.5	FM	KRSU	91.3	FM	WNG711	162.400 MHz
Ortonville	KCGN	101.5	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Ortonville	KPHR	106.3	FM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Ortonville	KDIO	1350	AM	KNCM	88.5	FM	KRSU	91.3	FM	KXI32	162.550 MHz
Osakis	KBHL	103.9	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG673	162.525 MHz
Owatonna	KOWZ	100.9	FM	WCCO	830	AM	KNO W	91.1	FM	WXK40	162.400 MHz
Owatonna	KRFO	104.9	FM	WCCO	830	AM	KNO W	91.1	FM	WXK40	162.400 MHz
Owatonna	KRFO	1390	AM	WCCO	830	AM	KNO W	91.1	FM	WXK40	162.400 MHz
Park Rapids	KXKK	92.5	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Park Rapids	KDKK	97.5	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WWG98	162.475 MHz
Park Rapids	KQKK	107.9	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz
Park Rapids	KPRM	870	AM	KNBJ	91.3	FM	KCRB	88.5	FM	WWG98	162.475 MHz
Park Rapids	KAKK	1570	AM	KNBJ	91.3	FM	KCRB	88.5	FM	WWG98	162.475 MHz
Pelican Rapids	KBOT	104.1	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXM64	162.400 MHz
Pequot Lakes	WZFJ	100.1	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ84	162.450 MHz
Pequot Lakes	KTIG	102.7	FM	KBPN	88.3	FM	KBPR	90.7	FM	KZZ84	162.450 MHz
Perham	KPRW	99.5	FM	KCCD	90.3	FM	KCCM	91.1	FM	WXM64	162.400 MHz
Pine City	WCMP	100.9	FM	KNOW	91.1	FM	KSJN	99.5	FM	WNG678	162.425 MHz
Pine City	WCMP	1350	AM	KNOW	91.1	FM	KSJN	99.5	FM	WNG678	162.425 MHz
Pipestone	KISD	98.7	FM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Pipestone	KLOH	1050	AM	KNSW	91.7	FM	KRSW	89.3	FM	KXI50	162.500 MHz
Plymouth	KPXM	Channel 41	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Preston	KFIL	103.1	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Preston	KFIL	1060	AM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Princeton	KLCI	106.1	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.475 MHz
Princeton	WQPM	1300	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz

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Red Wing	KWNG	105.9	FM	WCCO	830	AM	KNO W	91.1	FM	WXK41	162.475 MHz
Red Wing	KCUE	1250	AM	WCCO	830	AM	KNO W	91.1	FM	WXK41	162.475 MHz
Redwing	KLCH	94.9	FM	KNOW	91.1	FM	KSJN	99.5	FM	WXK41	162.475 MHz
Redwood Falls	KLGR	97.7	FM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Redwood Falls	KLGR	1490	AM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
Rochester	KRPR	89.9	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KZSE	90.7	FM	SR-1			KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KLSE	91.7	FM	SR-1			KZSE	90.7	FM	WXK41	162.475 MHz
Rochester	KFSI	92.9	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KWWK	96.5	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KNXR	97.5	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KRCH	101.7	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KROC	106.9	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KLCX	107.7	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KWEB	1270	AM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KROC	1340	AM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KOLM	1520	AM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KTTC	Chan. 10/3 6	TV	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Rochester	KXLT	Chan. 47	TV	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Roseau	KCAJ	102.1	FM	KRXW	103.5	FM	KNTN	102. 7	FM	WWF45	162.450 MHz
Roseau	KRXW	103.5	FM	SR-1			KNTN	102. 7	FM	WWF45	162.450 MHz
Roseau	KRWB	1410	AM	KRXW	103.5	FM	KNTN	102. 7	FM	WWF45	162.450 MHz
Roseville	KTIS	98.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Roseville	KTIS	900	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Sauk Centre	KMSR	94.3	FM	KNSR	88.9	FM	KSJR	90.1	FM	WNG673	162.525 MHz
Sauk Rapids	WHMH	107.1	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Sauk Rapids	WBHR	660	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Sauk Rapids	WVAL	800	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
Shakopee	KKCM	1530	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Slayton	KJOE	106.1	FM	KNSW	91.7	FM	KRSW	89.3	FM	WNG702	162.425 MHz
Sleepy Eye	KNUJ	107.3	FM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
South Burnsville	KBGY	107.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Spring Grove	KQYB	98.3	FM	KXLC	91.1	FM	KZSE	90.7	FM	WXJ86	162.550 MHz
Spring Valley	KVGO	104.3	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Springfield	KNSG	94.7	FM	KNGA	91.5	FM	KGAC	90.5	FM	KXI39	162.525 MHz
St. Cloud	KVSC	88.1	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KCFB	91.5	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KKJM	92.9	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz

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St. Cloud	KKSR	96.7	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	WWJO	98.1	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KLZZ	103.7	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KCLD	104.7	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	WJON	1240	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KXSS	1390	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.400 MHz
St. Cloud	KNSI	1450	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXL65	162.475 MHz
St. James	KXAC	100.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
St. Paul	WMCM	91.7	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
St. Paul	KSTP	94.5	FM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
St. Paul	KSTP	1500	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
St. Paul	KUCW	Chan. 23	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
St. Paul	KSTP	Chan. 5/45	TV	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
St. Peter	KGAC	90.5	FM	SR-1			KNGA	91.5	FM	WXK40	162.400 MHz
St. Peter	KNGA	91.5	FM	SR-1			KGAC	90.5	FM	WXK40	162.400 MHz
St. Peter	KRBI	105.5	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
St. Peter	KRBI	1310	AM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Staples	KNSP	1430	AM	KBPN	88.3	FM	KBPR	90.7	FM	WNG673	162.525 MHz
Stewartville	KYBA	105.3	FM	KZSE	90.7	FM	KLSE	91.7	FM	WXK41	162.475 MHz
Stillwater	WEZU	1120	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Stillwater	WIMN	1220	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Thief River Falls	KSRQ	90.1	FM	KNTN	102.7	FM	KQMN	91.5	FM	WXK43	162.550 MHz
Thief River Falls	KQMN	91.5	FM	SR-1			KNTN	102.7	FM	WXK43	162.550 MHz
Thief River Falls	KKDQ	99.3	FM	KNTN	102.7	FM	KQMN	91.5	FM	WXK43	162.550 MHz
Thief River Falls	KSNR	100.3	FM	KNTN	102.7	FM	KQMN	91.5	FM	WXK43	162.550 MHz
Thief River Falls	KNTN	102.7	FM	SR-1			KQMN	91.5	FM	WXK43	162.550 MHz
Thief River Falls	KTRF	1230	AM	KNTN	102.7	FM	KQMN	91.5	FM	WXK43	162.550 MHz
Thief River Falls	KKAQ	1460	AM	KNTN	102.7	FM	KQMN	91.5	FM	WXK43	162.550 MHz
Virginia	WUSZ	99.9	FM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Virginia	WHLB	1400	AM	WIRN	92.5	FM	WIRR	90.9	FM	KZZ45	162.475 MHz
Virginia-Hibbing	WIRR	90.9	FM	SR-1			WIRN	92.5	FM	KIG64	162.550 MHz
Wabasha	KMFX	1190	AM	WCCO	830	AM	KZSE	90.7	FM	WXK41	162.475 MHz
Wadena	KSKK	94.7	FM	KBPN	88.3	FM	KBPR	90.7	FM	WXK64	162.550 MHz
Wadena	KKWS	105.9	FM	KBPN	88.3	FM	KBPR	90.7	FM	WXK64	162.550 MHz
Wadena	KWAD	920	AM	KBPN	88.3	FM	KBPR	90.7	FM	WXK64	162.550 MHz
Walker	KLLZ	99.1	AM	KNBJ	91.3	FM	KCRB	88.5	FM	WXM99	162.425 MHz

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Warroad	KKWQ	92.5	FM	KNBJ	91.3	FM	KCRB	88.5	FM	WWF45	162.450 MHz
Waseca	KRUE	92.1	FM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Waseca	KOWO	1170	AM	KNGA	91.5	FM	KGAC	90.5	FM	WXK40	162.400 MHz
Watertown	KWOM	1600	AM	WCCO	830	AM	KNO W	91.1	FM	KEC65	162.550 MHz
Willmar	KDJS	95.3	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXK44	162.475 MHz
Willmar	KQIC	102.5	FM	KNSR	88.9	FM	KSJR	90.1	FM	WXK44	162.475 MHz
Willmar	KWLM	1340	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXK44	162.475 MHz
Willmar	KDJS	1590	AM	KNSR	88.9	FM	KSJR	90.1	FM	WXK44	162.475 MHz
Windom	KDOM	94.3	FM	KNSW	91.7	FM	KRSW	89.3	FM	WNG702	162.425 MHz
Windom	KDOM	1580	AM	KNSW	91.7	FM	KRSW	89.3	FM	WNG702	162.425 MHz
Winona	KQAL	89.5	FM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KSMR	92.5	FM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KAGE	95.3	FM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KWNO	99.3	FM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KHME	101.1	FM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KWNO	1230	AM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Winona	KAGE	1380	AM	KXLC	91.1	FM	KZSE	90.7	FM	KG95	162.000 MHz
Worthington	KRSW	89.3	FM	SR-1						WXM28	162.400 MHz
Worthington	KNSW	91.7	FM	SR-1						WXM28	162.400 MHz
Worthington	KITN	93.5	FM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz
Worthington	KWOA	95.1	FM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz
Worthington	KWOA	730	AM	KNSW	91.7	FM	KRSW	89.3	FM	WXM28	162.400 MHz

Annex B: EAS Event Code Recommendations

Purpose

To provide clarification on filtering alert codes in EAS Participant equipment operating under the State of Minnesota EAS plan. The information provide in this document is generic and not specific to any one manufactures equipment. It provides further detail more than what is published in CFR 47 part 11 (EAS). By no means is this document a substitute for knowing your roles and responsibilities in part 11 but excerpts are provided in this document as they pertain to programming codes into your EAS equipment.

Sections of the CFR for reference that specifically relate to programming equipment.

§11.21 State and Local Area plans and FCC Map book.

§11.33 EAS Decoder.

§11.51 EAS code and Attention Signal Transmission requirements.

§11.52 EAS code and Attention Signal Monitoring requirements.

§11.56 Obligation to process CAP-formatted EAS messages.

Scope

Over the air monitoring will be in accordance with the Minnesota Emergency Alert and Warning plan.

Monitoring for Common Alerting Protocol (CAP) messages by EAS Participants has been required by the FCC as of June 30, 2012, all EAS Participants must have deployed operational equipment that is capable of receiving CAP and be connected to a source that allows them to receive via the internet.

The FEMA CAP server URL is ‘apps.fema.gov’.

All EAS Codes listed in the following table, that are programmed into the EAS Participants equipment must have the SAME codes entered for the counties located in their broadcast area. The only exception is the Required Weekly Test (RWT) that only needs to be for the county which the EAS Participant is located in.

Annex B: EAS Event Code Recommendations

Nature of Activation	Event Code	Level of Severity	Required	Authority	Log Only	Rebroadcast	Notes:
National Codes (Required):							
Emergency Action Notification	EAN	Emergency	X	FCC		Mandatory	1
National Information Center	NIC	Advisory		FCC			
National Periodic Test	NPT	Test		FCC			
Required Monthly Test	RMT	Test	X	FCC		Mandatory	2
Required Weekly Test	RWT	Test	X	FCC	X		
State and Local Codes (Recommended):							
Child Abduction Emergency	CAE	Emergency		MN Plan			3
Civil Danger Warning	CDW	Warning		MN Plan			
Civil Emergency Message	CEM	Emergency		MN Plan	X		4
Flash Flood Warning	FFW	Warning		NWS			
Immediate Evacuation Notice	EVI	Emergency		MN Plan			
Nuclear Power Plant Warning	NUW	Warning		MN Plan			5
Severe Thunderstorm Warning	SVR	Warning		NWS			
Shelter in Place Warning	SPW	Warning		MN Plan			
Special Marine Warning	SMW	Warning		NWS			6
Tornado Warning	TOR	Warning		NWS			

Notes:

- Needs to be programmed in as per requirements of; CFR 47, §11.54 EAS operation during a National
- Needs to be programmed in as per requirements of; CFR 47, §11.61 Tests of EAS procedures., (1) Required Monthly Tests of the EAS header codes, Attention Signal, Test Script and EOM code.
- Child Abduction Emergency (CAE) is initiated in the State of Minnesota specifically by the Department of Public Safety, Bureau of Criminal Apprehension.

Annex B: EAS Event Code Recommendations

4. A Civil Emergency Message (CEM) The message would be sent for distribution through the IPAWS OPEN server with public delivery main delivery through the Wireless Emergency Alerts for the short message in a small geographical area and then **Logged Only** at the media outlets to as notification of an event happening. The text of the EAS message would contain the larger instructions of what to avoid / what to do or where to go, so it could also be delivered to designated CAP enabled news feed websites for posting during the emergency at hand.

5. Nuclear Power Plant Warning (NUW) Limited to EAS Participants **with coverage in the Counties of** Dakota, Goodhue, Sherburne, and Wright.

6. Special Marine Warning (SMW) Limited to EAS Participants **with coverage in the Counties of** Lake Superior.

Category	Description
Emergency	An event that, by itself, would not kill or injure or do property damage, but indirectly may cause other things to happen that result in a hazard.
Warning	An event that alone poses a significant threat to public safety and/or property, probability of occurrence and location is high, and the onset time is relatively short.
Watch	Meets the classification of a warning, but either the onset time, probability of occurrence, or location is uncertain.
Advisory	A message containing follow up information to a warning, watch, or emergency.
Test	System testing.

Annex C: Operating Procedures**I. OVERVIEW**

For the EAS to function properly for *every* activation (test or actual emergency), standard operating procedures (SOPs) must be outlined for all operators of EAS equipment. These SOPs must be performed thoroughly and accurately every time for the EAS to work. This annex will provide the information necessary for all EAS participants to perform their assigned tasks.

II. ORIGINATION PROCEDURES**A. National Weather Service personnel**

NWS issue EAS weather alerts using a variety of methods through the NWS Family of Services, which includes NOAA weather radio (NWR). Transmission of warnings over NWR will include the SAME/EAS codes, the 1050 Hz alert tone, the reading of the weather bulletin message, and finally the end-of-message or EOM code.

NOAA weather radio can also transmit non-weather related messages. PSAPs or EOCs in Minnesota can provide emergency messages to their local NWS office for distribution on the NOAA Weather Radio if they cannot get a message out themselves. In the event that this occurs, the procedures listed below (and those found in the applicable Local Area EAS Plan) should be followed.

B. Emergency Services personnel.

PSAPs & EOCs may distribute EAS alerts in several ways. They may purchase and program an IPAWS encoder or third party software and connect it to the IPAWS server managed by FEMA. This can be used to send out alerts directly to EAS participants. Alerting agencies may also send non weather emergency alerts to their local NWS office, who will then relay the message on the NOAA weather radio system. Methods for getting messages to the NWS include 800 MHz radio, email, fax, telephone and HazCollect. See annex W for the NWS office in your local area and contact information.

C. Elected Officials

The Governor's office may initiate EAS alerts, they will coordinate with HSEM for distribution.

D. Broadcast and Cable Operators

EAS participants must follow part 11 of the FCC rules and regulations.
<http://www.fcc.gov/encyclopedia/emergency-alert-system-eas>

Annex C: Operating Procedures**III. FORMATS AND SCRIPTS****A. Statewide Distribution**

The state EOC will transmit the following message to all Minnesota broadcasters and cable operators via the State Relay network during a statewide activation:

interrupt regular programming

send EAS header code three times

(1 second pause)

send EAS attention signal [8 seconds]

(1 second pause)

read intro. script:

"We interrupt this program because of a State of Minnesota emergency.
Important information will follow."

read Governor's intro. script:

"The Governor has declared statewide emergency. The following is an announcement from the Governor of the State of Minnesota."

Governor or authorized designee gives live address [not to exceed 1 minute, 30 seconds]

read termination script:

"This concludes this EAS activation. All broadcast stations and cable systems may now resume normal operations."

(1 second pause)

send EAS end-of-message code three times

(1 second pause)

resume regular programming

Annex C: Operating Procedures**B. Local Distribution.**

The local EOC will transmit the following message to local broadcasters and cable operators via CAP or the NWS for local activation:

interrupt regular programming

send EAS header code three times

(1 second pause)

send EAS attention signal [8 seconds]

(1 second pause)

read intro. script:

"We interrupt this program because of a local emergency.
Important information will follow."

read intro. script:

"The (*local authority*) has declared local emergency. The
following is an announcement from the (*local authority*)."

*Message is broadcast or otherwise delivered. [not to exceed 1 minute, 30
seconds]*

read termination script:

"This concludes this EAS activation. All broadcast stations and
cable systems may now resume normal operations."

(1 second pause)

send EAS end-of-message code three times

(1 second pause)

resume regular programming

C. AMBER Distribution

The state BCA will transmit the following message to all Minnesota broadcasters and cable operators via WCCO and the State Relay network during an AMBER activation:

interrupt regular programming

send EAS header code three times [with event code CAE]

(1 second pause)

send EAS attention signal [**8 seconds**]

(1 second pause)

read intro. script:

"We interrupt this program because of a child abduction announcement. Important information will follow."

read BCA intro. script:

"The Emergency Alert System has been activated for a Child Abduction Alert"

The BCA duty officer will read the BCA AMBER alert information.

read termination script:

"This concludes this EAS activation. All broadcast stations and cable systems may now resume normal operations."

(1 second pause)

send EAS end-of-message code three times

(1 second pause)

resume regular programming

Annex D: Training and Testing

I. TRAINING

Proper training must be maintained for the EAS to succeed. Alert Originators are required to complete at a minimum FEMA IS-247, it is recommended for all other EAS Participants to take for an overview of the IPAWS program. See FEMA training website for details on courses 247 and 248 for complete information.

<http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=is-247.a>
<http://training.fema.gov/EMIWeb/IS/courseOverview.aspx?code=IS-248>

II. OVERVIEW OF TESTING THE EAS

The following requirements for both the Required Weekly Test (RWT) and the Required Monthly Test (RMT) apply to all broadcasters and cable operators. Even stations that have elected not to participate in local EAS notifications must still rebroadcast verbatim the RMT every month within 60 minutes of its receipt.

There are two exceptions for broadcasters to these rules: 1) Class “D” FM (power output 10 watts or less) and LPTV (low-power TV) stations need not have an EAS *encoder*, but they must have a *decoder*. These stations are exempt from running the RWT digital code test, however, they must retransmit the RMT minus the header codes and attention signal. In addition, LPTV stations must present all EAS information visually, just as all other television stations must do. 2) The second exception is that FM translator and TV translator stations are not required to have *any* EAS equipment.

Wired and Wireless Cable systems:

EAS participants should reference FCC rules and regulations part 11 for testing responsibilities.
<http://www.fcc.gov/encyclopedia/emergency-alert-system-eas>

III. TESTING TYPES AND PROCEDURES

A. Required Weekly Test

All broadcasters and cable operators, with exception of those noted earlier, must transmit an RWT once each week at random days and times except for the week of the Required Monthly Test. There are no time-of-day restrictions for transmitting the RWT. This is a 10.5-second test consisting only of the EAS header and end-of-message codes. Reception of an RWT must be logged, but no further action is required.

B. Required Monthly Test

The RMT is to be initiated by HSEM, or the BCA Duty Officer based on the schedule in Section IV of this annex. During the designated week for this test, all other broadcasters and cable operators are to standby for this test and then re-transmit it within 60 minutes of reception. Re-transmission of the RMT within 60 minutes is an FCC requirement, not an option. For daytime- only stations receiving a night-time RMT, this test must be re-transmitted within 15 minutes from sign-on. Transmission of the RMT takes the place of the RWT for that week. Times should be logged for both the receipt and re-transmission of an RMT. All incoming information, including audio, must be retransmitted exactly as received except for the location code portion of the digital preamble.

C. Periodic National Tests

National Primary sources will conduct tests of the National EAS as appropriate.

D. Missed Tests

If you miss a RWT or RMT, contact Minnesota EAS chair for an explanation, place this information in your EAS log. An email list serve for all Minnesota EAS participants is maintained by the Minnesota Broadcasts Association, this is a useful tool for this type of communication.

If you miss a RWT or RMT, first research the reason locally, check your equipment, see if it is working properly. If every indication is that your equipment is functional, another resource is the MN EAS list server to make an inquiry to all of the other subscribed Minnesota EAS participants to find out if the problem was noted by others in your area. This MN EAS list server is maintained by the Minnesota Broadcasters Association and is a useful tool for this type of communication. Contact MBA to subscribe to this service. When you find the answer then insert it into your EAS log.

IV. TESTING SCHEDULE FOR RMT

State Relay, Local Primary, HSEM, and the BCA Duty Officer need to use reasonable judgment in the scheduling of the Required Monthly Tests (RMT). Since the RMT must be re-transmitted within 60 minutes of reception, its timing should not cause undue hardship on broadcasters by cutting into high-revenue program time. Broadcasters and cable operators with complaints regarding the scheduling of the RMT should contact the broadcast representative on the MN-IPAWS. See annex E for the name of the IPAWS chairperson.

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

All RMT start times for HSEM and the BCA are within the 5 minute window of the times noted below.

The State Relay network will relay the state RMT at either 14:06:00 or 22:58:00 depending month, on the MPR Talk network, RMTs will be relayed later in the hour on the MPR Music network. The schedule appears below.

Daytime (Odd number months) EAS RMT's are scheduled for the following times:

State HSEM Origination 13:54 via 8K circuit to MPR and WCCO.

When the daytime RMT falls on a holiday, the BCA Duty Officer will originate.

WCCO will retransmit within the hour

Statewide via MPR Talk: 14:06PM

Statewide via MPR Music later in the 14:00 hour.

Night time (Even number months), EAS RMT's are scheduled for following times:

State BCA Duty Officer Origination 22:44 via circuit to MPR and WCCO.

WCCO will retransmit within the hour

Statewide relay via MPR Talk: 23:06

Statewide via MPR Music later in the 23:00 hours.

V. TEST CODES

A. Time-Duration

The time-duration to be used in the EAS header code for all EAS tests should be 30 seconds.

B. County-Location Codes: The county-location codes used in the EAS header for all EAS tests must conform to the following guidelines:

1. State Relay stations: All tests, RWT and RMT must use the location code for the entire state of Minnesota (27000).
2. All EAS participants: RMT tests shall be re-transmitted unchanged, except for the EAS Participants Location Code. The RMT will include all counties present in the original message.

3. For the RWT originated each week by all EAS participants, the county-location code should be used for the county of the broadcaster's City of License or cable operator's Community of License. Other counties in the station's/system's service area may be added at management discretion.

VI. TEST FORMATS AND SCRIPTS

Required Weekly Test announcements and visual messages are optional for this test. Only the EAS digital header code is required for transmission. Log when this test is performed.

The following test scripts and formats should be used by all Minnesota broadcasters, cable operators and emergency agencies when originating EAS tests.

A. RWT

Review the FCC Handbook.

stop regular programming announce:
"This is a test of the Emergency Alert System."

TV/Cable - insert an appropriate "slide" for video
(one-second pause)
send EAS header code three times
(one-second pause)
send EAS end-of-message code three times
(one-second pause)
resume normal programming

B. RMT

The NP station, Minnesota Duty Officer, or NWS originating this test should use the following format and script. All other broadcasters and cable operators will receive the test in this format and must re-transmit it within 15 minutes in the same format.

stop regular programming
optional intro.:
"This is a test of the (local area) Minnesota Emergency Alert System."

TV/Cable - insert an appropriate "slide" for video
(one-second pause)
send EAS header code three times [All sources must use Event Code "RMT"]
(one-second pause)
send EAS attention signal, 8 to 25 seconds in length

test script:

"This is a coordinated monthly test of the broadcast stations in your area. Equipment that can quickly warn you during emergencies is being tested. If this had been an actual emergency – such as a tornado – official messages would have followed the alert tone. This concludes this test of the Emergency Alert System."

(one-second pause)

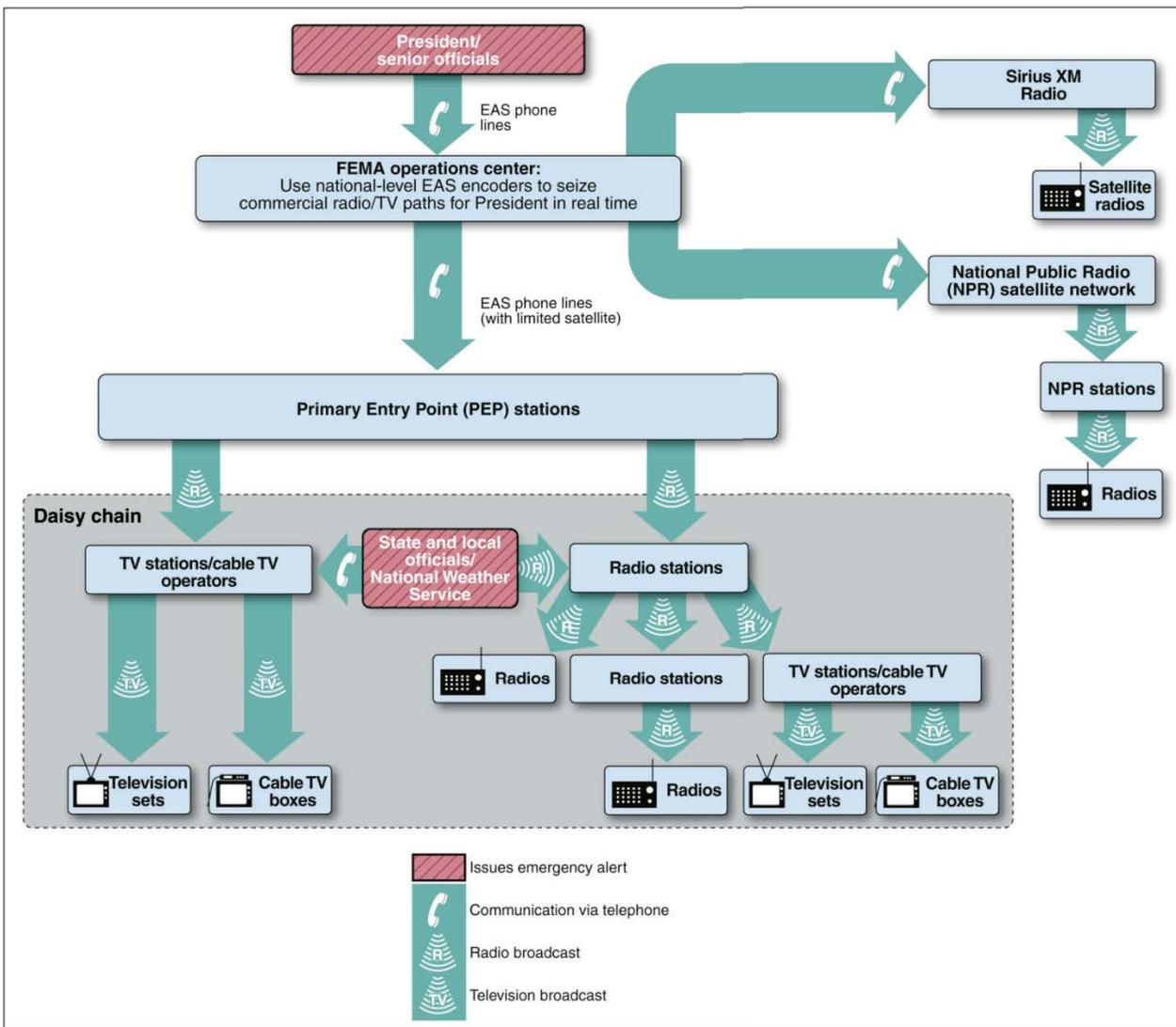
*send EAS end-of-message
code three times*

(one-second pause)

resume normal programming

Annex E: Organizational Charts

Chart A: Interrelationship of Agencies during National EAS Activation



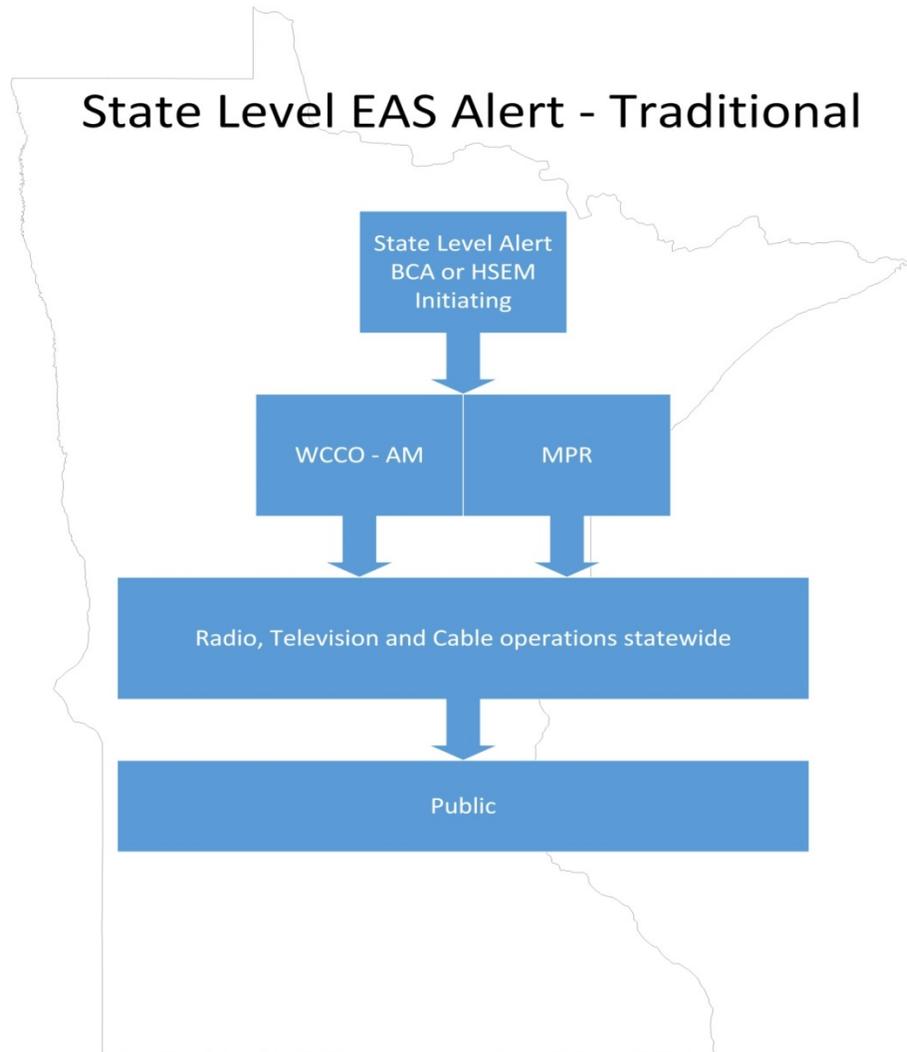
Source: FEMA and GAO.

While FEMA is responsible for administering EAS at the national-level, FCC adopts, administers, and enforces rules governing EAS and the EAS

Reference: GAO-13-375 Emergency Alerting Capabilities

Annex E: Organizational Charts

Chart B: Interrelationship of Agencies during State EAS Activation



Annex F: MN-IPAWS Policy Sub-Subcommittee Members

MN-IPAWS Policy Sub-Subcommittee Members December 2013.

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Annex G: Memorandum of Understanding

**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 with regard to major emergencies and disasters, both natural and technological, which pose significant threat to 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 broadcasters and cable operators 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) is to establish a broad framework of cooperation with regard to the Emergency Alert System that was established by the Federal Communications Commission (FCC) 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 or 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 Broadcasters, Cable Operators, 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 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 HSEM;
4. MPR will continue to maintain redundant audio paths from the Primary Entry Point (PEP) station and the State Emergency Operations Center to MPR HQ;
5. MN-IPAWS will work with MPR in obtaining the necessary financial resources to establish a reliable EAS CAP distribution network by officially requesting from the state one item: A Common Alert Protocol server. This equipment will be used at the MPR network facility to act as a back up to the FEMA CAP server. The proposed server will be initially owned by the state and maintained by MPR.
6. MPR will take ownership of the server in (1) year after the installation date, (with the state having a security interest for an additional two (2) years.) This assumes that MPR will be providing statewide EAS distribution at that time;

Annex G: Memorandum of Understanding

7. 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;
8. 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 distribution of National and State level EAS alerts and tests. In addition, this agreement will be included in the official EAS state plan;
9. 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 H: Plan Review Schedule

Schedule

The Minnesota EAS Statewide plan will be reviewed every two years at a minimum. Beginning in 2016 and every 2 years thereafter, the MN-IPAWS committee or its equivalent will meet and review the plan, updating as necessary. The plan may be reviewed and edited at other times as conditions warrant.

Annex I: Glossary of Terms

CAP - Common Alerting Protocol

CMSAAC - Commercial Mobile Service Alerting Advisory Committee

COG – Collaborative Operating Group

DEAS - Digital Emergency Alert System

EAS - Emergency Alert System www.fcc.gov/pshs/services/eas

EMA - Emergency Management Agency (See FEMA)

EOC - Emergency Operations Center

FCC - Federal Communications Commission www.fcc.gov

FEMA - Federal Emergency Management Agency www.fema.gov

HAZcollect - All-Hazards Emergency Message Collection System

HD Radio - A trademark of iBiquity Digital Corporation, covering a type of In-Band On Channel (IBOC) digital radio transmission which they license. www.hdradio.com

IPAWS – Integrated Public Alert Warning System

LP - Local Primary (Station)

NAB - National Association of Broadcasters www.nab.org

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

NCMEC - National Center for Missing & Exploited Children 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

NN - Non-participating National

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

NRSC - National Radio Systems Committee www.nrsstandards.org

NWEM - Non-weather emergency message

Annex I: Glossary of Terms

NWR - NOAA Weather Radio (see also NOAA) www.nws.noaa.gov/nwr

NWS - National Weather Radio Service www.nws.noaa.gov

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

PDA - Personal Digital Assistant

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

POTUS – President of the United States

R&O - Report and Order

RBDS - Radio Broadcast Data System

RMT - EAS Required Monthly Test

RWT - EAS Required Weekly Test

SAME - Specific Area Message Encoding

SBE - Society of Broadcast Engineers www.sbe.org

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

SECC - State Emergency Communications Committee

SR – Statewide relay for EAS distribution

WFO – Weather forecast office

Annex J: Description of the Common Alert Protocol (CAP).**Description of CAP**

The Common Alerting Protocol (CAP) is a digital format for exchanging emergency alerts that allows a consistent alert message to be disseminated simultaneously over many different communications systems. FEMA worked with the Organization for the Advancement of Structured Information Standards (OASIS) to develop a standardized international technical data profile that defines a specific way of using the standard for the purposes of the Integrated Public Alert and Warning System (IPAWS).

Benefits of CAP

As more systems are built or upgraded to CAP, a single alert can trigger a wide variety of public warning systems, increasing the likelihood that intended recipients receive the alert by one or more communication pathways. CAP provides the capability to include rich content, such as photographs, maps, streaming video and more as well as the ability to geographically-target alerts to a defined warning area, limited only by the capacity of the delivery system used.

Because CAP provides the capability to incorporate both text and equivalent audio, CAP alerts can better serve the needs of hearing or visually impaired persons. Although IPAWS does not provide translation services, CAP does provide the capability to issue alerts in multiple languages.

Guidance and Technical Documents

- [OASIS CAP 1.2 Standard](#)
- [OASIS CAP v1.2 IPAWS Profile Version 1.0](#)
- [CAP to EAS Implementation Guide](#)
- Common Alerting Protocol Profile Requirements ([PDF](#) 698KB, [TXT](#) 79KB)

Annex W: NWS contact information.Grand Forks MN:

Telephone: (701) 795-5119 (answered 24/7)
Fax: (701) 772-0751
Email: cr.fgf@noaa.gov
ARMER: SEMTAC and Grand Forks Weather Talk Groups.

Duluth MN:

Telephone: (218) 729-0653 (answered 24/7)
Fax: (218) 729-0690
Email: cr.dlh@noaa.gov
ARMER: SEMTAC and Duluth Weather Talk Groups.

Aberdeen SD:

Telephone: (605) 225-5547 (answered 24/7)
Fax: (605) 225-7417
Email: cr.abr@noaa.gov.
SD Radio Radio Patch to Aberdeen

Minneapolis MN:

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Email: cr.mpx@noaa.gov
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Sioux Falls SD:

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La Crosse WI:

Telephone: (608) 784-8292 (answered 24/7)
Fax: (608) 784-8238
Email: cr.arx@noaa.gov
ARMER: SEMTAC and La Crosse Weather Talk Groups.

Annex W: NWS contact information.

