

# STATEWIDE EMERGENCY COMMUNICATIONS BOARD OPERATIONS & TECHNICAL COMMITTEE

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January 12, 2016  
1:00 – 3:00 p.m.  
MnDOT Arden Hills Training Center  
1900 West County Road I, Shoreview MN  
Chair: Joe Glaccum

Call-in Number: 1-888-742-5095  
Code: 2786437892#

## AGENDA

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### Call to Order

### Approval of Agenda

### Approval of Previous Meeting's Minutes

### Action Items

1. Pierce County WI Participation Plan Amendment (Phil Meixner)
2. Carlton County Participation Plan Addendum (Bruce Hegrenes)
3. Dakota County Participation Plan Amendment (Ron Jansen)
4. BCA Request for System I.D.s (Lance Lehman)
5. Douglas County Request for Requested Site (Tom Egan)
6. Standard 1.2.0 Network Management (Cathy Anderson)
7. Standard 2.4.0 Console Naming - Request to Sunset June 1, 2016 (Cathy Anderson)
8. Standard 2.6.0 Fleetmap Standards (Cathy Anderson)
9. Standard 2.8.0 Talkgroup and Radio User Priority (Cathy Anderson)
10. Standard 2.16.0 Emergency Button (Cathy Anderson)
11. Standard 3.24.0 Public Safety Answering Point (PSAP) Interoperability
12. Standard 1.11.1 System Administrators Definition and Minimum Training Requirements (Cathy Anderson)

### New Business

1. 2015 Attendance

### Old Business

1. SOA Repeater Initiative
2. Report on Participation Plan and Standards Related to NWS and DROs (Jim Stromberg)

### Regional Reports

- Northwest (Richard)
- Northeast (Hegrenes)
- Northern RIC (Bruning)
- Central (Justin)
- Metro (Gundersen)
- Central/Metro RIC (Juth)
- South Central (Wesley)
- Southeast (Freshwater)
- Southwest (Hamann)
- Southern RIC (Donahue)

## **Other Reports**

- MnDOT (Lee)
- System Managers Group (Lee)
- DPS Standing Report (Stromberg)
- Status Board Report (Anderson)
- Change Management Workgroup (Stromberg)

## **Adjourn**

STATEWIDE EMERGENCY COMMUNICATIONS BOARD  
OPERATIONS & TECHNICAL COMMITTEE

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December 8, 2015  
MnDOT Arden Hills Training Center

MEETING MINUTES

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Attendance

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**Members**

**Present**

**Member/Alternate**

Chair Joe Glaccum/Vacant- Minnesota Ambulance Assn  
Vice Chair Dave Thomson/Vacant - MN Chiefs of Police Assoc.  
John Gundersen/Ron Jansen - MESB  
Tim Lee/Jim Mohn/Mukhtar Thakur- MnDOT  
Tim Boyer/- MN State Patrol  
Shane Richard/Brian Zastoupil- NW Region  
Bruce Hegrenes/Monte Fronk - NE Region  
Terry Wesley/Darrin Haeder - SC Region  
Tom Justin/Ace Bonnema / Paul McIntyre - CM Region  
Rick Freshwater/Michael Peterson - SE Region  
Mike Hamann/Kimberly Hall - SW Region

\*Members attending are marked with yellow highlight.

**Guests reporting:**

**Name**

**Representing**

Jackie Mines, ECN  
Jim Stromberg, ECN  
Cathy Anderson, ECN  
Carol-Linnea Salmon, ECN  
Steve Mueller, MNIT  
Nate Timm, Washington County  
Troy Tretter, MESB  
Randy Donahue, ECN  
Marcus Bruning, ECN  
Rod Olson, City of Minneapolis  
Ross Butterfield, North Star Search and Rescue  
Peter Sauter, Carver County  
Daniel Skripka, RF Data Systems  
Jake Thomson, Anoka County  
Scott Wosje, Northland Business Systems  
Carrie Oster, Motorola  
Mike Fink, Motorola

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CALL TO ORDER

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Chair Glaccum calls the meeting to order at 1:00 p.m.

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## AGENDA REVIEW

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Chair Glaccum requests to amend the agenda to move the StatusBoard report to the beginning and to change the review of change management to a discussion item rather than an action item.

**Dave Thomson moves to approve the agenda as amended.**

**Bruce Hegrenes seconds.**

**Motion carries.**

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## APPROVE PREVIOUS MEETING'S MINUTES

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**Hegrenes moves to approve the November meeting minutes.**

**Ron Jansen seconds.**

**Motion carries.**

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## SEARCH AND RESCUE ARMER REQUESTS (ROSS BUTTERFIELD)

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Ross Butterfield, from North Star Search and Rescue, introduces the request. North Star Search and Rescue is a non-profit organization which provides nationally certified canines for scent tracking. It is the only search and rescue agency in the five state area that holds a license as a medical response unit. He gives examples of when and how the canines are used. The agency is requesting to be on the ARMER system to better communicate with law and fire partners.

Dan Skripka adds that North Star Search and Rescue is requesting a TAC group or interoperability channel to be able to reach other departments for coordinating setting up a search area, staging responders and vehicles, and coordinating finds. The request is to add six radios to the ARMER system. The plan is for North Star Search to work with Ancom for programming and with a sponsoring agency to sponsor the interoperability talk group.

Chair Glaccum responds that request as presented falls short of providing the required letter from a sponsoring agency stating that it will sponsor North Star Search and Rescue on the system. He clarifies that because North Star Search and Rescue is not a public service/public safety entity, it must have sponsorship from a licensed entity which would oversee compliance with standards, radio programming and maintenance, and training.

**Jansen moves that the OTC request North Star Search and Rescue come back with a sponsorship letter from a participating agency.**

**Terry Westley seconds.**

Bruce Hegrenes explains that this is a process the committee has gone through for a range of agencies that come before it looking for access. It is not an indication that the committee would not be in favor of North Star Search and Rescue being on the system, but that it must have a sponsoring agency and follow the requirements of the standard.

Dave Thomson adds that one of the advantages of a sponsor is that they would have radio-specific training rather than just-in-time training.

Discussion that after acquiring sponsorship the agency would also need to seek regional approval for use of certain resources.

## **Motion Carries.**

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### **StatusBoard (Steve Mueller)**

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Steve Mueller reports that there were no outages during November. He asks the committee for feedback or concerns about the StatusBoard.

Rick Freshwater asks if it is possible to speed up the administrative additions. Mueller says they have done that already and thought this had been resolved. Freshwater says it is slow when adding or changing users. Cathy Anderson will work with him on this.

Anderson reports that there is a meeting scheduled with the regional administrators to discuss possible upgrades within the first quarter of 2016. The regional StatusBoard administrators have come up with a list and ranked what were considered to be the most important things. This month and next month are good times to talk about the StatusBoard and any issues or concerns or things you would like to see. Bring them to your regional StatusBoard administrator who will send them to Anderson.

Discussion about whether changes to the StatusBoard should be approved by the committee. Agreement that performance improvements can be made at the discretion of the workgroup but more substantive changes should be vetted by the committee.

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### **CASS COUNTY PARTICIPATION PLAN AMENDMENT (BRUCE HEGRENES)**

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Bruce Hegrenes introduces a request from Cass County to replace the county's Gold Elite consoles with MCC7500 consoles. The project will include three console positions. Two hundred and twenty-five radio I.D.s will be returned. Four CCGW ports are requested and the county will use one CCGW.

It has been brought before the Northeast (NE) Regional Advisory Committee and the NE Emergency Communications Board three times but there has not been a quorum yet so it has not been approved. The request has the support of MnDot.

**Thomson moves to approve the Cass County Participation Plan Amendment contingent upon approval at next regional radio board meeting with a quorum.**

**Jansen seconds.**

**Motion carries.**

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### **STANDARD 1.11.3 TRAINING RADIO TELECOMMUNICATORS (CATHY ANDERSON)**

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Cathy Anderson introduces the proposed changes to Standard 1.11.3. She reports that this Standard was reworked in August 2014. When the workgroup began working on 1.11.5 it was determined that 1.11.5 should be sunsetted and any relevant changes should be incorporated into Standards 1.11.3 and 1.11.4.

Anderson reviews the proposed changes. In the first paragraph there is verbiage change to correspond with the standard title. In the second paragraph, some verbiage was incorporated from 1.11.5 to clarify that radio telecommunicators can be working with either ARMER or interoperability equipment. Changes under number four and the bullet points were also to add interoperability equipment. It incorporated the necessities from 1.11.5 with the addition of NIMS ICS training. The workgroup decided not to list any specifics under it because it was thought that the PSAPS should know what their dispatchers need to take. On page three, the Refresher Training section was moved down on the page. Under number five, modules were added that the workgroup felt should be viewed.

There was a lot of discussion about whether to make the modules mandatory and it was determined to keep it that they *shall* be viewed.

Glaccum asks if there are comments. No discussion.

**Hegrenes moves**  
**Freshwater seconds.**  
**Motion carries.**

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#### STANDARD 1.11.4 TRAINING ARMER END USERS (CATHY ANDERSON)

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Anderson introduces the proposed changes to Standard 1.11.4. Language in the first paragraph was changed to incorporate anyone using interoperability equipment or ARMER equipment. Under number four in the first paragraph “in any capacity” was added. Three tiers of responsible users was changed to four tiers and “Emergency room departments with two-talkgroup radios” was added. There was a lot of discussion about this. It was determined that for EDs that have only two-talkgroups there is no reason for them to go through the full training. Linda Muchow, Paul McIntyre and Anderson are working on a module for ED people that have the two-talkgroup radios so they will get some ARMER background. There were issues about emergency rooms not wanting to pay staff for a long training session when all they will be doing is pushing one button and changing one channel. The workgroup was also told that the supervisory staff do get the full ARMER training. There are some EDs that have three talkgroups in their radios but right now they are not included in this.

On page three, the history of ARMER was added because it was believed that there was value in the history of ARMER for new users. Under “just-in-time” users, wording was added saying that “Emergency Department users only need to be trained in topics applicable to use of their two-talkgroup radios.”

NIMS ICS Training was added with the caveat that it is discipline-specific required training (on page 4).

“Refresher training” was moved to the end of the section. The names of the Regional Radio Boards were changed to Emergency Communications Boards and Emergency Services Boards.

Chair Glaccum calls attention to page two, where it reads, “If an organization creates their own training program, the modules listed below are not required, as long as the curriculum contains their content.” He suggests changing it to read, “If an organization creates their own training program, the modules listed below are encouraged but not required....”

**Jansen moves to accept the proposed changes to Standard 1.11.4 and along with the modification recommended above by Chair Glaccum.**  
**Hegrenes seconds.**  
**Motion carries**

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#### STANDARD 1.11.5 INTEROPERABILITY PARTICIPANTS (CATHY ANDERSON)

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Anderson reports that the Standards Workgroup recommends sunsetting Standard 1.11.5 as the applicable items were incorporated into Standards 1.11.3 and 1.11.4.

**Freshwater moves to sunset Standard 1.11.5.**  
**Thomson seconds.**  
**Motion carries.**

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#### STANDARD 1.4.1 SYSTEM LOGIN NAMING MAINTENANCE (CATHY ANDERSON)

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Anderson introduces the recommended changes to Standard 1.4.1. It was decided that because the System Managers Group (SMG) is not an official committee, the standard should be changed to read, “Procedures for this standard are at the discretion of the Operations and Technical Committee.”

Under the Management section, the name was changed to “Statewide System Administrator” shall be responsible for the creation of administrative accounts.

Chair Glaccum asks if other standards refer to the SMG. Anderson and Hegrenes do not think so. Jansen says he thinks this was looked at in the past.

**Jansen moves to accept the proposed changes to Standard 1.4.1.  
Hegrenes seconds.  
Motion carries.**

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#### STANDARD 1.4.2 MANAGEMENT OF ALIAS LIST (CATHY ANDERSON)

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Anderson introduces the proposed changes to Standard 1.4.2. On page two, under recommended procedures, System Management Group was changed to Statewide System Administrator. This was made so that only the statewide system administrator is responsible for maintaining the lists. Language was added stating that if there is a conflict over acronym use that is not resolvable by the agencies it must be brought to the OTC for resolution. In the last sentence MnDot System Administrator was changed to Statewide System Administrator.

Jim Mohn says that under paragraph two under Purpose and Objectives it reads as though it concerns who actually changes the aliases in the system rather than who maintains the list.

Upon discussion, it was agreed to change the language:

“Login User alias and agency acronym table are stored within the system database and will be maintained by the Statewide System Administrator.

Radio user talkgroup and talkgroup aliases are stored within in the system database and will be maintained by the authorized system administrator.”

**Freshwater moves to accept the proposed changes to Standard 1.4.2 with the recommended change to the language in paragraph two.  
Jansen seconds.  
Motion carries.**

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#### STANDARD 1.6.1 SYSTEM SECURITY GROUPS (CATHY ANDERSON)

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Anderson introduces changes to Standard 1.6.1. In the second paragraph, the name was changed from Configuration Manager to Provisioning Manager (PM). On page two, under heading number four, “one” was added before “example” and the verbiage was changed to look how it actually shows up in Provisioning Manager. She states that changes to the next paragraph are self-explanatory. Examples of RF Site Security Groups were added. “Visibility for RF Site Security Groups will be set as needed” was added. The names were changed to match what they are on the actual system. On the bottom of page two, “each administrative entity” was changed to “each agency’s local administrative representative.” On page three, the examples were changed to what they are named in the system and examples were added of who they are for and what they are for. Under number five, the first sentence wasn’t needed. At the end, the title was changed to “Statewide System Administrator” for consistency with other standards.

Glaccum asks if RF and PM were added to our acronym list and recommends it they were not that they should be. Anderson will follow up.

**Hegrenes moves to accept the proposed changes to Standard 1.6.1.**

**Freshwater seconds.**

**Motion carries.**

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**STANDARD 2.2.0 RADIO ALIASES (CATHY ANDERSON)**

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Anderson introduces the proposed changes to Standard 2.2.0. In the first paragraph, “regional system” was changed to “ARMER system”. There was discussion about changing number three but it was left as is. She notes that there is an exception for one agency (Hennepin) that is allowed to have one character because of the number of subscribers they have. Under number four, digits was changed to characters. On page two, the paragraph about lost radios was deleted because everybody does it differently in PM. On page two, paragraph four, the master list was assigned to the Statewide System Administrator. It was added that he will be responsible for creating and assigning two character prefixes for all agency identification. It was decided that the table served no purpose. It appears that this standard was adopted from a very early regional standard and the table does not serve a purpose in a statewide standard.

Chair Glaccum recommends, because there is already one exception and there may be others in the future, the addition of the following language to number four, at the bottom of the page, “Any exceptions to this naming standard must be approved by the OTC.”

Nate Timm suggests changing “the master list...” to “the master table” on page two, to be consistent with the language in other standards.

There are no objections to these additional proposed changes.

**Freshwater moves to approve the proposed changes to Standard 2.2.0 with the addition of adding at the bottom of page one, “Any exceptions to this naming standard must be approved by the OTC,” and changing “master list” to “master table” on page two.**

**Thomson seconds.**

**Motion carries.**

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**NEW BUSINESS**

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None.

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**OLD BUSINESS**

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**REVIEW OF CHANGE MANAGEMENT PROCESS (CHAIR GLACCUM)**

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Chair Glaccum states that at the previous meeting it was requested that the regional boards discuss change management and return to the committee with any concerns or suggestions. He opens the discussion.

Jim Stromberg says he reviewed the standard and found inconsistencies between the text and the flow chart. He found that the entry point is unclear, stating that it could go to OTC or the Interoperability Committee. Stromberg recommends that the entry point be with the OTC. He recommends creating a workgroup to review the standard.

Discussion about change management. It has been cumbersome. Timelines should be added. The item from the Central Region should be considered concurrent with reviewing the process.

Agreement to form a workgroup with representation from each region. Each regional representative on the OTC should determine a representative from their region and submit the name to Jim Stromberg by the end of December. Stromberg will report the membership at the January OTC meeting.

Mines asks if there should be a call-out for any change management requests so we get them in by the end of the year and start dealing with them by January 1.

Chair Glaccum responds that we should make the call out to find out what is coming up but also be clear that we are reviewing the process.

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## REGIONAL REPORTS

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### **Northwest (Zastoupil)**

No meeting last month. No report.

### **Northeast (Hegrenes)**

Bruce Hegrenes reports that the RAC met last month with a quorum. The regional Emergency Communications Board met and did not have a quorum. In the last year the ECB met ten times and had a quorum twice so they are talking about how to change that. Grants were discussed and the addition of channels for Carleton County.

They also discussed the ISSI gateway that St. Louis County was able to purchase from Motorola to be installed next year. It is a scaled down version of the original proposal.

There was also a discussion about the weather service in Duluth. It bought a radio but they have not been able to put it on the system because of lack of a participation plan. Hegrenes says that this is an area that needs cleaning up and suggests that perhaps the SWIC could look into it. In the meantime the regional ECB and RAC have approved putting that radio in the region and will sponsor them. He reports a similar situation with the Red Cross.

Discussion about the National Weather Service and Red Cross and other Disaster Relief Organizations (DRO) and how they have been on the system in the past. It has been different by region. Discussion about whether this is a regional issue or a statewide issue. Red Cross and Weather Service divisions cross over several regions. Discussion about if they fall under the non-government/non-public safety entities standard or are they a public safety entity.

**Freshwater moves that the Red Cross and the National Weather Service be considered public safety entities.**

**Motion fails for lack of a second.**

Stromberg offers to take a look at the standards and the current status and prepare a summary report on DROs and the Weather Service for the next meeting.

Chair Glaccum says the standards workgroup could take a look at it from there.

Chair Glaccum returns to the topic of the ISSI. He requests that the county submit a participation plan amendment with this addition.

Discussion about whether the ISSI project was approved by the SECB. It was technically approved at the committee level but not funded by the SECB. Mines clarifies that it was approved as a regional resource by the Interoperability

Committee (IOC) and reported as such to the SECB but the board took no action on it, as reflected in the meeting minutes.

Hegrenes states concern about submitting a participation plan amendment because the contract is due to be signed in a couple of days.

Chair Glaccum says that he thinks it is very unlikely that there would be any objection and he would encourage Hegrenes to move forward. Mines adds that she agrees that it has been vetted but should be formally approved in a participation plan.

Glaccum asks the committee if anyone would have an objection. Freshwater and Thomson do not see that there would be any objection.

**Northern RIC (Bruning)**

Marcus Bruning reports that the Northeast and the Northwest are both working on SHP planning. Sanford Health is negotiating with a vendor for a participation plan that will cover three regions. Cass County and Beltrami County are migrating to MCC7500 consoles. Marshall and Norman Counties are working on participation plans.

**Central (Bonnema)**

**No report.**

**Metro (Tretter)**

Troy Tretter reports that the Metro Radio Technical Operations Committee (TOC) met on November 18. There was a request to come on the system from an agency licensed by the MSRB but which does not provide emergency services—a transport company. The discussion led to the creation of a workgroup to consider what is allowed for full participation for the metro region and to further define public safety /public service agencies and emergency medical service and air ambulance. A copy of the workgroup report is available for those interested. The TOC also voted on removing dual naming from METACs after the 7.15 upgrade.

The Metro Communications Response Taskforce (CRTF) standardized an ICS 205 template with supporting documentation from metro incidents. Due to the frequent number of 205s that are being generated in the metro area it was determined that standardizing the 205 template was in the best interests of the metro region. Anyone interested in an electronic copy should contact Tretter.

The Owners group met on November 25 and discussed the check list and timelines for the 7.15 upgrade.

**Central and Metro RIC (Juth)**

No report.

**South Central (Wesley)**

Terry Wesley reports that the RAC has not met since the last OTC meeting. No report.

**Southeast (Freshwater)**

Rick Freshwater reports that there has been a lot of membership joining the regional logging. A voice logging subcommittee of the ECB was created. Winona County is in the process. Mower County just became a member. Rice and Steele are going to become members of the regional voice logging which is located in Rochester. Houston County has decided to not join.

**Southwest (Hall)**

**No report.**

### **Southern RIC (Donahue)**

Randy Donahue reports that the region has been focusing on preparing grant information. The Southwest had a regional planning session to develop a two year plan for priorities. LTE and FirstNet has been a topic of discussion after the recent demonstration in Elk River. The Southeast and Southwest regions have both been working on how to integrate new members coming on regional logging. Donahue has been working with Marcus Bruning on a full participation plan for Sanford Health as they also service a lot of the western part of the state.

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## **OTHER REPORTS**

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### **MnDOT (Lee)**

Jim Mohn reports that MnDot has completed land acquisition for the Cromwell site in Carleton County.

### **Systems Managers Group (Lee)**

Jim Mohn reports that the group is meeting every other month now and did not meet in December. Jansen adds that the SMG will meet in January and the highlight will likely be reviewing the 7.15 release note information which should be available by then.

### **DPS Standing Report (Stromberg)**

Jackie Mines reports that ECN has been working with regions on grants and encouraging planning further ahead. The goal is to create a more competitive grant process so that grant money can be used more economically and competitively to enable funding for larger regional projects when needed.

ECN is also working on the NextGen911 contract. It has been time-consuming because the way the vendors submitted their pricing information is not consistent with each other so it has been difficult to make side-by-side comparisons.

The Interoperable Data Committee will have a presentation this month on the summary report from the LTE pilot project. One of the take-aways was about assumptions that are being made about who is monitoring the data when an event is happening. The project revealed insight into what we as a public responder community will want to start looking at in terms of operations and monitoring data, for example what skills sets will be needed in the future. We are hoping to have a similar tabletop exercise at the Interop Conference. We are also working with Televate on a workshop about applications—what we are using now and what we would like to use in the future.

Stromberg adds that that the Communication Assets Survey and Mapping Tool (CASM) workgroup has made progress and is put finishing touches on a standard.

**Meeting adjourns at 3:01 p.m.**

# ***Pierce County Sheriff's Department***

Sheriff Nancy Hove  
Chief Deputy Jason Matthys



*Sheriff Department Phone: 715-273-5051*  
*Administration Fax: 715-273-3409*  
*Jail Fax: 715-273-6856*  
*Investigation Fax: 715-273-1137*

**432 W. Main Street, P.O. Box 9  
Ellsworth, WI 54011**

**Date: 12.08.2015**

ARMER OTC  
Chair Joe Glaccum  
4501 68th Avenue North  
Brooklyn Center, MN 55429

Chair Glaccum,

Pierce County Wisconsin is an approved interoperable user of the ARMER system. The majority of our deputies use either an APX dual band mobile or portable to interoperate with our Minnesota partners. This includes Goodhue, Dakota, and Washington Counties in addition to events at the Prairie Island Nuclear Generating Plant. Our dispatch center also is equipped with four ARMER control stations which allow us to establish interoperable patches.

We currently are authorized for 43 radio IDs. All of those IDs are now in use.

Prescott is our western most Pierce County city and shares a road and railroad bridge with Minnesota. Prescott Police Department has obtained two dual band radios and wishes to add ARMER to these radios to interoperate with Washington and Dakota counties. Those two radios will be issued to the Police Sergeants. If future grant funding allows, Prescott may obtain additional dual band radios.

I am requesting that Prescott Police and Fire Departments be added to our participation plan, and that our pool of IDs increases by 12 (for a total of 55 IDs). This will accommodate the immediate needs in addition to 3 years of projected growth.

I am an authorized ARMER programmer and will be programming the Prescott police APX radios. I will also provide training for those radio users, and any future users. I will interface with the radio managers of Washington and Dakota counties to verify any of their talkgroups placed in these radios are authorized and appropriate. These radio IDs will be created by Nate Timm, who administers the Pierce County block of IDs.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip Meixner", with a long horizontal flourish extending to the right.

Philip Meixner  
Sergeant  
Pierce County Sheriff's Office  
715-273-5051  
[phil.meixner@co.pierce.wi.us](mailto:phil.meixner@co.pierce.wi.us)

# Carlton County Minnesota

ARMER Participation Plan  
Addendum 2  
December 20, 2015

Bruce Hegrenes  
Technical Supervisor  
St. Louis County Sheriff Office  
Communications Division

Carlton County ARMER Participation Plan Addendum 2  
Based on Carlton County Participation Plan June 10, 2010 and  
Carlton County Participation Plan Addendum 1 April 12, 2013

## **Executive Summary**

The Carlton County ARMER Participation Plan was completed and approved by Carlton County Board, Northeast Region Advisory Committee, Northeast Region Radio Board, Minnesota Department of Transportation-Electronic Communications Division, Operations and Technical Committee of the State Radio Board and the State Radio Board in 2010. The plan was modified with Addendum 1 dated April 12, 2013. Addendum 2 is an update to the June 10, 2010 plan due to additional review and equipment purchase.

Due to consistent busies at the Moose Lake and Mahtowa ARMER sites Carlton County is proposing to add two channels to these sites. Moose Lake and Mahtowa sites will have a total of seven channels at each site. The sites are owned by MN-DOT.

## **2. ARMER System Technical Review**

### **A. System Design**

#### **ii) Local Equipment Additions and Enhancements**

##### **Moose Lake ARMER site**

The MN-DOT owned Moose Lake ARMER site is a 5 channel ASR site. Due to additional traffic above the anticipated levels detailed in the original engineering studies for the participation plan in 2010, Carlton County will add 2 channels to the 5 existing channels at the site.

The additional channels at the Moose Lake site will provide capacity for the unanticipated Minnesota Department of Human Services MSOP facility, Minnesota Department of Corrections Willow River facility and Pine County Law and Fire traffic.

##### **Mahtowa ARMER site**

The MN-DOT owned Moose Lake ARMER site is a 5 channel ASR site. Due to additional traffic above the anticipated levels detailed in the original engineering studies for the participation plan in 2010, Carlton County will add 2 channels to the 5 existing channels at the site.

The additional channels at the Mahtowa site will provide capacity to allow Fond du Lac Tribal Police to monitor St. Louis County Law talkgroups and Cloquet Area Fire and EMS to monitor St. Louis County Fire and EMS talkgroups.

GTR8000 base stations, transmit combiner and rack equipment will be purchased from Motorola Solutions for both sites. St. Louis County will install and provision the site equipment.

Carlton County ARMER Participation Plan Addendum 2  
Based on Carlton County Participation Plan June 10, 2010 and  
Carlton County Participation Plan Addendum 1 April 12, 2013

**v) 800 MHz Frequency Planning**

Additional frequencies at both sites are from the recently Vacated Frequency Pool for Public Safety.

SITE	1	2	3	4	5	6	7
Moose Lake						New	New
Mahtowa						New	New

Frequency information redacted.



Ulie Seal, Troy Tretter  
Chair – Metro Technical and Operation Committee  
Metro Region TOC Members

Dakota County would like to respectfully request to modify its ARMER System participation plan. The Dakota Communication Center (DCC) will be adding a Motorola AIS unit to accommodate for logging. This configuration will be required do the obsolescence of the Motorola Gold Elite console configurations.

The Statement of Work for this project has been discussed and routed through MnDOT Radio personnel and there were no issues with the request.

Thank You for your time and consideration on this request,  
Ron Jansen

# MINNESOTA DEPARTMENT OF PUBLIC SAFETY

## Bureau of Criminal Apprehension

1430 Maryland Avenue East, St. Paul, Minnesota 55106-2802  
Phone: 651/793-7001 FAX: 651/793-7001 TTY: 651/282-6555  
Internet: <http://www.dps.state.mn.us/bca/>

January 4, 2016

ARMER  
Operations and Technical Committee

To the Committee,

The Minnesota Bureau of Criminal Apprehension (BCA) requests additional System Identification numbers for its use on the ARMER network.

We request fifty (50) additional System Identification numbers.

Such numbers reflect an immediate need based on increased personnel and equipment needs of the Bureau. This request accommodates a modest increase of system identifiers for replacement or new purchases of radios for the near future.

Respectfully,



Jeff Hansen  
Deputy Director  
Investigations Division  
Bureau of Criminal Apprehension

Alcohol &  
Gambling  
Enforcement

Bureau of  
Criminal  
Apprehension

Capitol Security

Driver & Vehicle  
Services

Drug Policy &  
Violence  
Prevention

Emergency  
Management/  
Emergency  
Response  
Commission

State Fire  
Marshal  
Pipeline Safety

State Patrol

Traffic Safety

## **Douglas County requesting to have DG FIRE 'Requested' on the West Union Tower Site**

Douglas County has a 6 site VHF simulcast paging system. Douglas has patched the VHF Paging to the DG FIRE talk group, so the units in the field are able to hear all pages sent out by Douglas Dispatch. This is working well for the County with the exception of the Osakis Police Department. Because the City of Osakis is much closer to the West Union Tower Site, their mobile and portable radios have been programmed to 'prefer' the West Union Site. The Osakis Police Officers have been periodically missing pages. The Sheriff's Office, along with the Osakis Police Department and the Osakis Fire Department has attempted a couple of fixes for this problem and have not found a solution.

Douglas County is requesting the approval from the Operations and Technical Committee to allow the DG FIRE talk group to be 'Requested' on the West Union Tower Site. Douglas County understands concerns of tower loading, although, DG FIRE is not a high volume talk group. The DG FIRE talk group is used for all VHF paging and the initial communication from the fire departments, first responder units and ambulance services acknowledging the page. The unit or units are then moved to 1 of the 8 DG Interoperable talk groups for all radio communication relating to that event.

Sgt Tom Egan

Communications Supervisor/ARMER System Administrator

Douglas County Sheriff's Office

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

Document Section 1	<b>Management of System</b>	<b>Status: Complete</b>
State Standard Number	<b>1.2.0</b>	
Standard Title	<b>Network Management</b>	
Date Established	<b>08/07/2001</b>	<b>SRB Approval: 03/03/2005</b>
Replaces Document Dated	<del>08/13/2001</del> <b>03/03/2005</b>	
Date Revised	<del>03/03/2005</del> <b>12/28/2015</b>	

### **1. Purpose or Objective**

The purpose of this standard is to define the responsibilities for Network Management. The network is composed of, but not limited to, channel banks, hubs, switches, routers, servers, local area networks at the equipment locations, and wide area links connecting sites together consisting of the microwave and fiber optic equipment, and the network management tools provided by the equipment manufacturer.

### **2. Technical Background**

#### **▪ Capabilities**

The system architecture is primarily constructed around an internet protocol (IP) based network.

The network is composed of industry standard equipment, which also provides flexibility and a large variety of management and diagnostic tools.

Motorola will provide equipment configuration information as part of the system documentation.

#### **▪ Constraints**

The system network is complex, and unusual problems may be difficult to identify and resolve. The system documentation will have to be kept up-to-date to maintain its value in supporting the system network.

The system network is protected from other agency data networks, and shall remain so, to protect the security and functionality of the system. If there is a connection to another data network, it shall be through an appropriately designed and maintained firewall.

### **3. Operational Context**

The components of the network shall be considered “owned” by one of the appropriate owners of the system. The individual owners will then be responsible for the maintenance of the sites and equipment they own. Agreements between the owners and/or maintenance contractors are at each agency’s discretion, but the owner is still ultimately responsible for their portion of the system.

The backbone system is structured on ~~the—integrated~~ the integrated network; any infrastructure hardware and software upgrades or changes that may impact the system network will need prior Minnesota Department of Transportation (MnDOT) and regional approval. - The request will then be vetted thru the System Managers Group (SMG) before being submitted for approval by the Operations & Technical Committee (OTC). At the OTC’s discretion, the requested upgrade may be subjected to State Standard 1.8.0, System Change Management. need reasonable discussion/approval by the System Managers Group (SMG).

All maintenance work being scheduled that may affect the system and/or sub-system’s performance shall be preceded by reasonable and appropriate notification to the other System Managers.

The equipment configurations of the network components will need to be documented. This is primarily for the purpose of maintenance but also affects future planning. Motorola will provide the original as-built documentation.

The other defined standards for maintenance, documentation, notification, changes, security, and training also pertain to the network portion of the system.

### **4. Recommended Protocol/ Standard**

This will be an ongoing task in the operation and management of the system.

### **5. Recommended Procedure**

The methods for performing detailed network operations are defined in the technical resource manuals and training for the system. The technical resource manuals are classified as “Security Information” and “General Non-Public Data”, pursuant to Minn. Stats. §13.37, Subd. 1a.

Details on procedures not otherwise defined are at the discretion of the System Managers Group and will be approved by the OTC.

### **6. Management**

The System and Subsystem Administrators and Managers are responsible for managing and maintaining their agency’s the data attributes, ~~that they are individually responsible for.~~ The

| ~~Statewide Minnesota Department of Transportation (MnDOT)~~ System Administrator shall be responsible for the regional portion of the network.

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

Document Section 2	<b>Configuration and Allocation</b>	<b>Status:</b> Complete
State Standard Number	<b>2.4.0</b>	
Standard Title	<b>Console Naming</b>	
Date Established	<b>01/19/2001</b>	<b>SRB Approval:</b> 09/01/2005
Replaces Document Dated	<b>12/04/2003</b>	
Date Revised	<b>03/04/2005</b>	

### **1. Purpose or Objective**

The purpose of this standard is to set forth the principle by which all System Administrators of the ARMER system will establish names for the Radio IDs used to support dispatch console positions. This is necessary because IDs are not associated with a Radio User alias.

### **2. Technical Background**

- **Capabilities**  
N/A

- **Constraints**

The serial number field in Radio ID screens is 12 characters long. Every talkgroup per console position requires a Radio ID to be programmed for that position, e.g., a single console position may have 50 radio IDs programmed to support that position.

### **3. Operational Context**

Every radio ID in the system represents a radio, but some radio IDs in the system are consoles and not radios. By planning an identification process, the radio serial number field can be used in the radio entry screen to categorize consoles for easy identification.

### **4. Recommended Protocol/ Standard**

The serial numbers used in the records for console operator positions will be formatted according to the following:

#### OPTION 1

- Statewide operating agencies and first-class cities would have naming prefixes of at least two characters that would stand alone. Counties would be pre-named with a two character identifying mnemonic, and the cities and agencies of the counties would be included under the prefix of the county they are in.
- The next three characters would be the letters “con,” for console, to easily distinguish this identifier from other radio aliases.
- The characters following these first five are at the individual agency’s discretion.

## OPTION 2

- Starting with a 2-digit prefix to identify the Console location “for example WE, NM, BP, GV, etc
- The next two digits represent the Central Electronics Bank (CEB) number
- The following two digits indicate the Time Division Multiplexing (TDM) slot on that CEB
- The last four characters are to be unique, at the individual agency’s discretion.

## **5. Recommended Procedure**

N/A

## **6. Management**

The System Administrators are responsible for compliance of this standard.

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

Document Section 2	<b>Configuration and Allocation</b>	<b>Status:</b> Complete
State Standard Number	<b>2.6.0</b>	
Standard Title	<b>Fleetmap Standards</b>	<b>SRB Approval:</b> 2/26/2009
Date Established	<b>12/5/2000</b>	
Replaces Document Dated		
Date Revised	<del>2/10/2009</del> <b>12/07/2015</b>	

### **1. Purpose or Objective**

The Allied Radio Matrix for Emergency Response System (ARMER) will contain a large number of talkgroups and multigroups to support the various agencies that will be subscribing to the system.

The system has multiple administrating agencies that will maintain fleetmaps and system programming information for agencies they are responsible for.

For effective management of the system, a defined process needs to be used to document the fleetmap information that each administrating agency is supporting. This information will be shared with other System Administrators, providing a resource for subscribing agencies to reference when planning interagency communications. System fleetmaps contain configuration information that is classified as “Security Information” and “General Non-Public Data,” pursuant to Minn. Stats. § 13.37, Subd. 1a.

### **2. Technical Background**

#### **▪ Capabilities**

The fleetmap is parameter information programmed into the system infrastructure and into the subscriber radios to control how the radios will behave on the ARMER system.

The fleetmap itself contains the following detailed information:

Talkgroup	Name of the talkgroup & multigroup as it is programmed into the system.
Talkgroup ID	Numerical ID of the talkgroup or multigroup
Owner	The agency requesting the creation of the talkgroup
Description	General description of the talkgroup & multigroup
Multigroup	If the talkgroup is part of a multigroup, this will identify a multigroup
Priority	Priority level of the talkgroup
Logging	If the talkgroup is going to be recorded
Admin Agency	The agency that is responsible for the system administration for this talkgroup
Site # Access	Will be listing the RF sites individually and if the talkgroup is authorized

Media Access	If media access is permitted for this talkgroup
Global Sharing	The predefined global sharing authorizations
User Groups	The subscriber groups using the talkgroups, this becomes the matrix for the program

The fleetmap spreadsheet will become a documented matrix of the talkgroups in the system and the subscriber groups that are using/sharing these talkgroups.

▪ **Constraints**

Since the system will be administered by multiple agencies and access is controlled, no master list will be maintained.

**3. Operational Context**

The local System Administrator shall be responsible for managing the fleetmap information of the subscribers they are representing. This information is also shared with other System Administrators, and the ID information must be kept secure, as described in the “Security” section of [the State Standards, this manual](#).

**4. Recommended Protocol/Standard**

Each administering agency will maintain a master fleetmap spreadsheet containing data on the subscribers for whom they are responsible.

**5. Recommended Procedure**

- ~~• As a local System Administrator makes updates or changes to their fleetmap spreadsheet, the spreadsheet will be emailed to the rest of the System Administrators. This will allow System Administrators to update their information in a timely manner.~~
- ~~• Talkgroups that are shared between subscribers of different administrating agencies will be reflected on all spreadsheets. The portion of the administrating agency’s spreadsheet containing data on talkgroup ownership will be considered the master reference for the talkgroup.~~
- System Administrators may omit listing any information in the master fleetmap spreadsheets for “unlisted” private talkgroups used for undercover operations and other highly sensitive confidential law enforcement and homeland security activities. Approval by the Statewide Emergency Communications Board (SECB) is required for a talkgroup to be designated “unlisted” and private. The request will include talkgroup system settings, names, priority level, and site access, if applicable. The existence of unlisted talkgroups is considered Non-Public Data and is not subject to disclosure in public meetings.
- The disclosure of fleetmap spreadsheet information including talkgroup IDs, user IDs, user privileges, and other related system information would substantially jeopardize the security of the system. Therefore, the master fleetmap spreadsheets shall be classified as “Security Information” and “Non-Public Data.”
- Only talkgroup names in non-detailed fleetmaps/channel lists are to be shared.

## **6. Management**

| The Statewide System Administrator will manage the master fleetmap spreadsheet information and the details of the process for communicating the information.

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

Document Section 2	<b>Configuration and Allocation</b>	<b>Status: Complete</b>
State Standard Number	<b>2.8.0</b>	
Standard Title	<b>Talkgroup and Radio User Priority</b>	
Date Established	<b>01/19/2001</b>	<b>SRB Approval: 09/01/2005</b>
Replaces Document Dated		
Date Revised	<b>04/12/2005</b>	

### **1. Purpose or Objective**

The purpose of this standard is to establish varying priority levels for talkgroups. This will ensure the most critical talkgroups on the system are granted a channel as quickly as possible when the system is experiencing busy conditions.

### **2. Technical Background**

#### **▪ Capabilities**

The system priorities can be managed at the user level and at the talkgroup level.

#### **▪ Constraints**

All User Priorities will be set to 10. As radio users change talkgroups, their effective priority will be set by the talkgroup they are on.

### **3. Operational Context**

Priority levels in the system will be managed at the talkgroup level. The goal is to distribute priorities across the system's talkgroups in a way that maximizes the ability for critical groups to communicate and minimizes the number of talkgroups with high priority. All User Priorities will be set to the lowest priority level, which is 10. As radio users change talkgroups, their effective priority will be set by the talkgroup that they are on.

### **4. Recommended Protocol/ Standard**

The ~~talkgroup owner or applicable local appropriate~~ System Administrator shall assign talkgroup priority levels, not exceeding the level defined by the criteria below. All ~~talkgroup priorities assigned to level five or above~~ are subject to the review and audit provisions that are specified in State Standards Section 1, Management of System.

#### **Priority 1**

##### **[Definition: Emergency]**

Priority 1 will be used only for Emergency Alert calls, i.e., calls where the emergency button is pressed will be given Priority 1 status.

## Priority 2

### **[Definition: Extraordinary/Temporary, Console Tactical Upgrade for Priority 3]**

Priority 2 will be used for temporary reprioritization (via System Manager terminal) of a lower priority talkgroup for critical operations, i.e., presidential motorcade, major incident command, etc. From a dispatch console position, a Priority 3 talkgroup can be upgraded to priority 2 by a dispatcher switching the “access priority” icon in the talkgroup window from “normal” to “tactical.” etc. In addition, Priority 2 will be assigned to dedicated “EMERGENCY ALARM” talkgroups for agencies that do not use the Emergency Alert (Emergency Button) function.

## Priority 3

### **[Definition: Shared Talkgroups normally dealing with Mutual Aid]**

Priority 3 will be used for public safety mission-critical announcement groups (multi-groups), network wide, and local system wide mutual aid interoperability talkgroups, i.e., regional tactical talkgroups, STAC’s, and LTACs.

## Priority 4

### **[Definition: Console Tactical Upgrade For Priority 5]**

A priority 5 talkgroup can be upgraded to priority 4 by a dispatcher switching the “access priority” icon in the talkgroup window from “normal” to “tactical.”

## Priority 5

### **[Definition: Owned Talkgroups dealing with the Safety and Protection of Life and Property]**

Priority 5 will be used for talkgroups that have an impact on the delivery of services involving the safety and protection of life and property. Priority 5 talkgroups may also include those talkgroups used by personnel involved in high-risk and mission-critical field operations, i.e., law enforcement, fire, and EMS mains.

## Priority 6

### **[Definition: Temporary Console Tactical Upgrade for Non-Mission Critical]**

A priority 7 talkgroup can be upgraded to priority 6 by a dispatcher switching the “access priority” icon in the talkgroup window from “normal” to “tactical.”

## Priority 7

### **[Definition: Non-Mission Critical]**

Priority 7 will be used for all other “secondary”, “administrative”, “nonessential”, or “non-mission critical” talkgroups used by subscriber agencies, both public safety and general government, i.e., public works.

## Priority 8 –9

### **[Unassigned] [Definition: Temporary Console Tactical Upgrade for Non-Mission Critical]**

A priority 9 talkgroup can be upgraded to priority 8 by a dispatcher switching the “access priority” icon in the talkgroup window from “normal” to “tactical.”

Not used.

### **Priority 9**

**(Definition: Non-Mission-Critical Low Priority Secondary Talkgroups)**

**Priority 9 will be used at the System Administrator's discretion for non-mission-critical low priority talkgroups. Secondary higher educational institutions will also use this priority for training and educational purposes, as specified in their respective user agreement.**

### **Priority 10**

**[Definition: Private and Interconnect Calls]**

Priority 10 will be used for telephone interconnect calls or private calls, as defined by direct point-to-point, radio-to-radio communications that are not carried out within a talkgroup. This priority will also be used for talkgroups that are established for system testing.

## **5. Recommended Procedure**

N/A System Administrators shall follow the outlined priority levels when creating or modifying talkgroups in the ARMER system.

## **6. Management**

The Statewide System Administrator Manager is responsible for supervision and management of this procedure. ~~See State Standards Section 1, "Management of System."~~

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

Document Section 2	<b>Configuration and Allocation</b>	<b>Status:</b> Complete
State Standard Number	<b>2.16.0</b>	
Standard Title	<b>Emergency Button</b>	
Date Established	<b>01/19/2001</b>	<b>SECB RB Approval:</b> 09/01/2005
Replaces Document Dated	<del>012/31/2003</del> <b>4/19/2005</b>	
Date Revised	<del>04/19/2005</del> <b>12/14/2015</b>	

## **1. Purpose or Objective**

The purpose of this standard is to address Emergency Button usage. There will be a large variety of users on the radio system with various Emergency Button needs. The various ways the Emergency Button can be configured allow for flexibility of use; however, it is important to design the system in such a way that when an Emergency Button is pushed, it is responded to quickly and appropriately.

## **2. Technical Background**

### **▪ Capabilities**

The Emergency Button feature, if programmed into radios, will allow a user to send an emergency notification by pressing a button on the radio. The notifications will audibly and visually alert all dispatch console positions displaying the talkgroup that receives emergency notification. Other radios that have the talkgroup selected will also receive the emergency notification and display the radio ID or alias of the radio generating the emergency.

Emergency calls are automatically assigned the highest priority available and would be first available from the queue if the system is in a busy situation. Subscribers' radios can optionally be configured to automatically key the Push-to-Talk (PTT) for a programmed period of time if the Emergency Button is pressed.

### **▪ Constraints**

Emergency Button usage must be directed to a predefined talkgroup in the radio programming, and the talkgroup that is selected for this must be approved by the local System Administrator.

Pressing the Emergency Button does not provide a central radio monitoring point with emergency location information.

## **3. Operational Context**

An agency may use the Emergency Button function if they so elect; however, the process to receive an emergency notification needs to be documented and include resolution for the items listed under Section 4 of this standard.

## **4. Recommended Protocol/ Standard**

Use of the Emergency Button as an emergency signaling option should be available to any agency on the radio system, subject to certain conditions and provisions.

- Agencies are not required to use this capability of the radio system.
- No agency will be permitted to enable their emergency signal on a talkgroup designated as “Emergency Button Restricted.”
- All agencies implementing the Emergency Button must have a plan in place to respond to Emergency Button activation.
- All Emergency Button response plans must include, at minimum:
  - A central radio monitoring point that can identify which radio user pushed the ~~buttonkey, the location and nature of the emergency,~~ and what the proper agency response should be.
  - A central monitoring point must be available during any/all hours that personnel are using the radio system.
  - A policy for use of the Emergency Button by radio users.
  - A response plan to assist the radio user in need.
  - In the event the central radio monitoring point is not the same agency as the radio user, an agreement on policy, monitoring, use, and response, must be in place among the agencies.

## **5. Recommended Procedure**

N/A

## **6. Management**

Agencies wishing to use the Emergency Button function must coordinate with agency resources that will be receiving the emergency calls. The receiving agencies must have an appropriate plan in place, documenting the process that they will use to handle the emergency notification.

Emergency Button usage must be directed to a predefined talkgroup in the radio programming, and the talkgroup that is selected must be approved by the local System Administrator.

## Allied Radio Matrix for Emergency Response Standards, Protocols, Procedures

Document Section 3	<b>Interoperability Standards</b>	<b>Status:</b> Complete
State Standard Number	<b>3.24.0</b>	
Standard Title	<b>Public Safety Answering Point (PSAP) Interoperability</b>	
Date Established	<del>1/30/2001</del>	<b>SECB Approval:</b> 10/27/2011
Replaces Document Dated	<del>1/30/2001</del> <b>10/27/2011</b>	
Date Revised	<del>10/27/2011</del> <b>01/04/2016</b>	

### **1. Purpose or Objective**

The purpose of this standard is to establish minimum guidelines for development of regional interoperability standards enabling users throughout the state to communicate with Public Safety Answering Points (PSAPs).

### **2. Technical/Operational Background**

- Capabilities

The statewide implementation of the ARMER backbone provides the opportunity to establish a uniform approach to using the ARMER system for communicating with PSAPs across the state. For counties that are full participants on the ARMER system, PSAPs generally have access to multiple talkgroups, including statewide and regional interoperability talkgroups.

Two ARMER radio control stations were provided to all non-metro PSAPs through the Public Safety Interoperable Communication (PSIC) grant program, establishing a uniform capability to communicate with participating and non-participating PSAPs. Under the grant agreement, one ARMER radio control station was provided for the purpose of monitoring a regional hailing talkgroup. The second ARMER radio control station was provided for the purpose of patching local communication resources.

~~The ARMER system can also be used to provide a consistent and reliable capability for PSAP-to-PSAP communications, replacing capabilities once provided over the VHF frequency (155.370 MHz Point-to-Point).~~

- Constraints

The use of ARMER radio control stations to connect to the ARMER system is limited to one talkgroup for each radio control station. As such, non-participating counties operating with the two ARMER radio control stations provided under the PSIC grant are limited to two talkgroups.

With over one hundred PSAPs in Minnesota, it is not practical to require users (regional, state, and transient local) to program separate county talkgroups for each individual county PSAP in the state.

### **3. Operational Context**

A consistent approach to the use of the ARMER radio control stations is required to ensure consistent interoperability with PSAPs throughout the state. This approach must be applied to both full-participation counties and limited-participation counties to be effective. Interoperability among public safety users is anchored upon the Regional Emergency Communications Boards (ECBs) and Emergency Services Boards (ESBs) Radio Boards (RRBs), which have adopted regional interoperability fleetmaps and regional Tactical Interoperable Communication Plans (TICPs).

Regional ECBs and ESBs Radio Boards may designate one or more PSAP as the region's primary PSAP(s).

### **4. Recommended Protocol/Standard**

Each region shall develop a regional standard specifying the following:

- Defining all talkgroups adopted in the region as regional interoperability talkgroups
- Defining which regional talkgroup is adopted in the region for required monitoring by all primary PSAPs within the region
- Designate which regional interoperability talkgroups each primary PSAP is required to maintain for patching to local communication resources

The regional standard must also reference State Standard 3.16.0.

### **5. Recommended Procedures**

Regional ECBs and ESBs Radio Boards shall adopt standards defining regional interoperability talkgroups and their use, including the designation of an interoperability hailing talkgroup that must be monitored by primary PSAPs.

### **6. Management**

The Department of Public Safety (DPS), Division of Emergency Communication Networks (DECN), should provide assistance and direction to RRBs ECBs and ESBs in the development of a regional standard consistent with this State Standard. The Statewide Emergency Communications Board (SECB) Interoperability Committee (IOC) shall be responsible for monitoring the development of regional standards and coordinating those standards between regions to the maximum extent possible.

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

Document Section 1	<b>Management of System</b>	<b>Status:</b> Complete
State Standard Number	<b>1.11.1</b>	
Standard Title	<b>System Administrators Definition and Minimum Training Requirements</b>	
Date Established	<b>10/01/2003</b>	<b>SECRRB Approval:</b> 09/01/2005
Replaces Document Dated	<b>02/17/2005</b>	
Date Revised	<b>03/30/2015</b>	

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### **1. Purpose or Objective**

The purpose of this standard is to establish the minimum training standards for system administration staff. This is to ensure that system functionality and integrity are maintained because qualified personnel are performing system administration functions.

There are four levels of system administrators that will be described below.

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### **2. Technical Background**

#### **▪ Capabilities**

Different levels of access allow different changes to the system.

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#### **▪ Constraints**

▪ N/A

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### **3. Operational Context**

System functionality and integrity must be maintained by ensuring that only qualified personnel perform system administration functions.

### **4. Protocol/ Standard**

Local System Administrators are responsible for maintaining system configuration databases for local infrastructure, subscriber databases, and console configuration databases. Therefore, they shall have successfully completed the appropriate training ~~on~~ as defined by each class of administration duties:

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**System Admin Level 1. Statewide System Administrator.** This Administrator is assigned to MnDOT or its designee and has full access and rights to the system and all subsystems. This Administrator assigns network authority for all other levels. Administrators performing at this Level must also have qualifications of System Admin Levels 2, 3, and 4. **Minimum training for Admin Level 1 consists of formal manufacturer training and MnDOT Best Practices Training.**

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**System Admin Level 2.** This Administrator handles any or all of the following based on security rights given by System Admin Level 1: local network controls, databases, console infrastructure administration, system and site maintenance, and other system resources as required. Administrators performing at this Level must also have qualifications of System Admin Levels 3 and 4. **Minimum training for Admin Level 2 consists of formal manufacturer training or OTC approved vendor training (see Section 6, Management) and MnDOT Best Practices Training.**

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**System Admin Level 3.** This Administrator has access to the system software tools used to manage subscribers. They can add, update, or delete radio and talkgroup id's, handle code plug creation and management, and run appropriate reports. ~~Elite Admin user. Administrators~~ ~~Persons~~ performing at this Level must also have qualifications of System Admin Level 4. **Minimum training for Admin Level 3 consists of formal manufacturer training or OTC approved vendor training and MnDOT Best Practices Training.**

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**System Admin Level 4.** This Administrator has no access to network management. Tracks local ID's, handles mandated reporting, ~~managing~~ ~~missioning~~ their talkgroups, request talkgroup use permissions from others, and responsible for security group permission and for the Communications SubSystem. ~~Ensure proper technical staff is trained to this standard.~~ **Minimum training for Admin Level 4 consists of training from a System Admin at any level and, in addition to, an overview of MnDOT Best Practices Training.**

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**The Minimum Training Requirements for each level are as follows:**

**System Admin Level 1**

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- Attend formal manufacturer training
- Attend MnDOT Best Practices Training

**System Admin Level 2**

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- Attend formal manufacturer training
- Attend MnDOT Best Practices Training

**System Admin Level 3**

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- May be trained by System Admin level 1, 2, or 3
- Must receive approved code plug training class and mentorship
- Attend MnDOT Best Practices Training

**In the absence of formal manufacturer training, a level 1, 2 or 3 may do peer to peer Provisioning Manager network training (PM), Private Radio Network Management (PRNM), and Unified Event Manager (UEM).**

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**System Admin Level 4**

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- May be trained by System Admin at any level.

- ~~Must receive overview of MNDOT Best Practice Training from instructor~~
- ~~Attend MnDOT Best Practices Training~~

~~It is recommended that All System Administrators view ARMER training modules. levels of System Admin Training also include the following:~~

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#### ~~Training Modules~~

- ~~Radio 101~~
- ~~History of ARMER~~
- ~~Interoperability 101~~
- ~~Interoperability – How to Communicate Outside of Your Agency~~
- ~~Technology of the ARMER System for Decision Makers~~
- ~~MCC 7500 Dispatch Console Part 1~~
- ~~MCC 7500 Dispatch Console Part 2~~

These courses, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts, are hosted through the Alexandria Technical & Community College online website. They can be accessed from the Emergency Communication Network's (ECN's) website under ARMER Standards.

A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER Standards. While web-based training is supplemental, except for the Minimum Training Requirements, all users must attend formal training for the ARMER system.

~~All Local~~ system administrators shall be familiar with the ARMER State Standards.

The appropriate Local System Administrator shall certify that:

- Personnel acting as system administrators are properly trained.
- A current record of personnel who are trained and acting as system administrators will be maintained. The Local System Administrator shall forward this list to the Statewide System Administrator as changes are made. This list will also be included as part of the annual report sent to the Statewide System Administrator each December.
- System access rights shall not be given to personnel who have not met the minimum training requirements for their respective level

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### **5. Recommended Procedure**

~~This Standard does not contain specific training procedures or training modules; however, it is highly recommended that System Administrators read and familiarize themselves with all Minnesota Communications Best Practice Guides as part of their training. The Best Practice Guides are available on ECN's website under Allied Radio (ARMER) at <https://dps.mn.gov/divisions/ecn/programs/armer/Pages/Guide-Books.aspx>.~~

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~~Additionally, online training for the ARMER system should be completed. These courses, created on behalf of the Statewide Emergency Communications Board (SECB) and reviewed and approved by subject matter experts, are hosted through the Alexandria Technical & Community College online website. They can be accessed from the Emergency Communication Network's (ECN) website under ARMER Standards.~~

~~A user name and password will be needed for these training modules, and instructions for obtaining these are posted on ECN's website under ARMER Standards or under the Refresher Training Plan section in all Best Practice Guides except Fire. While web-based training is supplemental, except for the Minimum Training Requirements, all users must attend formal classroom training for the ARMER system.~~

## 6. Management

Local System Administrators are responsible for ensuring that:

- An appropriate training plan has been developed for their agency that includes statewide interoperability training.
- Minimum training requirements are met, as listed in #4, Recommended Protocol/Standard.
- Only qualified personnel perform system administration functions.
- Local System Administrators are familiar with all applicable sections of the system standards manual.
- The annual MNDOT report is compiled and submitted.

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### Approval of Curriculum

- All vendors who wish to perform System Administrator training must submit current curriculum for each level of training to the Operations and Technical Committee (OTC) for approval.
- System Administrators with credentials to the ARMER system prior to February 1, 2016, shall retain their current system rights.

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# Mower County Sheriff

201 First Street NE • Austin, Minnesota 55912  
(507) 437-9400 • Fax (507) 437-9546

**Sheriff Terese M. Amazi**



January 7, 2016

Mower County is requesting an additional 88 subscriber ID's which will bring us to a total of 450 available ID's. Also, we are requesting 8 additional talk groups. This would bring our total to 40 talk groups. As a reminder, we came onto the system late in the SE Region and we are still working to migrate all of our fire departments and ambulances onto the system. We believe this will cover our needs for the next few years as we strive to be 100% ARMER users.

Thank you for your consideration.

  
Terese M. Amazi  
Sheriff



Minnesota Department of **Human Services**

Date: January 6<sup>th</sup> 2015

To: SECB/OTC

From: Bill Schmidt – DHS

Re: Request to add additional RU ID's and TG ID's

Request for DHS \_ Human Services / MSOP

- Add additional "72" RU ID's to system (Already have number blocks assigned – Just need authorization)  
*Note: 22 to be used to update existing system records and correct for current overage of 22 ID's. Additional 50 to be used for new assignments.*
- Add additional "23" TG ID's to system (This is a follow up to update records only as TG's already exist in the system).  
*Believe this to be a records keeping error that was missed sometime between now and 2009 when our original participation plan with DHS and DOC was approved)*

*The above requests will both update existing system records and provide needed capacity at both Moose Lake and St. Peter MSOP facilities and programs.*

*Thank you*

**Bill Schmidt**

**DHS - Tactical Communications Coordinator**

**ARMER System Administrator**

**State All Hazards Communications Leader – COML**

**Email: [William.schmidt@state.mn.us](mailto:William.schmidt@state.mn.us)**

**Phone: 651-201-5716**

**ARO: WB0LZR**

SECB Operations & Technical Committee 2015 Attendance

	Operations and Technical Committee Members and Alternates	Jan 12	Feb 10	Mar 10	Apr 14	May 12	Jun 9	Jul 14	Aug 11	Sep 8	Oct 13	Nov 10	Dec 8
10	<b>Ambulance:</b> Joe Glaccum	X	X	X	X		X		X	X	X	X	X
V	Alternate: <b>VACANT</b>	V	V	V	V	V	V	V	V	V	V	V	V
11	<b>Chiefs of Police:</b> Dave Thomson	X	X	X	X	X		X	X	X	X	X	X
V	Alternate: <b>VACANT</b>	V	V	V	V	V	V	V	V	V	V	V	V
11	<b>MESB:</b> John Gundersen	X	X	X	X	X	X	X	X	X	X	X	
9	Alternate: Ron Jansen		X	X	X	X	X			X	X	X	X
11	<b>MnDot:</b> Tim Lee	X	X	X	X	X	X	X	X	X	X	X	
1	Alternate: Jim Mohn, Mukhtar Thakur												X
3	<b>State Patrol:</b> <b>VACANT</b> /Tim Boyer 4/15	V	V	V	X	X						X	
V	Alternate: <b>VACANT</b>	V	V	V	V	V	V	V	V	V	V	V	V
9	<b>NW Region:</b> Shane Richard	X	X	X	X		X		X	X	X		X
7	Alternate: Nick Robertson/Brian Zastoupil			X	X	X	X	X	X				X
11	<b>NE Region:</b> Bruce Hegrenes	X	X	X	X	X	X	X	X	X	X		X
0	Alternate: Monte Fronk												
11	<b>SC Region:</b> Terry Wesley	X	X	X	X	X	X	X	X	X	X		X
1	Alternate: Darrin Haeder				X								
2	<b>CM Region:</b> Tom Justin							X	X				
10	Alternate: Ace Bonnema/Paul McIntyre	X	X	X	X	X	X	X	X		X	X	
8	<b>SE Region:</b> Rick Freshwater/Nate Timm	X	X		X	X	X	X		X			X
4	Alternate: Nate Timm/vacant/Michael Peterson	X	X	X					X				
5	<b>SW Region:</b> Mike Hamman		X		X		X	X		X			
3	Alternate: Kimberly Hall	X			X	X							

December 7, 2015

Mr. Joe Glaccum  
North Memorial Ambulance  
4501 68th Avenue North  
Brooklyn Center, MN 55429

Dear Sir;

This letter is sent in support of the SOA Repeater initiative brought forward by the Central Minnesota Emergency Services Board. The Southwest Minnesota Emergency Communications Board supports this plan for several reasons;

1. In the more rural areas of the state there are small communities that have problems accessing the ARMER system and do not have the resources to expand their access.
2. Call frequency in these areas does not warrant the cost of local enhancement systems such as towers or Bi-directional Amplifier.

For the most part these SOAR systems would serve portable or on occasion mobile radios that cannot access ARMER from remoter areas. We also believe that creating a system that could access these repeaters statewide would enhance interoperability.

Respectfully submitted;

A handwritten signature in black ink, appearing to read 'Bill Flaten', written over a horizontal line.

Bill Flaten, Sheriff  
Southwest RAC Chair  
Yellow Medicine County Sheriff  
930 4th Street, Suite 1  
Granite Falls, MN 56241

To: SECB Operations and Technical Committee  
From: Jim Stromberg, ARMER Program Manager  
Date: December 22, 2015  
Subject: Participation Plan and Standards related to the National Weather Service and Disaster Relief Organizations

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Per the direction of the OTC at the December 8, 2015 OTC meeting, I have researched Participation Plans and Standards related to the National Weather Service (NWS) and Disaster Relief Organizations (DROs).

In searching ECN files I found no Participation Plans for any of the following entities:

- National Weather Service
- American Red Cross
- Salvation Army
- MnVOAD (Minnesota Voluntary Organizations Active in Disaster)

In searching for Sponsorships of any of the above, I found one sponsorship letter:

- Blue Earth County sponsors American Red Cross of Mankato (letter dated 12/31/2014)

I identified two standards specific to the National Weather Service:

- Standard 3.35.0 (state):  
Defines ARMER talkgroup procedures to be used by the NWS in the various regions of the state. The Standard does not address participation or sponsorship but does mandate the availability of certain talkgroups to individual NWS offices.
- Standard 3.35.0 (metro):  
Defines ARMER talkgroup procedures to be used by the NWS in Chanhassen. The Standard does not address participation or sponsorship but does mandate the availability of certain talkgroups. Further, the standard indicates that one handheld portable radio and two control stations were provided to the Chanhassen NWS office.

I identified two standards specific to Disaster Relief Organizations:

- Standard 5.2.0 (state):  
Establishes a policy allowing DROs “to be included as Authorized Users of the ARMER system for communication services.” The Standard specifically calls out the American Red Cross and the Salvation Army and assigns them each a DRO talkgroup. It also makes two other talkgroups available to other DROs. The Standard specifically states that DROs shall enter into a User Agreement with a contracting entity as defined in Standard 1.9.0.
- Standard 5.2.0 (metro):  
Establishes a policy allowing MnVOAD organizations “to be included as Authorized Users” of ARMER for disaster relief communications. The Standard specifically calls out the American Red Cross and the Salvation Army and assigns them each a DRO talkgroup. It also makes two other talkgroups available to other DROs. The Standard stipulates that MnVOAD shall enter into an agreement with the MESB and that MnVOAD entities must sign a MOU with MnVOAD. The Standards holds MnVOAD responsible for equipment and programming costs but specifically excludes MnVOAD from user fees.

I reviewed Standard 1.9.0 and it references Standard 1.10.0. Together, they suggest that a DRO (as a statewide resource) would need to hold a Participation Plan with “MnDOT or regional radio boards.”

I also noted that Standard 1.10.2 allows for sponsorship of “non-public safety/non-public service organizations not specifically addressed in other ARMER standards.” This Standard suggests, because existing standards address the National Weather Service and Disaster Relief Organizations, that those entities would require their own Participation Plans.

## Allied Radio Matrix for Emergency Response Standards, Protocols, Procedures

Document Section 3	<b>Interoperability Guidelines</b>	<b>Status:</b> Complete
State Standard Number	<b>3.35.0</b>	
Standard Title	<b>National Weather Service ARMER Radio Operations</b>	
Date Established	<b>1/13/2013</b>	<b>SECB Approval:</b> 1/24/2013
Replaces Document Dated		
Date Revised		

### 1. Purpose or Objective

The purpose of this standard is to define the ARMER talkgroups and procedures to be used by the National Weather Service (NWS) offices that serve the various ARMER regions of the state for NWS to county and local agency communications during severe weather events.

### 2. Technical Background

#### ▪ Capabilities

All NWS Offices that serve an area of the state, with the exception of Aberdeen, South Dakota, have been issued a minimum of one ARMER control station or portable radio.

This standard establishes talkgroups for the use of NWS offices to communicate with numerous local warning points, such as Public Safety Answering Points (PSAPs), Emergency Operations Centers (EOCs), or other designated locations across the state during severe weather events or other emergency incidents where the National Weather Service's aid may be requested.

The NWS offices are authorized to use statewide talkgroups created specifically for them, as well as STAC 1-4 and any of the regional ARMER interoperability talkgroups, as necessary. The statewide talkgroup, SEMTAC, is also programmed in the control stations or radios to enable communications with state and local emergency managers, as directed by Division of Homeland Security and Emergency Management (HSEM).

#### ▪ Constraints

Some counties may not have the capacity available in their PSAP or EOC consoles to add NWS dedicated talkgroups that serve their counties. These counties may choose to communicate with NWS Chanhassen via an assigned state or regional talkgroup that will be assigned by the Minnesota State Patrol (MSP), as specified in Metro and Central Standard number 3.35.0.

3.35.0 METRO  
3.43.0 STATE

<b>Cross-Patch Standard</b>	<b>Yes / No</b>	<b>To Talkgroups</b>
Soft Patch	Optional	As needed for the duration of the weather event
Hard Patch	No	

MSP is designated as the Warning Point for their respective Districts as follows:

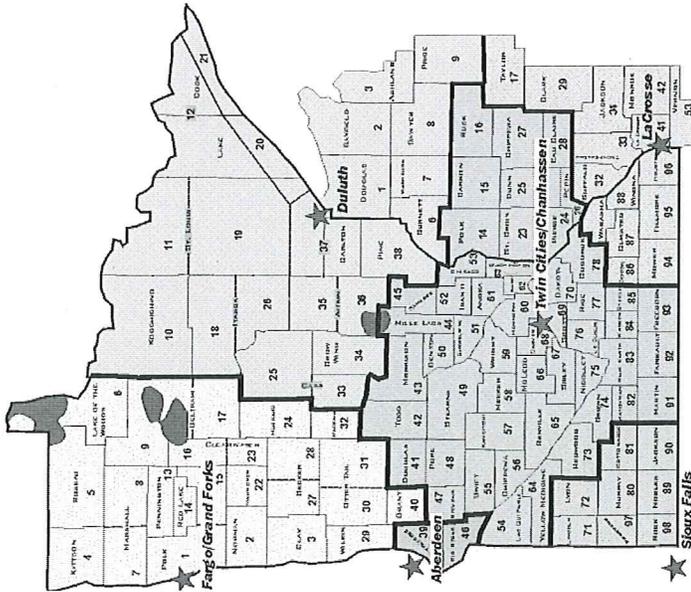
- Detroit Lakes handles all the agencies within the Northwest Radio Region (14 counties)
- Duluth handles all the agencies within the Northeast Radio Region (11 counties)
- St Cloud handles all the agencies within the Central Minnesota Radio Region (19 counties)
- Roseville handles all the agencies within the Metro Radio Region (9 counties)
- Marshall handles all the agencies within the Southwest Radio Region (13 counties)
- Rochester handles all the agencies within the South Central and Southeast Radio Regions (21 counties)

Note: MSP has consolidated communications center operations into two locations, Roseville and Rochester. However, MSP will continue to serve counties in groups listed above.

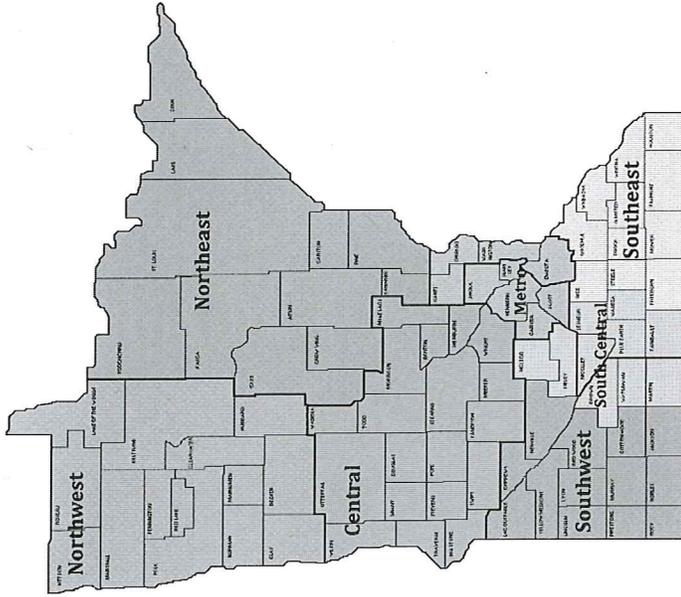
#### **4. Recommended Procedures**

- A NWS office will use the National Warning System (NAWAS) to alert the MSP Warning Point of a weather watch/warning event.
  - The NWS will use NAWAS to alert MSP for all watches and warnings; however, MSP will not conduct a roll-call of local PSAPs/EOCs for watches unless the NWS specifically requests one due to unique circumstances.
- MSP will call local PSAPs/EOCs via the appropriate ARMER regional CALL or COMM talkgroups for the counties named in the watch/warning event.
  - MSP will conduct a roll call on the ARMER Regional CALL talkgroup for the counties affected.
  - MSP will contact counties that do not respond by phone.
- Depending upon the desire of the counties involved, MSP may patch the NWS office dedicated talkgroup to an ARMER regional or statewide talkgroup.
  - ARMER regions will provide MSP with the weather patching requirements for their member counties in advance.
  - MSP will reserve the ARMER regional or statewide talkgroups they choose for the patch on StatusBoard.
- The NWS office issuing the watch/warning will make announcements and conduct ongoing communications on their dedicated NWS talkgroup
- County PSAPs/EOCs will monitor either the MSP assigned ARMER regional or statewide talkgroup or the NWS office talkgroup for the duration of the weather event and communicate with the NWS as necessary.
  - The NWS talkgroup or the ARMER patch talkgroup is intended for PSAP, EOC, or local command communications with the NWS office. It is not allowed to be programmed into subscriber units for local spotters' traffic.

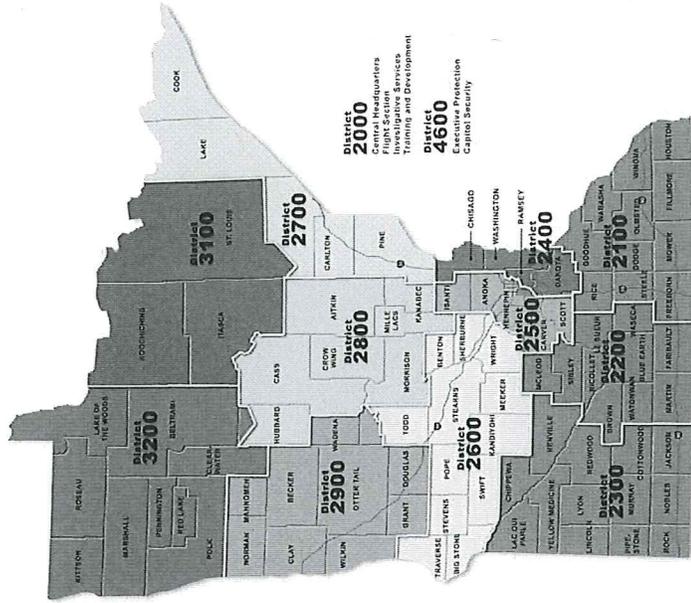
### NWS OFFICES



### REGIONAL RADIO BOARDS



### STATE PATROL DISTRICTS



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

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

**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

## **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.

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

Document Section 5	<b>System Access by Non-Governmental Organizations (NGOs)</b>	<b>Status: Complete</b>
State Standard Number	<b>5.2.0</b>	
Standard Title	<b>Disaster Relief Organization Access</b>	
Date Established		<b>SECB Approval: 1/26/2012</b>
Replaces Document Dated	<b>3/3/2008</b>	
Date Revised	<b>1/26/2012</b>	

### **1. Purpose or Objective**

The purpose of this standard is to establish a policy that allows disaster relief organizations (DROs) to be included as Authorized Users of the ARMER system for communications services.

### **2. Policy Background**

DROs providing disaster relief services are defined as Eligible Users of the ARMER system, as provided for in section 90.20(a)(2)(vii) of the FCC Rules and Regulations. The Statewide Emergency Communications Board (SECB) is empowered under Minn. Stats. §403.36, Subd. 2, to enter into system use agreements with such eligible DROs.

### **3. Operational Context**

In Minnesota, there are the multiple DROs that operate in times of emergency and disaster. The American Red Cross and the Salvation Army provide initial response disaster services for both large and small-scale emergencies occurring in the community. These organizations often work directly with public safety agencies, and direct communication is often necessary.

The other volunteer organizations that are under the umbrella of the Minnesota Voluntary Organizations Active in Disasters (MNVOAD) are coordinated through the local incident command and/or state Emergency Operations Center (EOC). Usage of DRO talkgroups will be assigned to the organizations, as set forth in paragraph 4 of this State Standard.

### **4. Recommended Protocol/ Standard**

DROs will be authorized to use the system for the following types of communications: leadership coordination in times of disaster for coordination between Government Agencies to DRO members; DRO members to Government Agencies; coordination between DRO members to other DRO members. All communications using the system shall be limited to the protection of life and property, emergency situations, disaster relief planning,

The Minnesota Department of Public Safety (DPS), Division of Homeland Security and Emergency Management (HSEM), is the lead agency for planning and coordination of a DROs communications operation. DRO radios, even if purchased by the DRO, shall be considered part of the State of Minnesota subscriber fleet for purposes of FCC licensing. Radio IDs will be allocated by the Minnesota Department of Transportation (MnDOT).

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

Document Section:	<b>5—System Access by NGOs</b>	Radio TOC Approval:
Sub-Section:	<b>METRO 5.2.0</b>	Date: 04/23/03
Procedure Title:	<b>Disaster Relief Organization Access</b>	MESB Approval - Signature:
Date Established:	<b>2/26/03</b>	Date: 05/02/03
Replaces Document Dated:	<b>4/23/03</b>	
Date Revised:	<b>1/20/09</b>	

**1. Purpose or Objective**

To establish a policy that provides for non-government organizations (NGOs) providing disaster relief services to be included as “Authorized Users” of the regional 800MHz trunked digital public safety radio system for communications services.

**2. Policy Background:**

NGOs providing disaster relief services are defined as “Eligible Users” of the regional 800MHz trunked digital public safety radio system as provided for in section 90.20(a)(2)(vii) of the FCC Rules and Regulations. The Board is empowered under Minn. Stats. §473.894 Subd. 15 to enter into system use agreements with such eligible NGOs for inclusion in the system.

**3. Operational Context:**

An umbrella organization entitled “Minnesota Voluntary Organizations Active in Disaster” (MnVOAD) has approximately 30 member organizations which provide a broad mission in times of emergency and disaster. Services provide by MnVOAD member organizations include:

- |                            |                          |
|----------------------------|--------------------------|
| Advocacy for Victims       | Funeral Services         |
| Bulk Distribution of Goods | Health Care              |
| Case Management            | International Relief     |
| Child Care                 | Mass Care                |
| Clean-Up & Rebuilding      | Massage Therapy          |
| Community Outreach         | Mental Health Services   |
| Counseling                 | Mitigation Planning      |
| Damage Assessment          | Mobile & Fixed Feeding   |
| Debris Removal             | Organizational Mentoring |
| Disaster Education         | Pastoral Care/Chaplaincy |
| Disaster Planning          | Pet & Animal Care        |
| Donations Management       | Radio Communications     |
| Elder Care                 | Relocation Services      |
| Emergency Assistance       | Resource Coordination    |
| Emergency Repairs          | Sanitation Services      |
| Financial Assistance       | Special Needs            |
| Financial Planning         | Technical Assistance     |

- Training
- Translation Services
- Transportation Services
- Volunteer Coordination
- Volunteer Services
- Warehouse Facilities
- Welfare Inquires (Int'l)
- Welfare Inquires (US)

Two member organizations (the American Red Cross and the Salvation Army) provide initial response disaster services to both large scale and smaller scale emergencies occurring in the community. These organizations often work directly with public safety agencies. Other MnVOAD members are not normally mobilized until a substantial disaster has occurred. Since MnVOAD radios may be deployed elsewhere in the country for disaster response they should be equipped with 700 MHz and 800 MHz nationwide interoperability channels.

**4. Recommended Protocol/ Standard:**

MnVOAD and its member disaster relief organizations will be authorized to use the system for the following types of communications: Government Agency to MnVOAD members; MnVOAD members to Government Agency; MnVOAD members to other MnVOAD members; and internal MnVOAD member communications. All communications using the system shall be limited to the protection of life and property, emergency situations, disaster relief planning, response, mitigation, recovery and related supporting operations including planned drills. Internal day to day, administrative and other non-disaster relief related communications are not permitted.

Assignment of priorities and use of the system by MnVOAD members for internal MnVOAD communications will be considered “Public Service” and “Non-Critical Operations” as defined in Appendix 2 of the Board’s Standards.

The following four priority 7 talk groups will be established for internal MnVOAD operations: DRO-1, DRO-2, DRO-3 and DRO-4. These talk groups will not be capable of encryption. DRO 1 will be assigned as primary use by the American Red Cross Disaster Services and DRO 2 by the Salvation Army Disaster Services. DRO-3 and DRO-4 will be assigned as needed by MnVOAD. Operation on other public safety, public service and interoperability talk groups by MnVOAD members will be at the direction of the Responsible Government Official coordinating the incident. It is recommended that MnVOAD radios be equipped with the following capabilities:

- |        |           |
|--------|-----------|
| DRO-1  | A-SOA-1   |
| DRO-2  | A-SOA-2   |
| DRO-3  | 8CALL90 R |
| DRO-4  | 8TAC91 R  |
| ATAC-1 | 8TAC92 R  |
| ATAC-2 | 8TAC93 R  |
| ATAC-3 | 8TAC94 R  |
| ATAC-4 |           |

STAC1	8CALL90 D
STAC2	8TAC91 D
STAC3	8TAC92 D
STAC4	8TAC93 D
	8TAC94 D

**5. Recommended Procedure:**

MnVOAD shall enter into a User Agreement with the Board. MnVOAD shall be responsible to coordinate all use of the system by MnVOAD members. Individual MnVOAD members shall sign a Memorandum of Understanding, on a form approved by the Board, with MnVOAD agreeing to comply with the Board’s Standards, MnVOAD’s User Agreement with the Board, and Board approved Standard Operating Procedures for disaster relief organization use of the system prior to use of the system. The User Agreement shall specify the maximum number of radios that may be owned by MnVOAD and its members and activated on the system. The User Agreement shall also specify enforcement provisions including consequences of misuse.

The acquisition cost of radio equipment for use of the system is the responsibility of MnVOAD and its member organizations. There will be no access fee charged by the Board for access to the system, however, users may be responsible for the actual costs associated with programming the radios to operate on the system and Board assessed User Fees. The Board shall designate an entity or entities to perform the programming.

The Board or any Authorized User, at their discretion, may loan, lease or otherwise temporarily provide radios to MnVOAD or any other eligible disaster relief organization for the authorized purposes provided for within this Standard.

The talk groups programmed in MnVOAD radios shall be limited to those specified within this Standard, the User Agreement and those additional public safety talk groups that have been authorized by the respective agencies owning those talk groups.

**6. Management**

The staff of the Metropolitan Emergency Services Board shall manage the User Agreement process and maintain a list of DROs that have been approved to use the system. Billing users for the cost of programming shall be the responsibility of the programming entity.

The Minnesota Department of Public Safety, Division of Homeland Security and Emergency Management is the lead agency for planning and coordination of MnVOAD communications operations. MnVOAD radios shall be considered part of the State of Minnesota subscriber fleet for purposes of FCC licensing. Radio IDs will be allocated by Mn/DOT.

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

Document Section 1	<b>Management of System</b>	<b>Status:</b> Complete
State Standard Number	<b>1.9.0</b>	
Standard Title	<b>Regional Development and Responsible Entity</b>	
Date Established	<b>09/27/2007</b>	<b>SRB Approval:</b> 09/27/2007
Replaces Document Dated	<b>08/08/2007</b>	
Date Revised	<b>09/12/2007</b>	

### **1. Purpose or Objective**

The purpose of this standard is to identify entities the Minnesota Department of Transportation (MnDOT) should contract with in each region of development of the ARMER system. In accordance with Minn. Stat. Section 403.36, subd. 1e, the Commissioner of Transportation shall own, operate, and maintain the ARMER system backbone.

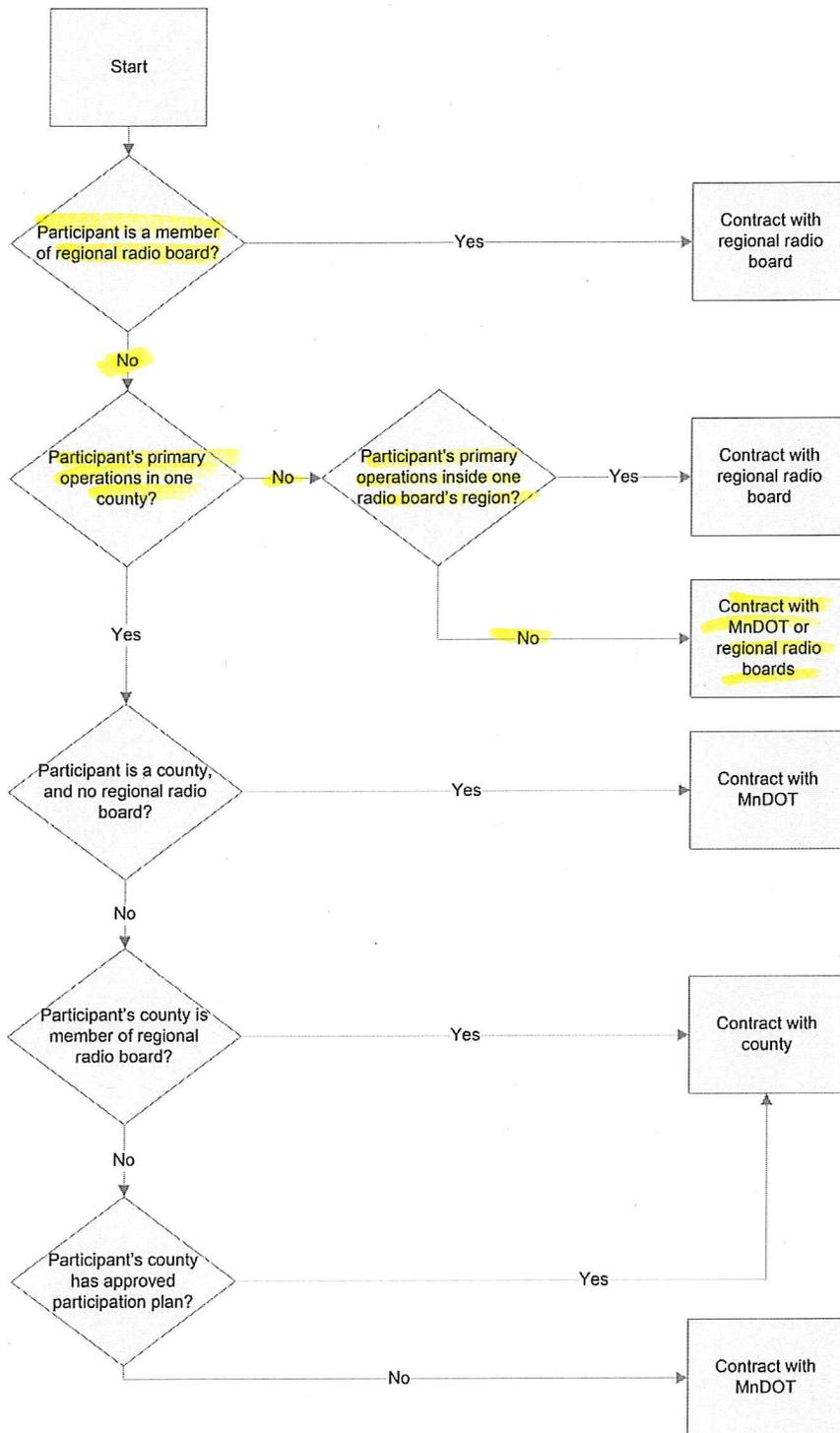
Although Minn. Stat. Section 403.39 provides that the Statewide Emergency Communications Board (SECB) shall facilitate the formation of Regional Advisory Committees (RACs) in each region and shall act cooperatively with Regional Advisory Committees and Regional Radio Boards (RRBs) to complete the implementation of the backbone and regional infrastructure, it is anticipated that regional planning and implementation may not occur on region wide basis.

The purpose of this standard is to identify a structural hierarchy for relationships between MnDOT and potential users of the ARMER system during the formation and evolution of local radio boards within each region. Additionally, Minn. Stat. Section 403.39, subd. 3, specifies that once an RRB has been formed, local users must coordinate their integration to the ARMER system through one of the members of the RRB.

### **2. Technical Background**

The initial implementation of the regional, trunked radio system was accomplished through the Metropolitan Emergency Services Board (MESB). With the subsequent implementation of a statewide system (funding of Phase Three) and the creation of the SECB to coordinate that implementation, the model for local and regional autonomy was maintained within the statute. The MESB became an RRB, and Minn. Stat. Section 403.39 provides specific authority for the development of regional planning committees and RRBs in various portions of the state.

Minn. Stat. Section 403.39 provides for the creation of RRBs by joint powers agreement (JPA). This process requires a voluntary association of members for that purpose.



← ⊕ ARMER 1.9 Contracting Entity  
9/12/2007

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

Document Section 1	<b>Management of System</b>	<b>Status:</b> Complete
State Standard Number	<b>1.10.0</b>	
Standard Title	<b>Requesting Participation and Participation Plan Changes</b>	
Date Established		<b>SECB Approval:</b> 4/28/2011
Replaces Document Dated		
Date Revised	<b>02/01/2011</b>	

### **1. Purpose or Objective**

The purpose of this standard is to establish the procedure for an eligible entity to apply for participation in the ARMER system and for a participant to request changes to their participation plan.

### **2. Technical Background**

The following definitions apply to this standard:

- “Requesting entity” means an entity that wishes to gain access to the ARMER system for voice communication purposes. Entities that are not eligible ARMER participants may not apply for access.
- “Contracting entity” means the entity with which the requesting entity will contract, as defined in State Standard 1.9.0.
- “Full participant” means an entity whose primary voice communications are fully integrated into the ARMER backbone.
- “Limited participant” means an entity whose primary voice communications are integrated with the ARMER system via patches, audio gateways, or other means.
- “Interoperability participant” means an entity who desires access to the ARMER system, via subscriber equipment, for purposes of interoperability and not as the entity’s primary voice communication system. Interoperability participants may be authorized to maintain and operate subscriber equipment programmed to talkgroups, in accordance with State Standards adopted by the Statewide Emergency Communications Board (SECB).
- “Regional and statewide plans” means any plans adopted by the contracting entity, the contracting entity’s Regional Radio Board (RRB), or the SECB.

- Site additions
- Channel additions
- Equipment additions
- Frequency plan
- Subscriber radios
- Talkgroups
- Preliminary Fleetmap
- PSAP consoles
- PSAP logging
- ATIA data requirements
- Contingency plans
- Backup equipment
- Connectivity
- System administration
- Alarm and monitoring
- Training plan
- Cutover plan
- Schedule
- Interoperability plan
- Maintenance
- Other local elements

### Interoperability Participation

When an entity elects to become an interoperability participant Interoperability plans should contain the following information:

- The type and quantity of equipment
- Whether the agency has Public Safety Answering Point (PSAP) equipment capable of accessing the ARMER system
- A narrative description of the entity's intended use
- A list of public safety agencies that the entity would anticipate communicating with over the ARMER system

The requesting entity may be granted access to these talkgroups:

- I-CALL and I-TAC channels from the National Public Safety Planning Advisory Committee (NPSPAC) plan
- Statewide interoperability talkgroups
- Statewide system patches to Legacy communication systems
- Other talkgroups whose owners have granted permission to the requesting entity

### B. Plan Review

The contracting entity shall determine whether the requesting entity's plan is consistent with regional and statewide plans. The contracting entity may resolve inconsistencies by amending its plan, suggesting changes to regional or statewide plans, or seeking adjustments to the requesting entity's proposal. The contracting entity shall not approve plans where there is an inconsistency between regional and statewide plans and the requesting entity's plan. Once the requesting entity's plan is found to be consistent with regional and statewide plans, the contracting entity shall approve it and submit it to MnDOT for review.

MnDOT will review the requesting entity's plan to ensure these requirements are met:

## Allied Radio Matrix for Emergency Response Standards, Protocols, Procedures

Document Section 1	<b>Management of System</b>	<b>Status:</b> Complete
State Standard Number	<b>1.10.2</b>	
Standard Title	<b>Requesting Participation by Non-Public Safety/Non-Public Service Organizations</b>	
Date Established	<b>02/13/2014</b>	<b>SRB Approval:</b> 08/28/2014
Replaces Document Dated		
Date Revised		

### **1. Purpose or Objective**

The purpose of this standard is to establish a policy that will provide for non-public safety/non-public service organizations not specifically addressed in other ARMER standards, which in an emergency or under contract, require cooperation and coordination with public safety users, to be included as “Authorized Users” of the statewide 800 MHz trunked digital public safety radio system for communications services.

### **2. Technical Background**

- **Capabilities**
  - The system has robust support for many users and use cases, allowing non-public safety/non-public service organizations to use the system without negatively impacting primary first responders.
- **Constraints**
  - There are finite resources available on the system available to users; for example, site channel capacity or Radio User IDs or Talkgroup IDs.
  - As the quantity of non-public safety/non-public service organizations on the system increases, the system has limited resources available for additional first responder users.
  - Non-public safety/non-public service organizations introduce unique management, training, and funding challenges.

### **3. Operational Context**

This standard provides a methodology for the Operations and Technical Committee (OTC) to make recommendations to the Statewide Emergency Communications Board (SECB) in determining priorities for participation requests of non-public safety/non-public service organizations to join the ARMER system. Examples include, but are not limited to, railroads, utilities, pipelines, refineries, hazmat response contractors, vehicle recovery contractors, towing companies, commercial aviation, educational institutions, etc.

Certain types of these entities work directly with public safety in emergency situations involving imminent safety to life or property. These organizations must be authorized and sponsored by a police, fire, or public safety entity.

The OTC reserves the right to review and deny any application.

#### **4. Recommended Protocol/Standard**

A government entity holding an FCC license for the ARMER system may allow radios to be used by certain non-public safety/non-public service organizations with which the licensee requires cooperation and coordination during an emergency. This is allowed through Section 90.421 of the FCC rules.

Non-public safety/non-public service organizations not addressed specifically in other ARMER Standards which are sponsored by a licensee of the system may apply under either or both of the following categories:

1. Emergency **coordination** with other authorized users during an **emergency event** which is under incident command of a public safety entity.
2. Coordination among other authorized users in the performance of **official governmental** activities of the sponsoring agency.

Prohibited use includes internal day-to-day, administrative, and non-emergency communications, except where otherwise approved by the SECB.

All requests shall be reviewed by the OTC. However, any requests for new groups or individuals as defined in this standard will also be reviewed by the Steering Committee, and other committees as deemed appropriate, before submission for approval by the SECB.

Nothing in this Standard shall be construed so as to prohibit a licensee from temporarily issuing radios to non-public safety/non-public service entities as necessary in an emergency to protect life and property. Any such use shall be approved by a Communications Unit Leader, or COML, or a Communications Unit Leader in Training, or COML-(T), and be included in an Incident Communications Plan (ICP). Such use exceeding 72 hours shall be reported to an Executive Member of the SECB.

#### **5. Recommended Procedure**

Any proposed non-public safety/non-public service organization must provide a completed, sponsored participation plan and a letter of support by a sponsoring agency. (See sample Sponsored Participation Plan template after this standard.)

Required information includes the following criteria:

**Criteria 1 – Background Information**

- Agency requesting access
- Reason for request /proposed uses
- Number of users and radios proposed, if applicable
- Deployment time requirements
- Training plan
- Fleetmap

**Criteria 2– Value of Participant Being on ARMER**

- Business need and justification for immediate interoperability with public safety responders
- Basis and justification for the quantity of resources requested
- Area of impact (criticality: e.g., emergency search and rescue, food, shelter, emotional, clean-up, utility service storage)
- Whether the support is duplicative of that provided by another entity (e.g. whether there is overlap with the requestor’s service with others already on the system; if so: the identity, location, and service area for the incumbent entity)
- Level of coordination needed with other entities
- Risk or impact of not providing resources for your service
- Risk or impact of providing fewer resources than requested

**Criteria 3– Sponsorship (long-term support)**

- Sponsor Name
- Sponsor’s commitment:
  - Budget support: (e.g., none, initial, ongoing, initial and ongoing)
  - Training support: (e.g., none, initial, initial and ongoing)
  - Monitoring and enforcement of those resources for appropriate usage
  - Letter from sponsor with roles and responsibilities assumed

**Criteria 4– Technical Consideration**

- Resources required (e.g., quantity of Radio user or Talkgroup IDs, existing talkgroups required, etc.)
- Anticipated traffic load, if applicable
- Capacity for additional users in the area, if applicable

## **Criteria 5 – Cost/Feasibility**

- Long-term funding plan (e.g. technology refresh)
- Upkeep, maintenance, and programming plan
- Future expense responsibility (e.g. system upgrades, channel additions, etc.)

## **6. Management**

The Sponsoring Agency will be responsible for monitoring the use of resources involved.

Any existing non-public safety/non-public service user on the ARMER system must get approval prior to December 31, 2015, unless covered by another state standard.

Agencies already sponsoring a non-public safety/non-public service organization prior to August 28, 2014, can submit a letter of support indicating they are in compliance with this standard in lieu of initiating a formal application process.

The Minnesota Department of Public Safety (DPS), Division of Emergency Communication Networks (DECN) will be responsible for maintaining this standard and a roster of the agencies that are a participant under this standard.

# **SAMPLE SPONSORED PARTICIPATION PLAN**

**(Refer to Standard 1.10.2 for Full Requirements)**

**Whereas,** \_\_\_\_\_ Sponsoring Entity is a member of the \_\_\_\_\_ Regional Emergency Communications Board (RECB).

**Whereas,** the \_\_\_\_\_, as the governing body of \_\_\_\_\_ Sponsoring Entity has or will enter into a Sponsored Participation Plan with the RECB and the State of Minnesota, Department of Transportation, permitting the operation of ARMER radio equipment by non-public safety/non-public service organizations within the County.

**Whereas,** a Sponsored Participation Plan must be approved by the Sponsoring Entity and submitted to the \_\_\_\_\_ Regional Emergency Communications Board (RECB) for approval.

Now, therefore, the \_\_\_\_\_, as the governing body of \_\_\_\_\_ Sponsoring Entity approves the following Sponsored Participation Plan applicable to the use of ARMER radios by non-public safety/non-public service organizations.

Any non-public safety/non-public service organization must provide a completed, sponsored participation plan and a letter of support by a sponsoring agency stating their roles and responsibilities. Required information includes the following 5 Criteria:

## **Criteria 1 – Background Information**

- Agency requesting access
- Reason for request /proposed uses
- Number of users and radios proposed, if applicable
- Deployment time requirements
- Training plan
- Fleetmap

## **Criteria 2– Value of Participant Being on ARMER**

- Business need and justification for immediate interoperability with public safety responders
- Basis and justification for the quantity of resources requested
- Area of impact (criticality: e.g., emergency search and rescue, food, shelter, emotional, clean-up, utility service restoration)

- Whether the support is duplicative of that provided by another entity (e.g. whether there is overlap with the requestor's service with others already on the system; if so: the identity, location, and service area for the incumbent entity)
- Level of coordination needed with other entities
- Risk or impact of not providing resources for your service
- Risk or impact of providing fewer resources than requested

**Criteria 3 – Sponsorship (long-term support)**

- Sponsor Name
- Sponsor's commitment:
  - Budget support: (e.g., none, initial, ongoing, initial and ongoing)
  - Training support: (e.g., none, initial, initial and ongoing)
  - Monitoring and enforcement
  - Letter from sponsor stating roles and responsibilities assumed

**Criteria 4 – Technical Consideration**

- Resources required (e.g., quantity of radio user or talkgroup IDs, existing talkgroups required, etc.)
- Anticipated traffic load, if applicable
- Capacity for additional users in the area, if applicable

**Criteria 5 – Cost/Feasibility**

- Long-term funding plan (e.g., technology refresh)
- Upkeep, maintenance, and programming plan
- Future expense responsibility (e.g., system upgrades, channel additions, etc.)

**Sponsor**

The following person is designated as the Sponsoring entity's contact for any issues related to operation and maintenance of ARMER subscriber equipment:

\_\_\_\_\_ (Name and title)

\_\_\_\_\_ (Telephone number)

\_\_\_\_\_ (Email address)

The Sponsoring Entity's request that upon qualification, in accordance with State Standard 1.10.2, any RECB, Statewide Emergency Communications Board (SECB), etc., Standards and requirements of the Minnesota Department of Transportation, the non-public safety/non-

public service organization's contracted vendor will be provided with the system key and subscriber programming orientation necessary to allow the non-public safety/non-public service organization's contracted vendor to program and maintain ARMER subscriber radios.

Approved and adopted by the Sponsoring Entity on \_\_\_\_ of \_\_\_\_\_, 2010.

\_\_\_\_\_  
\_\_\_\_\_



## Blue Earth County Sheriff's Office

*Brad Peterson*  
Sheriff

*Michael J Maurer*  
Chief Deputy

*Kevin Sorensen*  
Jail Administrator

December 31, 2014

Cathy Anderson  
Standards and Training Coordinator  
Minnesota Department of Public Safety  
Division of Emergency Communications Networks  
445 Minnesota Street, Suite 137  
St. Paul, MN 55101-5137

Re: Armer radio sponsorship.

Dear Ms. Anderson

Blue Earth County's participation plan includes the following non-public safety entities as ARMER participants and are sponsored Blue Earth County:

Gold Cross Ambulance Service  
Lake Crystal Ambulance Service  
MAYO Clinic Health System Mankato  
American Red Cross Mankato  
City of Mankato Public Works  
Blue Earth County Public Works  
Blue Earth County Public Health  
Mankato Public School  
Maple River Public School  
All Saints Public School  
Lake Crystal Welcom Memorial Public School  
Blue Earth County Probation

As the sponsor for the above listed agencies, I verify all participants will be properly trained to appropriate state and local standards. Blue Earth County assumes responsibility for on-going monitoring, training, and coordination of sponsored non-public safety participants.

Sincerley,

Sheriff Brad Peterson  
Blue Erath County Sheriff's Office

**Allied Radio Matrix for Emergency Response**



# ARMER

## Project Status Report

Reporting Period December 1, 2015 through January 1, 2016

**Executive Summary**

**Overall Status:**

	Green (Controlled)	Yellow (Caution)	Red (Critical)	Reason for Deviation
<b>Budget</b>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	
<b>Schedule</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	Land acquisition delays will impact completion of some sites
<b>Scope</b>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	

ARMER  
Backbone  
**97%**  
On-the-air

**Controls**

**Issue Status:**

**Change Status:**

- No pending plan changes

**Accomplishments**

**Accomplishments during this Reporting Period:**

- The following sites went on the air:
  - Island Lake
- The land acquisition has been completed for the following sites:

**Budget**

**Construction Budget Status as of January 1, 2016**

Project Funding	Original Budget	Spent to Date	Unspent Balance Remaining	Encumbered	Available Balance
Phase 3	\$45,000,000	\$44,952,397.19	\$47,602.82	\$0.00	<b>*COMPLETE</b>
SRB Funds (FY 09)	\$1,902,831.00	\$1,902,831.00	\$0	\$0	<b>COMPLETE</b>
Phase 456 (FY 09)	61,996,957.89	\$61,981,069.99	\$15,887.90	\$15,887.90	\$ 0.00
Phase 456 (FY 10)	\$62,015,407.77	\$61,896,212.77	\$119,190.00	\$119,190.00	\$ 0.00
Phase 456 (FY 11, 12, 13)	\$61,987,634.34	\$52,920,120.22	\$9,067,514.12	\$2,757,102.04	\$ 6,310,412.08
<b>Total Phase 456</b>	<b>\$186,000,000.00</b>	<b>\$176,797,407.98</b>	<b>\$9,202,592.02</b>	<b>\$2,892,179.94</b>	<b>\$ 6,310,412.08</b>
<b>Projected Contingency as of January 1, 2016</b>					<b>\$200,412.00</b>

**Comments:**

**Scheduled Milestones / Deliverables**

Status updated January 1, 2016

Milestone	Total Sites	Sites Not Started	Sites in Progress	Sites Complete
ARMER Backbone Construction	335 Sites			
Tower Site Acquisition	335	0	8	
Tower Construction & Site Development Work	335	8	5	
Microwave Connectivity & RF Deployment	335	11	0	326 On the Air

Some Sites are on the air, but on the old towers or temporary towers. They are counted as on the air, but still require construction and/or installation at the new tower sites before they are complete:

- o Finland
- o Duluth South
- o Eden Valley
- o Lake Crystal

Of the 335, 4 are on temporary sites; sites construct and move still in the works.

- SE – all sites completed
- SR – 2 land acquisitions remaining, 1 new site plus leased site replacement for Lake Crystal.
- SW – all sites completed
- CM – 1 land acquisitions remaining, leased site replacement for Eden Valley.
- Metro – all sites completed
- NW – 2 land acquisitions remaining.
- NE – 3 land acquisitions remaining, 5 site under construction.

Completion Targets

ARMER all Phases:

4 original plan sites will be delayed due to delays in land acquisition.

**Ongoing ARMER System Work****Motorola System Upgrade**

- 7.15 upgrade scheduled to begin May 2016. Lock down for any system changes prior to the 7.15 upgrade will be around the beginning of April 2016.
- Motorola 2016-2020 Support services contract is completed.
- Working on contracts for billing with local agencies involved in 7.19 equipment replacements under the Motorola contract.
- Notice for 2016 Motorola SUAll local agency billing amounts will be sent out in January with actual billing invoices to be sent in March.

**Site improvements**

- Still working on the addition of card key reader to the equipment shelters. Parts are in. Working on installs, 95% of the sites completed.
- We are continuing our review of our leased sites/land. Plans had always been to build towers in these areas, but to get the project moving we leased sites to get on the air. In review of some of the land and lease cost it would make sense to find land in these areas and build towers. Also looking at long term land lease from private parties, would prefer to have towers we own on state, County or City owned land.
- Replace Lake Crystal leased site with 2 new sites. This adds a new site to the area.

**Microwave improvements**

- At this point we have identified one bad path where an intermediate microwave site is needed. So we are looking to add a microwave site somewhere in the Cromwell area to split the Lawler – Moose Lake link. Working with the County, a site has been identified. Need to work through the acquisition and easements.
- We are also working to get the DC power systems updated at all sites to improve system reliability. Battery system install is nearing completion.
- Still reviewing microwave performance, ongoing.

**VHF interop layer**

- VPN access is being worked on for access to MotoBridge network.
- Working on plans in the metro area to simplify the VHF interop layer as we move from Gold Elites to 7500s.

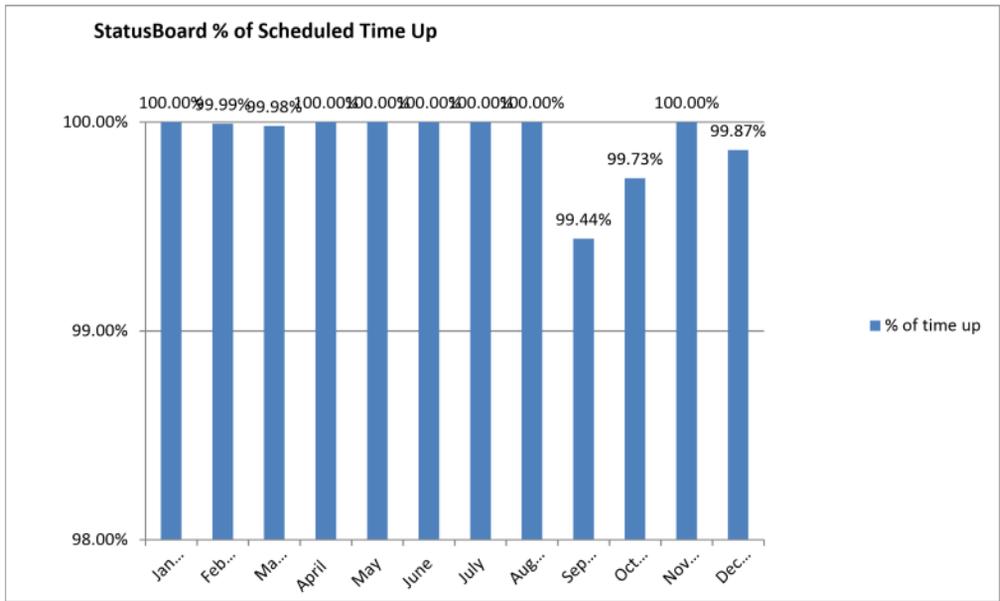
**Old towers that need replacement**

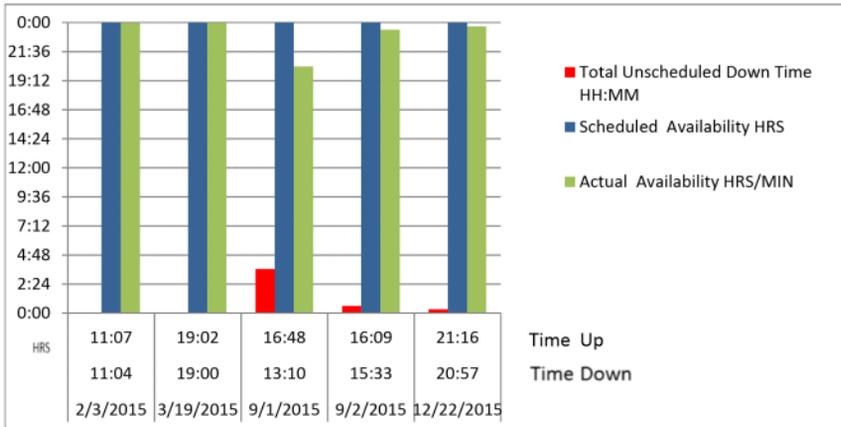
- We have a number of towers that are on the air for ARMER that are old towers constructed in the 50's. These towers did not pass structural when we added the new ARMER equipment. But the level of structural deficiency was not a risk that required immediate replacement. So we have held off on replacement of these towers to see where we were in the ARMER budget to build what we had planned. We are still holding off on these until we are a little further along with ARMER. Towers not replaced under the ARMER project will be scheduled for replacement as the ARMER maintenance budget allows, estimate 1 to 2 per year until completed.

## ARMER Construction Budget (Remaining Work)

Unencumbered Fund Balance ( As of December 1, 2015)					<b>\$6,310,412.00</b>
Site Name <small>(Green - site on air)</small>	County	Description	Land/ Construction	Estimate to Complete	Balance
Duluth South	St Louis	New tower	Spec posted	\$280,000.00	\$6,030,412.00
Cromwell	Carlton	New tower	Spec posted	\$605,000.00	\$5,425,412.00
Finland	Lake	Replace Tower	Envir	\$440,000.00	\$4,985,412.00
NE Lake County	Lake	New tower	DNR/Envir	\$930,000.00	\$4,055,412.00
Lima Mt	Cook	New tower	DNR/Envir	\$880,000.00	\$3,175,412.00
Red Lake	Beltrami	New tower	Indent Land	\$505,000.00	\$2,670,412.00
Eden Valley	Meeker	New tower	Envir/Lease	\$500,000.00	\$2,170,412.00
Lake Crystal	Blue Earth	New tower	Indent Land	\$575,000.00	\$1,595,412.00
Madelia	Watonwan	New tower	DOT/Envir	\$350,000.00	\$1,245,412.00
Molde	St Louis	Replace fire tower	DNR/Envir	\$320,000.00	\$925,412.00
Berner	Clearwater	New tower	Indent Land	\$505,000.00	\$420,412.00
<b>PENDING WORK</b>					
Card Key				\$20,000.00	\$400,412.00
Site clean up, shelter and tower removals				\$200,000.00	\$200,412.00
MSO - Backup equipment				\$0.00	\$200,412.00
Microwave DC power - Upgrades to meet run time required				\$0.00	\$200,412.00
<b>TOWER REPLACEMENTS (This work being held until above projects completed)</b>					
Hawley	Replace tower			\$600,000.00	
Freedhem	Replace tower			\$600,000.00	
Middle River	Replace tower			\$600,000.00	
Theif River Falls	Replace tower			\$600,000.00	
Windom	Replace tower			\$600,000.00	
Virginia	Replace tower			\$600,000.00	
Cass Lake	Replace tower			\$600,000.00	
Viola	Replace tower			\$600,000.00	
Kimball	Replace tower			\$600,000.00	
Hoffman	Replace tower			\$600,000.00	
New London	Replace tower			\$600,000.00	
Woodland	Replace tower			\$600,000.00	
Littlefork	Replace tower			\$600,000.00	
Roosevelt	Replace tower			\$600,000.00	
Hewit: Land Purchase, replace tower.				\$500,000.00	
Scandia: Need to look at land purchase.				\$100,000.00	
Geneva: Need to look at land purchase, new tower ?				\$500,000.00	
Mapleton: Find land and build new tower				\$500,000.00	
Red Wing: Land purchase				\$100,000.00	

StatusBoard Unscheduled Down Time							
Date	Time Down Military Time	Time Up Military Time	Total Unscheduled Down Time HH:MM	Scheduled Availability HRS	Actual Availability HRS/MIN	% of time up	Cause
2/3/2015	11:04	11:07	0:03	24:00:00	23:57	99.79%	Emergency server maintenance fix
3/19/2015	19:00	19:02	0:02	24:00:00	23:58	99.86%	Emergency server proactive maintenance fix
9/1/2015	13:10	16:48	3:38	24:00:00	20:22	84.87%	Emergency server manitenance
9/2/2015	15:33	16:09	0:36	24:00:00	23:24	97.50%	Emergency server proactive maintenance fix
12/22/2015	20:57	21:16	0:19	24:00:00	23:41	98.68%	Emergency Backup Maintenance





# StatusBoard CY 2015

	Total Hours Month	Total hours SCHEDULED MAINTENANCE Tues. 0900 - 1100 Wed. 1900 - 2300	Total Hours SCHEDULED Availability	Actual Duration of maintenance Rounded up to nearest hour	Total hours available AFTER scheduled maintenance	UNSCHEDULED OUTAGES Rounded up to nearest hour	TOTAL HOURS AVAILABLE	YTD Availability
January*	744	24	720	16	728	0	728	100.00%
February**	672	24	648	24	648	1	647	99.85%
March	744	24	720	2	742	1	741	99.87%
April	720	28	692	8	712	0	712	100.00%
May	744	24	720	4	740	0	740	100.00%
June	720	28	692	4	716	0	716	100.00%
July	744	24	720	4	740	0	740	100.00%
August***	744	24	720	0	744	0	744	100.00%
September****	720	28	692	4	716	4	712	99.44%
October	744	24	720	2	742	0	742	100.00%
November	720	28	692	0	720	0	720	100.00%
December	744	24	720	0	744	1	743	99.87%

- January 16-22 URL issues. Some users report unable to access application.
- February 17th URL issues. Some users unable to access application
- August 28th 3 users reported being knocked off of the system for a few minuets, but logged back on without issue. We are currently researching this issue and will modify this report once we receive the results if needed.
- September 1st MNIT@DPS experienced degraded services that impacted performance and availability of DPS Systems including Statusboard. Issues were resolved and system performance was restored.
- September 2nd Server hardware issues caused an outage, and fluctuating functionality.
- December 22nd An emergency change made to one of our servers after hours caused a brief 15 minute outage to Status Board.