M E T R O P O L I T A N E M E R G E N C Y S E R V I C E S B O A R D

RADIO TECHNICAL OPERATIONS COMMITTEE
AGENDA

Board Room, Metro Counties Government Center
June 28th, 2017
1:00 – 3:00 p.m.

MEMBERS:

Scott Haas, Chair
Scott County

Ron Jansen, Vice Chair
Dakota County

Jake Thompson
Anoka County

Tim Walsh
Carver County

Rod Olson
City of Minneapolis

Jon Eckel
Chisago County

John Gundersen
Hennepin County

Bob Shogren
Isanti County

Jeff Bjorklund
Metropolitan Airports Commission

Chad LeVasseur
Metropolitan Council

Scott Gerber
MN Fire Chiefs Association

Dave Pikal
Ramsey County

Chuck Steier
U of M Police, at large member

Nate Timm
Washington County

Open
Metro Region EMS

Open
MN Chiefs of Police Association

1. Call to Order

2. Approval of May 2017 Minutes

3. Agenda Items
    a. Metro Standard 3.35.0 – National Weather Service ARMER Radio Operations - Haas
    b. Metro Standard 3.13.0 – Nationwide 800MHz Conventional Interoperability Channels – Tretter
    c. NGO usage of ARMER for preplanned events – Haas
    d. Washington County 3.19.0 waiver request - TImm

4. Moves, Additions & Changes to the System
    a. Update on Removal of Voting from Interoperability System – Jansen

5. Committee Reports
    a. Metro Mobility System Usage Update—Chad LeVasseur/Dana Rude
    b. System Manager's Group/Metro Owner's Group Update – Jansen
    c. Reports from SECB Committees
        i. Steering - Tretter
        ii. OTC – Gundersen / Timm
        iii. Interoperable Data Committee – Olson / Thompson
        iv. IOC –Thompson / Kummer
        v. IPAWS – Haas / Williams
        vi. Finance / Grants Workgroup- Tretter
    d. Super Bowl 52 Communications Workgroup - Olson

6. Other Business
    a. Regional Talkgroup Permissions Requests
    b. Next Meeting July 26th

7. Adjourn

Scott Haas, Chair

Metropolitan Emergency Services Board
Radio Technical Operations Committee
Meeting Notes
May 24, 2017

Members Present:
Ron Jansen, Jon Eckel, Jake Thompson, Chad LeVasseur, Rod Olson, John Gundersen, Peter Sauter, Dave Pikal, Scott Haas, Nate Timm, Jeff Bjorklund, Chuck Steier.

Guests Present:
Rick Juth; DPS/ECN, Steve Ouradnik; DOC, Charles Sloan III; Hennepin EMS, Carrie Oster; Motorola, Dana Rude; Met Council, Troy Tretter, Jill Rohret, Martha Ziese; Metropolitan Emergency Services Board, Al Fjerstad by phone

Call to Order:
Scott Haas called the meeting to order at 1:00 P.M.

Ron Jansen asked that the following corrections be made to the March 2017 TOC minutes:

- Jansen's name was misspelled in motion to approve February 2017 minutes
- SWIT misspelled on page 2.
- The 7.15, 7.17 and 7.18 referred to in the System Managers report were missing periods.
- It is not correct to state that 7.18 will be the last version to support T1 service.

M/S/C Motion made by Jeff Bjorklund to approve the March 2017 minutes as amended. Ron Jansen seconded. Motion carried.

Request by Rick Juth to discuss request by Cathy Anderson to make hailing regional talk groups available on Status Board. Item to be 3F.

M/S/C Motion made by John Eckel to approve the May 24, 2017 agenda with the above modifications. Rod Olson seconded. Motion carried.

Agenda Items:

COML Packet – Charles Sloan III (HCMC EMS)
Troy Tretter said that Charles Sloan III has met the requirements for COML and asked for approval of his certification.

M/S/C Motion made by Peter Sauter to approve Charles Sloan III COML Packet. Dave Pikal seconded. Motion carried.

CRAE Installation of 8TAC91 at Princeton H.S.
Fjerstad said that per standard 3.47.0 an approval is needed to install a CRAE repeater system to be used for emergency interoperability purposes at Princeton High School. The Northeast and Central regions have approved the installation. It is now before the Metro TOC for approval. It will not be providing citywide coverage. If approved at this TOC it will go before the OTC.

Jon Eckel said that there needed to be some changes to the FCC 601-D application. To correct the AGL heights on page 8 and 10, to drop the ERP Wattage to match the portable output, to Fjerstad said he will talk to Dave Sissor of West Central Communications about making corrections. Nate

Timm asked where the antenna would be mounted. Fjerstad said it would be located on the upper level of the two-story high school.

M/S/C Motion made by Timm to approve CRAE installation. Seconded by Gundersen.

Further discussion by John Eckel to have this contingent on the correction of the FCC license.

Request to amend motion by Nate Timm to add contingent on correction of the FCC license, Gundersen seconded. Motion carried.

Metro Standard 3.23.0 – Connecting to the 800MHz System

Tretter said that this standard was sunsetted in April by the SECB. Tretter brought it to the metro work group in January where it was tabled. Tretter requested a motion to sunset the standard unless there was an interest in revising and bringing it up to date.

M/S/C Motion made by Eckel to sunset Standard 3.23.0. Timm seconded. Motion carried.

Metro Standard 3.7.0 – Recording of Interoperability Talkgroups

Tretter said at the same April SECB meeting, Standard 3.7.0 was recommended to be deleted at the state level. The recommendation was for regions to do their own standard for the recording of interoperability talk groups. There will need to be a substantial rewrite if standard is retained. Jansen said that a small work group would be needed to revise 3.7.0. It might be a MOG workgroup.

Tretter had an email discussion with Kathy Hughes of Hennepin County and she said they have a lot of talk groups that they are recording for other agencies. Timm said that it could be sent to the 9-1-1 TOC to see if they felt the need for the standard revision and the necessity of a talkgroup. Haas said that if the state felt it was not a necessity then he did not feel it would be necessary for regions to have one but that it was an agency decision. Tretter added that the state's position is that it is optional that regions adopt this standard.

Jansen said that the Southeast and Central regions are migrating toward a combined or shared resource and the state did not want to dictate what they could or couldn't do at that level.

M/S/C Motion made by Jansen to send discussion to 9-1-1 TOC after the MOG cleaned up the outdated technical language. Timm seconded. Motion carried.

Metro Standard 3.13.0 – Nationwide 800MHz Conventional Interoperability Channels

Tretter said this standard has not been updated in nine years and it also references the old Metro recording standard that is currently outdated. Gundersen asked if there was any conflict with regional trailers antenna setups? Haas said he thought there was a state standard specific to those.

M/S/C Motion made by Gundersen to send discussion to MOG. Timm seconded. Motion carried.

Hailing regional talk groups available on Status Board

Rick Juth said there was a request for the regions input on the regions consistency on Status Board. Rod Olson said the state patrol is the only one with MSP CALL in their consoles, so there would be no need to reserve it and was not sure if it was in status board.

Nate Timm checked status board and said that MSP CALL was available to reserve and did not think that MSP CALL should be in Status Board. He felt that MN COMM should be added to a list of available recourses and it was not listed.

Rick Juth thanked the group for their feedback.

Move, Additions & Changes to the System

Update on Removal of Voting from Interoperability System.

Jansen said the state is working on replacing the EF Johnson 2008 series repeaters with GTRs.

Haas said the Weather Standards group is to meet on the 30th and if there are any concerns to address them with him before the meeting.

Scott Haas updated the committee on the Norwood site. It sounded like tailgating mid conversation that would fade in and out at Norwood during a storm event. They found that the STR v.24 conversion lines got crossed with the GTR's. He wanted to give the committee and heads up on how they were able to find and fix it.

Ron Jansen said they also had similar issues between the STR and GTR's.

Committee Reports

Metro Mobility System Usage Update

Dana said their request been approved for the T1s to be moved off their network, but they don't have a set schedule of when they are doing it. They need to have more meetings with MnDOT.

System Manager's Group/Metro Owner's Group Update

Jansen said there was no meeting today. 7.15 is done, 7.17 is scheduled for 2018, and 7.19 is scheduled for 2020.

Reports from SECB Committees

Steering

Troy Tretter reported Rey Freeman will do a study on ARMER participation plan requirements and their applicability to what is currently in standard, focus will be on Federal participants. There was a review of the participation plan of Clay County, ND / Fargo coming onto ARMER. It will be reviewed by all applicable SECB Committees before going back to Steering. Steering will be the last stop before it goes to the SECB.

OTC

Jon Gunderson said the OTC met in May. Some standards had language revised and were approved.
The National Guard's request for additional radios was approved.
Jim Stromberg presented some instructions to update participation plans.
Dakota County waiver request was approved pending regional approval.
Minneapolis Participation plan amendment was approved.
Status Board application presentation on how changes to the application will be done.

Interoperable Data Committee

Rod Olson said AT & T will push out priority and preemption before band class 14 is installed. He said there was a presentation, but WebEx was not working, they will email out the presentation.

Interoperability

Jake Thompson said they met on May 16th and discussed the Fargo participation plan.

IPAWS - No meeting

Scott Haas said there currently there is no Chair, and committee is under review.
Some of the updates include:

Wireless Emergency Alerts available to IPAWS multi-lingual abilities possible for 2019. This would coincide with the WA messages to be increased to 360 characters. Washington State passed a law requiring multi-lingual alerting. TPT's new equipment installed in July will permit them to have multi-lingual alerting on one of their channels.

Finance/Grants Workgroup
Tretter said that the grants that were applied for in the region have been fully executed. Each region's grants will be discussed in a June 1st call.

There is a second application for the federal grant funds. For SIP enabled or planning, there is the HSHP grant for firewall grant.

There will be two (2) day courses on APX radio programming.

Super Bowl 52 Communications Workgroup
Rod Olson said there are multi groups meeting. There is a new expanded COML group. Olson asked TOC members to communicate with workgroup what events would be going on in their areas.

Tretter said there is a draft CONOPS document in progress and is due to planning group in August. Sara Boucher Jackson is running the COML workgroup to develop the ICS205.

Other Business
Regional Talkgroup Permissions Requests
None

Scott Haas asked for a last request to bring up any National Weather Service issues before the 30th.

Scott reminded the group the next TOC meeting June 28, 2017.

Meeting adjourned at 1423.

METRO REGION
800 MHz Trunked Regional Public Safety Radio System
Standards, Protocols, Procedures

Document/ Section: Sub-Section: Procedure Title:	**3. Interoperability Guidelines** **METRO 3.35.0** **National Weather Service ARMER Radio Operations**	Radio TOC Recommendation Date: 3/30/11
Date Established: Replaces Document Dated: Date Revised:	**2/3/2010** **4/3/2013** **6/24/2015**	MESB Approval - Signature: 4/13/11 Date:

1. Purpose and Objective:

To define the ARMER talkgroups and establish policy and procedures of radios to be used by the National Weather Service (NWS) Chanhassen office (Chanhassen Weather) and establish a Warning Point Net during severe weather events.

2. Technical Background:

- **Capabilities –**

To provide talkgroups that are readily available tools for the use by Chanhassen Weather to communicate with numerous Warning Points (PSAP, Dispatch Center, EOC or other designated location) across the nine county metro region and optionally other counties within the Chanhassen Weather County Warning Area (CWA) during severe weather events or other emergency incidents where the weather service's aid may be requested. The Statewide Emergency Communications Board has authorized a dedicated talkgroup for Chanhassen Weather, named US-NWS CHN. This is the resource Chanhassen Weather will use to distribute weather event information. PSAPs may choose to add this resource to their consoles. Chanhassen Weather is authorized to use the statewide resources of STAC1-12 and the metro region resources of ME TAC5-8 for the Warning Point Net. The statewide talkgroup SEMTAC is also programmed in the radios for communications with State and Local Emergency Managers as directed by HSEM.

- **Constraints –**

Chanhassen Weather has been issued one hand held portable and two control station transceivers. These units will primarily be used to monitor selected talkgroups when invited to do so by a Warning Point or Emergency Manager as a result of severe weather or other emergency incident. This Standard does not limit the use of other ARMER resources and/or radios for other authorized purposes by Chanhassen Weather.

3. Operational Context:

For activations within the nine county metropolitan region, Chanhassen Weather will normally contact the Metro Warning Point (Minnesota State Patrol - Metro Communications Center) in the event of a severe weather watch and/or warning. The Metro Warning Point will determine the

appropriate resource for the event and will patch that resource to the US-NWS CHN talkgroup. In the event of some other type of emergency incident that would require assistance from Chanhassen Weather, the agency requesting the assistance would contact Chanhassen Weather directly via a land line or via US-NWS CHN and create the appropriate patch between resources to be used for the incident.

4. Recommended Procedure:

- Normal Activation – Metro Warning Point

Chanhassen Weather will normally initiate weather announcements, via NAWAS to the Metro Warning Point and MNJIS to notify of affected areas. The Metro Warning Point will determine to what resource US-NWS CHN will be patched and will create the patch. The Metro Warning Point will hail the affected Local Warning Points using METCOM and ask them to move to STAC 12 (11, 10, 9, etc.) for weather information from the National Weather Service. *Non ARMER Warning Points will be notified via MNCOMM.* The Metro Warning Point will follow up via a land line if an affected Local Warning Point does not reply over the radio system. The Metro Warning Point will take roll and read the announcement on STAC12 (11, 10, 9, etc.) and advise the Local Warning Points to remain on the talkgroup resource for continuing information from the National Weather Service. The Metro Warning Point will be responsible to update the use of STAC12 (11, 10, 9, etc.) on the status board. STAC12 (11, 10, 9, etc.) will be used for any information exchange between the affected centers and the National Weather Service; such as watches turning to warnings or sightings of tornados. This communication should be limited to updates to/from Warning Points **only.** This is not for individual field spotters. As the threat expires for each Warning Point's area, the center can choose to leave STAC12 (11, 10, 9, etc.) on their own. Any new weather threats that occur after existing threats have expired will be handled in the same manner described above. Once all weather threats have passed, the Metro Warning Point will clear the associated resource from the status board.

- Optional Procedure for Emergency Activation During Sudden Severe and/or Near-Severe Weather Incidents With or Without a National Weather Service Issued Warning

In the event of a sudden onset or report of severe or near-severe weather incident occurring in the absence of a National Weather Service Storm Prediction Center issued watch, and when the Warning Point Net has not yet been activated, a Local Warning Point MAY elect to immediately activate the Warning Point Net on STAC12 (11, 10, 9, etc.). Upon such activation the Local Warning Point activating the net shall make an announcement on METCOM that the net has been activated and update the status board.

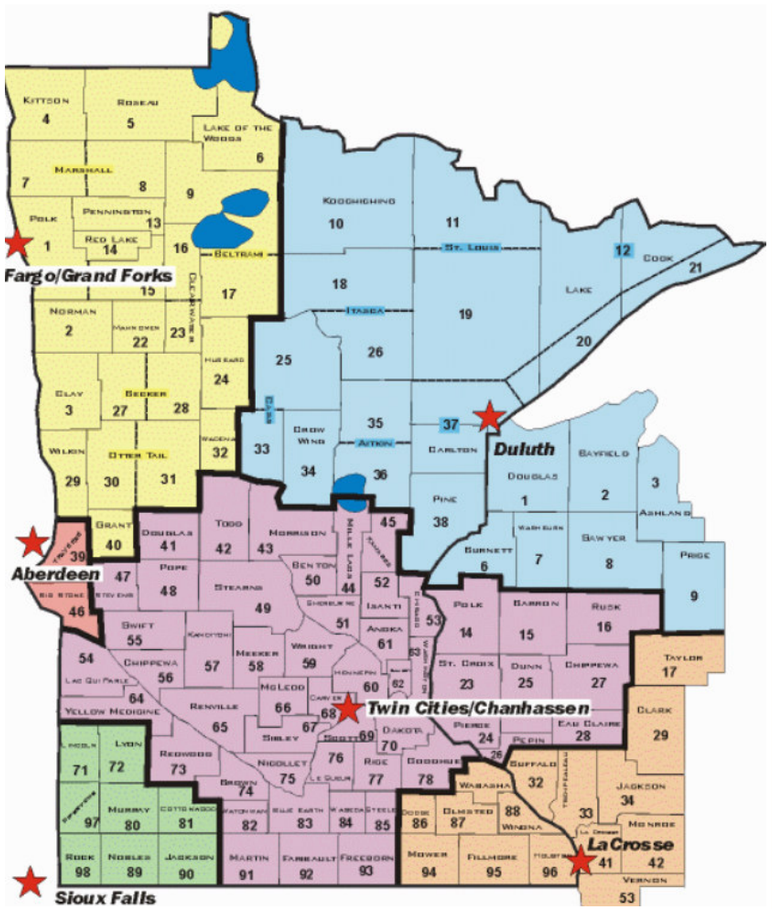
- Activation in Outside the Metro Region

State Patrol Warning Points in Rochester will follow other regions' NWS standards and/or the Statewide NWS standard, State 3.35.0, to facilitate communication regarding weather event information between NWS Offices and Greater Minnesota PSAPs.

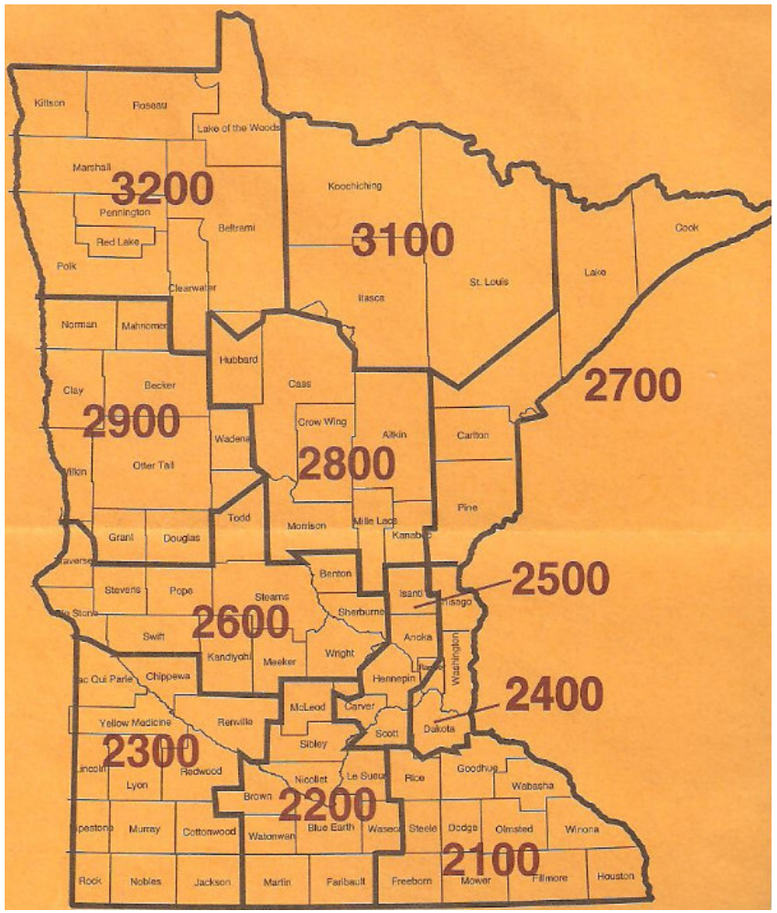
5. Management:

State Patrol Warning Points shall manage assignment and usage of talkgroups and conventional channel resources for normal Warning Point Net activations. Dispatch center managers and supervisors on the metro area ARMER system shall ensure that this procedure for usage and assignment of ME TAC or STAC talkgroups be adhered to. HSEM shall manage use of SEMTAC for severe weather operations.

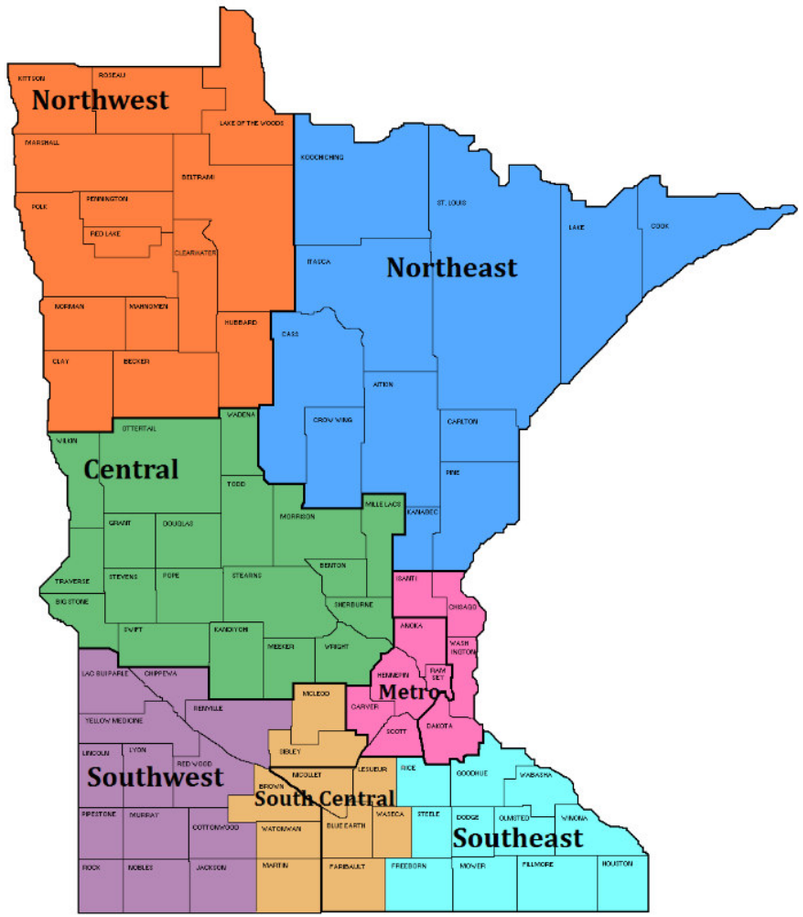
NWS CWA MAP



STATE PATROL DISTRICT MAP



REGIONAL RADIO BOARD MAP



Allied Radio Matrix for Emergency Response (ARMER)
Standards, Protocols, Procedures

Document Section 3	**Interoperability Guidelines**	**Status**: Approved by OTC on June 13, 2017
State Standard Number	**3.35.0**	
Standard Title	**National Weather Service ARMER Operations**	
Date Established	**01/24/2013**	**SRB Approval**: Pending
Replaces Document Dated	**01/24/2013**	
Date Revised	**06/13/2017**	

1. Purpose or Objective

This standard defines talkgroups and establishes procedures for interoperability between authorized National Weather Service (NWS) offices and public safety entities.

2. Technical Background

- **Capabilities**

All NWS offices serving Minnesota except the Aberdeen, South Dakota office are located within ARMER's coverage area.

Table A in the Appendix identifies the NWS offices serving Minnesota, the Minnesota counties they serve, and the Emergency Communications/Services Board (ECB/ESB) region to which the county belongs.

- **Constraints**

The NWS is an atypical ARMER user. Five of the six NWS offices serving Minnesota's eighty-seven counties are within ARMER's coverage area; one is not. Of the five NWS offices within ARMER's coverage area and capable of using ARMER, three are physically located outside of the state of Minnesota. The NWS is not a public safety responder; NWS office personnel usually operate from fixed sites and are rarely transient. Yet the information exchanged between the NWS and public safety entities during severe weather incidents is critical to public safety.

NWS office coverage boundaries do not align with state boundaries or ECB/ESB region boundaries.

3. Operational Context

NWS offices must be able to quickly hail the public safety entities and have a dedicated talk path for exchanging weather information with public safety entities. NWS offices should not be hampered by multiple processes or with tracking down public safety to convey their message.

Each NWS office serving Minnesota (except Aberdeen) is assigned a dedicated ARMER *NWS Forecast Area Talkgroup* for direct weather-related communication between the NWS office and the public safety entities it serves. Each NWS office should have that talkgroup programmed

into its ARMER radio(s). With the consent of the Operations and Technical Committee (OTC) and impacted ECB/ESB regions, a NWS office may program into their ARMER radio(s) the NWS Forecast Area Talkgroup of another NWS office.

Public Safety Answering Points (PSAPs), Dispatch Centers, Emergency Operating Centers (EOC), and mobile command posts *may* program into their radios the NWS Forecast Area Talkgroup of the NWS office serving their jurisdiction. With the consent of the OTC and the impacted ECB/ESB regions, Public Safety Answering Points (PSAP), Dispatch Centers, Emergency Operating Centers (EOC), and mobile command posts *may* have programmed into their radios the NWS Forecast Area Talkgroup of the NWS office serving other jurisdictions. A subscriber radio may be used when console limitations prohibit the installation of the NWS talkgroups.

NWS Forecast Area Talkgroups will not be programmed into public safety subscriber radios used by first responders or weather spotters in the field. With the permission of the applicable ARMER System Administrator, NWS office talkgroups may be installed in mobile and portable radios of incident commanders and local command staff (e.g. emergency managers; law, fire, EMS commanders; etc.) to relieve a PSAP of the responsibility to communicate with the NWS as well as for management and coordination purposes.

Unless temporarily necessary because of a weather event, no NWS office radio or other subscriber ARMER radio should be *selected* to a NWS office talkgroup other than that of the NWS office serving the county where that radio is being operated.

NWS Forecast Area Talkgroups should not be patched to other resources. See Table B in the Appendix for a summary of talkgroup and patching recommendations.

NWS Forecast Area Talkgroups will be programmed with a statewide site access profile that reflects the primary forecast area of the NWS to which it is assigned and will be given a Level 5 priority.

NWS office radios *should* have the following talkgroups programmed into their radios:

- NWS talkgroup designated for the NWS office

NWS office radios *may* have the following talkgroups programmed into their radios:

- SEMTAC
- Other talkgroups as mutually agreed

For the purposes of this standard, “Mission Critical Communications” is defined as weather-related messages regarding:

- Tornado or funnel cloud
- Wind damage or measured speeds of 58 mph or greater
- Hail – Penny-sized (¾”) or larger
- Flooding from rain storms
- Inquiries for specific information/spot forecasts for ongoing high impact events/incidents.
- Reports affirming or negating warning products

- Any other information relevant to Incident Command or Emergency Management.

4. Recommended Procedure

NWS offices serving Minnesota have identified ARMER as the preferred tool for notifying public safety of a weather event and for exchanging mission critical communications with public safety during the event.

A NWS office wishing to alert public safety of a weather event will hail the affected counties *and* the appropriate Minnesota State Patrol Regional Communications Center on its NWS Forecast Area Talkgroup. Upon response(s), the NWS office will utilize the talkgroup for mission critical two-way information exchanges during the weather event. If an affected county does not answer, the Minnesota State Patrol Regional Communications Center will follow up for the NWS office by contacting any entities that did not answer. If the Minnesota State Patrol Regional Communications Center does not answer on the regional NWS talkgroup, the NWS office may attempt to contact them by other means.

Each public safety entity may establish its own process for monitoring their county's NWS office talkgroup. It is recommended that each county and city of the first class identify a singular point of contact for communicating with the NWS during a weather event. This standard does not mandate that public safety entities monitor a NWS Forecast Area Talkgroup.

Authorized users wishing to call a NWS office may do so by hailing them on the NWS Forecast Area Talkgroup. Each NWS office is expected to monitor its NWS Forecast Area Talkgroup at all times.

The NWS may enter into agreement(s) with ECB/ESB region(s) establishing unique procedures for additional regional communications beyond hailing and mission critical communications. Copies of finalized agreements between NWS offices and ECB/ESB regions should be forwarded to the Department of Public Safety Emergency Communication Networks (ECN) for tracking purposes.

Big Stone and Traverse counties have a unique circumstance in that the NWS office serving those counties is located in Aberdeen, South Dakota, eighty miles west of the Minnesota border and outside of ARMER's coverage area. In an agreement between the Aberdeen NWS office and the counties of Traverse and Big Stone, Traverse County utilizes a South Dakota public safety radio channel to communicate with the Aberdeen NWS office and Traverse County serves as a liaison between the Aberdeen NWS office and Big Stone County.

Except in an emergency, such as when established communications paths and processes have failed, ARMER shall not be used to facilitate communications between any NWS office and any entity outside of Minnesota.

ECB/ESB Board regions may establish standards imposing stricter procedures.

5. Management

The NWS and local entities are responsible for self-policing their adherence to this standard. Regional Interoperability Coordinators and the Statewide Interoperability Coordinator are to be contacted to assist with interpreting this standard or for initial conflict resolution.

The ECN shall track agreements between NWS offices and ECB/ESB regions that supplement the process defined by this standard.

Appendix

Table A

National Weather Service Office	Emergency Communications/ Services Region	County
Aberdeen South Dakota	Central	Big Stone & Traverse
Chanhassen Minnesota	Northeast	Kanabec
	Central	Benton, Douglas, Kandiyohi, Meeker, Mille Lacs, Morrison, Pope, Sherburne, Stearns, Stevens, Swift, Todd, Wilkin, & Wright
	Metro	Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, & Washington
	Southwest	Chippewa, Lac Qui Parle, Redwood, Renville, & Yellow Medicine
	South Central	Blue Earth, Brown, Faribault, Le Sueur, Martin, McLeod, Nicollet, Sibley, Waseca, & Watonwan
	Southeast	Freeborn, Goodhue, Rice, & Steele
Duluth Minnesota	Northeast	Aitkin, Carlton, Cass, Cook, Crow Wing, Itasca, Koochiching, Lake, Pine, & Saint Louis
Grand Forks North Dakota	Northwest	Becker, Beltrami, Clay, Clearwater, Hubbard, Kittson, Lake of the Woods, Mahnomen, Marshall, Norman, Pennington, Polk, Red Lake, & Roseau
	Central	Grant, Otter Tail, Wadena, Wilkin
La Crosse Wisconsin	Southeast	Dodge, Fillmore, Houston, Mower, Olmsted, Wabasha, & Winona
Sioux Falls South Dakota	Southwest	Cottonwood, Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, & Rock

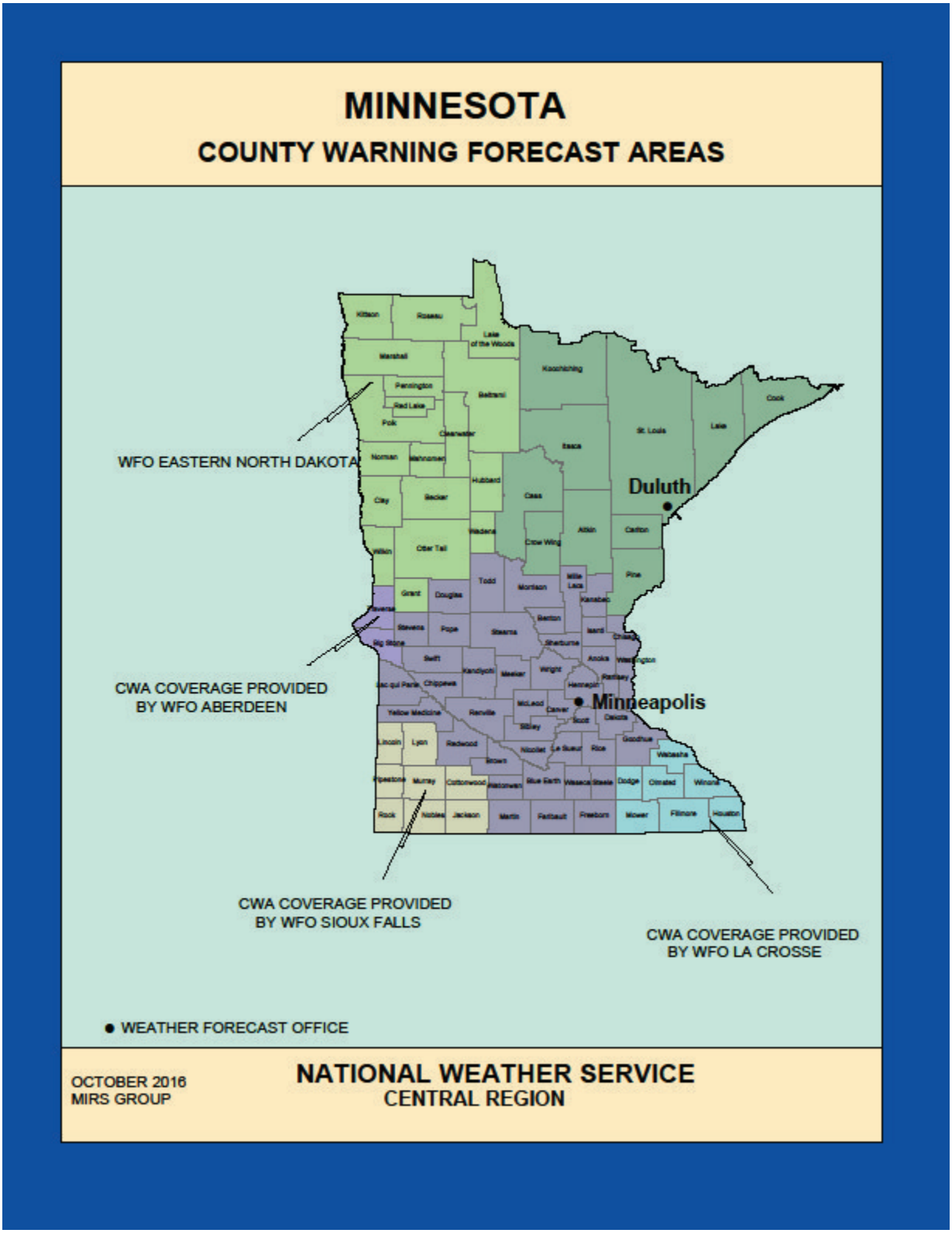

MINNESOTA
COUNTY WARNING FORECAST AREAS
WFO EASTERN NORTH DAKOTA
Duluth
Minneapolis
CWA COVERAGE PROVIDED BY WFO ABERDEEN
CWA COVERAGE PROVIDED BY WFO SIOUX FALLS
CWA COVERAGE PROVIDED BY WFO LA CROSSE
● WEATHER FORECAST OFFICE
OCTOBER 2016
MIRS GROUP
NATIONAL WEATHER SERVICE
CENTRAL REGION

Table B

Talkgroup Requirements	**For Whom?**
Required	NWS offices
Highly Recommended	PSAPs & EOCs
Recommended	Command Posts & Command Staff
Optional	
Not Allowed	Not for public safety first responders or weather spotters in the field.

Cross Patch Standard	**Yes/No**	**To Talk Group**
Soft Patch	No	
Hard Patch	No	

Managed via "Status Board" Application	No

METRO REGION
800 MHz Trunked Regional Public Safety Radio System
Standards, Protocols, Procedures

Document Section:	**3 – Interoperability Guidelines**	Radio TOC Recommendation:
Sub-Section:	**METRO 3.13.0**	Date: 5/24/01
Procedure Title:	**Nationwide 800 MHz Conventional Interoperability– 8CALL, 8TACs**	
Date Established:	**1/23/01**	MESB Approval - Signature:
Replaces Document Dated:	**3/26/08**	
Date Revised:	**5/24/17**	06/01/01

1. Purpose or Objective

To establish procedures for the use of 800 MHz conventional mobile relay (two-frequency repeater) radio channels for intercommunications between radio users on different 800 MHz radio systems.

2. Operational Background:

- **Capabilities**

There are **five 800 MHz mobile relay frequency pairs that the FCC has assigned exclusively for interoperability communications between radio users on different 800 MHz radio systems.** One of these frequency pairs is reserved by the FCC as a calling channel, and the other four are reserved for intercommunications between radio users. The calling channel is named 8CALL90 and the other four channels are named 8TAC91, 8TAC92, 8TAC93, and 8TAC94. These frequency pairs are to be used with analog modulation in a 20 kHz bandwidth, mobile relay (repeater) mode and/or direct radio-to-radio "talk around" mode for scene of action interoperability. These frequency pairs may be licensed for use in any or all separate 800 MHz radio systems. The digital modulation radios that will be used in the new regional 800 MHz trunked radio system are capable of operating with analog modulation of 4.0 kHz.

The regional 800 MHz trunked radio system has **two mobile relay stations** each operating on one of these five frequency pairs with those stations located at the City Center site for maximum coverage area. One of those stations is on the calling frequency pair 8CALL90, and the other is 8TAC91. In addition to the region-wide mobile relay stations on 8CALL90 and 8TAC91, there is a sub-regional mobile relay station within Hennepin County on 8TAC94 consisting of 8 receiver sites and a transmitter site at Plymouth, MN. 8TAC94 is hardwired into a VHF/ UHF/ 800 MHz tri-band nationwide TAC channel system which can be soft

patched to ARMER 800 MHz trunked talkgroups. This will facilitate not only communications among different 800 MHz users within Hennepin County, but cross band among and between VHF and UHF users as well. There will also be transportable mobile relay stations on the other two frequency pairs.

- **Constraints**

If one or more of these frequency pairs is selected in a mobile or portable radio in the regional radio system, the radio user will lose the priority revert feature as part of the talk group scanning function.

The 8CALL90 and 8TAC radio frequencies are in the NPSPAC band of 800 MHz frequencies and mobile and portable radios must be able to function in compliance with NPSPAC specifications to use these channels.

There is only one transmitter on the 8CALL90 and one transmitter on the 8TAC91 channel located at the City Center Building site. ~~There are 18 receivers scattered over nine counties with the best audio selected in a voting comparator on the receive side of the mobile relay. Therefore, the receive coverage geographic area is greater than the talk out geographic area.~~ 8TAC94 coverage is generally limited to the areas in and immediately around Hennepin County.

Once a patchable resource is included in a manual (soft) patch, then that resource is not available for patching again. Only the dispatch operator who set up the manual patch can add or delete additional members to or from the manual patch.

3. Operational Context:

These 800 MHz interoperability frequency pairs may be used for day to day interagency coordination, for urgent or emergency mutual aid situations, and/or for task teams or for other purposes where coordination between radio users on separate 800 MHz radio systems must intercommunicate to perform assigned duties.

These frequency pairs shall not be used for intercommunications between radio users who are on the same radio system infrastructure.

4. Recommended Protocol/ Standard:

8CALL90 - FCC Calling Channel

TG Requirements	For Whom?
Highly Recommended	None
Recommended	All
Optional	None
Not Allowed	None

Cross Patch Standard	YES / NO	To Talk Group(s)
Soft Patch	Yes	Permitted Resources
Hard Patch	No	NA

8TACs Channels

TG Requirements	For Whom?
Highly Recommended	None
Recommended	All
Optional	None
Not Allowed	None

Cross Patch Standard	YES / NO	To Talk Group(s)
Soft Patch	Yes 8TAC91 through 4	Permitted Resources
Hard Patch	No	NA

- 8TAC94 may be temporarily (soft) patched to the HCOMMON talkgroup or another selected talkgroup so that trunked radio users can scan that channel without losing the priority revert feature.

- 8TAC91 shall not be included in a permanent (hard) patch in order to provide the ability to place 8TAC91 into a manual (soft) patch by any dispatch console operator as detailed later in this document

- It is recommended that all radio users on other 800 MHz radio systems have the 8CALL90, 8TAC91, 8TAC92, 8TAC93 and 8TAC94 channels in selector slots on all of the mobile and portable radios used by law enforcement, fire and EMS personnel. It is recommended that public service personnel using these other 800 MHz radio systems also have 8CALL, and 8TAC91 programmed into the radios used.

- Agencies using the regional 800 MHz radio system may also have the conventional 8CALL90 and 8TAC91-94 mobile relay stations included in their fleet maps. These are for use when travelling outside the coverage area of the regional 800 MHz radio system but into another 800 MHz system with base radio facilities on those channels.

- The Primary PSAP regional dispatch centers shall monitor the 8CALL90 channel at all times and be equipped to transmit on these channels. The 8CALL90 channel may be monitored in any other dispatch center and/or by as many dispatch center operators as the system manager responsible for managing the center selects.

- ~~The 8CALL90 and 8TAC91 conventional mobile relay stations shall be recorded. For details see *Metro Standard 3.7.0 Recording Interoperability Talk Groups.*~~

- Transportable mobile relay stations with the 8TAC channels, shall coordinate with a COML or COMT before emplacing the station to avoid interference with the fixed stations. ~~on the 8TAC92 and 3 conventional channels may be installed in mobile command posts.~~ ~~**No agency shall utilize a transportable mobile relay station on 8CALL90, 8TAC91 or 8TAC94 to avoid interference with the fixed stations on those channels.**~~

- ~~Any government entity~~Per State Standard 3.16.6 - 800 MHz Statewide Uniform Interoperability Radio Zones, entities using ~~an 800 MHz radio system may add a repeater talk around radio channel in radios on the 8TAC conventional channels~~ the ARMER system, are required to have the 8TAC's programmed in repeater and simplex mode.~~.~~

- ~~The talk around 8TAC radio channels are also available for use with on scene cross band repeat or cross band patch operations such as VHF to 800 MHz or UHF to 800 MHz.~~

5. Recommended Procedure:

Most of the time, an event that requires agency coordination will begin on the main dispatch radio channel of one of the public safety dispatch centers. **The dispatch center operator that handles the event initially shall become the responsible dispatch operator and shall provide dispatch service to all personnel in all units participating in the event activities.**

- **If that dispatch center is on the regional 800 MHz radio system, and coordination is required with personnel in units on another 800 MHz radio system**, the responsible dispatch center operator shall tell the units in his or her agency that are involved in the event to switch to the 8TAC91 trunked talk group and initiate a manual (soft) patch between the talk group and the 8TAC91 conventional repeater channel. The dispatch center operator that set up the soft patch shall be responsible for breaking the soft patch when there is no further need for the patch.

- **If the responsible dispatch center operator is on a VHF or UHF radio system, and personnel in units on multiple 800 MHz radio system are also involved**, either**:**
  1. The responsible dispatch center operator shall soft patch a VHF/UHF mutual aid channel to the conventional 8TAC91 mobile relay station, or
  2. Ask a dispatch center operator in another dispatch center with the capability to create the soft patch, and proceed as described in the above paragraph.

- **If agency coordination is required for a time period longer than a few hours**, or if the area where the 800 MHz to 800 MHz agency coordination is needed **does not have good network coverage,** one of the transportable mobile relay stations in a mobile communications van shall be sent to the area of the event operations. Communications shall then be reassigned from 8TAC91 to 8TAC92 or 8TAC93.

- **If a government radio user from outside the metropolitan Minneapolis-St. Paul geographic area that is using an 800 MHz radio system comes into the area and**

needs assistance, that outside radio user may call on the 8CALL90 channel. The called unit and/or State Patrol dispatch center operator shall respond to that call. If the requested PSAP does not respond to the 8CALL90 call, a Hennepin County Sheriff's dispatch or any other dispatch center operator shall respond and serve the caller.

6. Management

Any 800 MHz radio system user may obtain a license for mobile and portable radio use of the 8CALL90 and 8TAC radio channels.

Dispatch center managers for 800 MHz radio systems with access to the 8TAC91 channel, or a talk group patchable to that channel, shall prepare procedures for use of the 8TAC91 channel that is consistent with this procedure.

Dispatch center managers shall prepare and conduct initial and continuing training for dispatch center operators on the procedures that are established for use of the 8CALL90 and 8TAC channels that are consistent with this procedure.

Responsibility for monitoring the use of and for recommending modifications to this procedure shall be a function of the Radio Technical Operations Committee.

Office of the Sheriff

Commitment to Excellence

Dan Starry
Sheriff

Brian R. Mueller
Chief Deputy

7/28/2016

ARMER Operations and Technical Committee
Chair Joe Glaccum
4501 68th Avenue North
Brooklyn Center, MN 55429

Dear Chair Glaccum,

The Washington County joint SWAT team has four assigned medics from Lakeview EMS. These same medics also serve on the Washington County Mobile Field Force Team. Several of those members were recently embedded with the team during protests following the Officer Yanez trial. Communications were assigned to LTAC talkgroups, which are not present in the medic's radios per ARMER standard 3.19.0.

The lack of these assigned event talkgroups resulted in a communication challenge. Please see Medic Barratt's letter of support for additional details.

I am requesting a waiver to grant these team members access to the LTAC talkgroups in their radios. The radios are assigned to each member and are not shared. Usage will be at the discretion of the team or incident commander.

Sincerely,

Nathan Timm
Radio Systems Manager
Washington County Sheriff's Office
651-430-7863

Nate.timm@co.washington.mn.us

Lakeview Hospital
HealthPartners®

Emergency Medical Services

6/22/2017
Attn: Nate Timm
Radio Systems Manager
Washington County Sherriff's Office
Re: LTAC Channel addition to Lakeview EMS Tactical Medic Radios

Nate,

I am requesting the addition of LTAC channels to four radios that are owned and operated by Lakeview EMS. The radios are utilized by four paramedics from Lakeview EMS that are embed on the Washington County SWAT team and are also an element of the Washington County Mobile Field Force team. Medics Barratt, Milder, Lundquist, and Murphy are each assigned a radio and are the sole operators of their assigned radio.

Communication is a key to both officer and tactical paramedic safety. LTAC channels 1-4 have been utilized recently during the Protests in Minneapolis where our Mobile Field Force team was deployed. All communication on the team was done on LTAC channel and this became an officer safety issue as the medics were unable to communicate with the team leads during a case where officers were being evaluated. The addition of the LTAC channels to the four radios will allow for proper communication during future callouts.

Please feel free to contact me with any further questions related to this issue.

Respectfully,

Nicolas Barratt Critical Care Paramedic
Lakeview EMS
Tactical Paramedic Team Lead
Washington County SWAT