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

RADIO TECHNICAL OPERATIONS COMMITTEE
AGENDA

Conference Room, Bloomington Fire Station #1
March 30, 2016
1:00 – 3:00 p.m.

MEMBERS:

Ulie Seal, Chair
MN Fire Chiefs Association

Ron Jansen, Vice Chair
Dakota County

Jake Thompson
Anoka County

Tim Walsh
Carver County

Rod Olson
City of Minneapolis

Jon Eckel
Chisago County

John Gundersen
Hennepin County

Bob Shogren
Isanti County

Jeff Bjorklund
Metropolitan Airports Commission

Chad LeVasseur
Metropolitan Council

Iver Johnson
Metro Region EMS

Scott Williams
Ramsey County

Adam Pirri
Scott County

Chuck Steier
U of M Police, at large member

Nate Timm
Washington County

Open
MN Chiefs of Police Association

1. Call to Order

2. Approval of February 24, 2016 Minutes

3. Agenda Items
   a. State Change Management Submission – Meyer
   b. Maple Grove Fire – Waiver for State Standard 3.19.0 - Meyer
   c. Alina Health EMS participation plan change - Peckman
   d. MN DHS ARMER Plan – Rey Freeman
   e. COMT packet approval (Bob Beem, Hennepin County)

4. Moves, Additions & Changes to the System
   a. Anoka County Water Tower Sites Repainting - Thompson
   b. Update on Removal of Voting from Interoperability System – Jansen

5. Committee Reports
   a. Metro Mobility System Usage Update—Chad LeVasseur/Dana Rude
   b. System Manager's Group/Metro Owner's Group Update – Jansen
   c. Reports from SECB Committee - Tretter
   d. 2016 Interoperability Conference - Tretter

6. Other Business
   a. Regional Talkgroup Permissions Updates
   b. Discussion on system capacity management
   c. Next Meeting April 27th

7. Adjourn

Ulie Seal, Chair

Metropolitan Emergency Services Board
Radio Technical Operations Committee
Meeting Notes
February 24, 2016

Members Present: Ulie Seal, John Gundersen, Ron Jansen, Jake Thompson, Dana Rude, Iver Johnson, Adam Pirri, Nate Timm, Dave Pikal , Jon Eckel, Rod Olson, Chad LeVasseur, Jeff Bjorklund, Tim Walsh, Bob Shogren, Chuck Steier

Guests Present: Jill Rohret, Troy Tretter, Martha Ziese; *Metropolitan Emergency Services Board*, Steve Ouradnik; *DOC,* John Anderson, *MnDOT,* Curt Meyer; *HCSO,* Carrie Oster*; Motorola,*

Call to Order: Ulie Seal called the meeting to order at 1:00 P.M.

Agenda of the meeting. February 24, 2016
M/S/C Motion made by Rod Olson to approve February 2016 agenda. Ron Jansen seconded. The motion carried.

Minutes of the January 27, 2016 Meeting
Amendment in Guests Present, to add Derek Leyde as the point of contact from Northland Business. In the 3rd paragraph under Regional Encrypted talk groups for change management, Change Ron Olson, to Rod Olson.

M/S/C Motion made by Gundersen to approve January 2016 minutes. Thompson seconded. The motion carried.

Agenda Items
Regional Encrypted Talkgroups for change management – Gundersen

John Gundersen introduced Curt Meyer from Hennepin County to follow up from January's discussion on additional state encrypted talk groups. Curt informed the committee that further research of the data showed that the use of the LTACxE's were not mostly in use inside the Metro, but outstate. There was discussion amongst the members as to how many talk groups would be sufficient and if there would be capacity to add them into consoles, and if any additional regional talk groups would be needed. Curt Meyer explained that generally from May through October most of the regional encrypted talk groups are in use. There was a suggestion about adding 2 additional METAC's and 2 encrypted METAC's.

Jill noted that the State and Metro Change management processes needed to be followed and the request cannot be approved without following the process. Troy indicated that the intent was to see if there was support before this was submitted for change management and Hennepin County would be the sponsor and follow through the change management process. John Gundersen stated that the state has not finalized their change management process and would like to align the Metro and State change management timelines. Ulie stated that if we want to add more regional talk groups, we would need to follow the proper change management process.

There was discussion on whether or not Minneapolis would have room to program them into their channels, if all Law Enforcement would be required to program these channels and if they would be allowed in consoles.

M/S/C Motion made by Gundersen to approve moving forward with change management submissions for additional regional and statewide talk groups. Jansen seconded.

Gundersen will write a proposal to the state before the March meeting and submit to Troy Tretter.

Moves, Additions & Changes to the System

Anoka County Water Tower Sites Repainting – Thompson
Jake discussed that Anoka County will be repainting two water tower sites starting in Mid-March by removing equipment. Jake discussed that he has requested use of the Metro STR through Troy Tretter and Butch Gillum.

Ron Jansen stated the Dakota County Sperry radio site would begin work as soon as the ground thaws.

John Gundersen stated that for the Hennepin County STR tower will be repaired using county funds to repair it and they plan to have it ready for the state interoperability conference.

There was discussion from Jill that there are funds for maintenance for the regional STR should issues arise.

Update on Removal of Voting from Interoperability System – Jansen
Ron Jansen stated that it is still on the punch list after the 7.15 upgrade.

Committee Reports

Metro Mobility System Usage Update—Chad LeVasseur/Dana Rude
Dana Rude discussed that they have had issues with reliability on their data dispatching system and are working with their vendor to add better redundancy. They have moved 81 radios off ARMER and put radios on a 400MHz ANCOM system.

System Manager's Group/Metro Owner's Group Update – Jansen
Ron Jansen discussed that at the Metro Owners Group, they discussed the 7.15 upgrade and April 1st will be the lock down date for any changes to the system. At the next SMG will be training on the 7.15 upgrade, and the training will be on March 23rd from 9am-noon. A proposal to change the next TOC meeting, either date or time was proposed. There was a proposal to move the next meeting one week later to March 30th. Martha found that the MESB board room was not available on the 30th. Ulie stated he can check into hosting the meeting at Bloomington Fire Station #1.

Reports from SECB Committee – Tretter
Troy Tretter briefed on each of the activities from the SECB board meetings from the last month. OTC: Noting that the OTC approved the request for a Statewide Talkgroup for Task Force 1. Steering: Noted that there may be a proposal for Fargo and West Fargo to add up to 6 ARMER sites in North Dakota for connection to the Detroit Lakes Zone controller as the North Dakota statewide trunked system is not moving at the pace for the needs of Fargo and West Fargo. Finance: The finance committee approved the 2015 SHSP grant allocations, to include $25,000 for the Metro to be used for training.

2016 Interoperability Conference – Tretter
Troy Tretter informed the group the dates for the conference are April 25-27 that via grant funds the MESB can pay for registration and two nights of hotel at the Kelly Inn, anyone interested needs to contact Troy. A solicitation email will follow as well once the registration site is open, which should be no later than 1 March.

Other Business

Regional Talkgroup Permission updates
None

Discussion on system capacity management
Troy Tretter stated that system capacity has been and will be discussed at each of the SECB sub-committees. It was agreed that the Metro region's issues were not the same as the rest of the state and the challenges being faced by the Metro will potentially become an issue for the rest of the state. Ulie informed the committee that other regions will face challenges, whether it be capacity, funding or other factors. It may not be immediate issues, but eventually there will be challenges that will need to be addressed as ARMER being a finite resource. In the metro we have been more restrictive of who we let on the system prompting discussion of standards and policy of letting people on the system.

Next Meeting
Was stated that the next meeting would be moved to March 30th at 1pm in Bloomington.

Meeting was adjourned at 3pm.

Allied Radio Matrix for Emergency Response (ARMER)

Change Proposal

1. Administrative Information:

Type of Change (Technical or Operational)

Technical and Operational

Date Submitted:

Submitter (e.g., Regional Radio Board or state agency):

Metropolitan Emergency Services Board - MESB

Change Sponsor (Individual) Contact Information:

Curt Meyer, Hennepin County – curtis.meyer@hennepin.us, 612-596-1922

2. Summary of proposed change(s):

Add 2 statewide encrypted law enforcement talk groups (LTAC9E & LTAC10E)

3. Existing SRB standards impacted:

3.19.0 - Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

4. Scope of Change:

Impact on users (e.g., majority of users, minority of users, number of counties/regions):

All law enforcement radios that are equipped with DES-OFB encryption.

Impact on the placement of resources in communications equipment (e.g., upgrades):

2 encrypted talk groups to be added to encrypted law enforcement radios.

Impact on operational procedures (e.g., changes to operational standards):

Language for statewide encrypted law enforcement talk groups must be updated in the existing radio standard.

Impact on user training (e.g., training required for compliance):

Minimal training would be required as currently there are statewide encrypted talk groups.

Impact on reprogramming or configuration of end-user equipment:

Subscribers: Some training would be required as currently there are no regional encrypted radio resources.

Consoles: All law enforcement PSAP radio consoles would add the resources.

Other equipment: These new resources should be recorded.

5. Existing deficiencies, problems, needs addressed by the proposed changes:

Frequently all 4 encrypted statewide encrypted law enforcement talk groups are in use leaving none available for use.

Expected improvements & benefits resulting from the change:

More encrypted interoperable law enforcement statewide talk groups are available for use. This will relieve current congestion making additional encrypted interoperable law enforcement talk groups available. More encrypted law enforcement radios are being added. This will allow for future expansion.

6. Proposed implementation & transition plan including timeline, milestones and training:

Start and End Date:

Beginning of the next Change Management radio programming cycle. No end date.

Description of Implementation Plan:

Add to dispatch consoles, then to subscriber radios.

7. Preliminary assessments which have been completed (documentation attached):

See attached documentation.

8. List of Attached proposed new or revised Standards, Plans or Best Practices Guides:

3.19.0 - Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups

9. Other Attachments:

10. **Tracking and Approvals:**

Submitter Approval:

Signature Date

DECN Receipt:

Signature Date

OTC/IOC Determination of Need:

Signature Date

MnDOT/ECN Approval:

Signature Date

OTC/IOC Approval of Assessments:

Signature Date

Finance Committee Approval:
(if required)

Signature Date

Final SRB Approval:

Signature Date

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

Document Section 3	**Interoperability Standards**	**Status:** Complete
State Standard Number	**3.19.0**	
Standard Title	**Use of 800 MHz Statewide LTAC and SIU Interoperability Talkgroups**	
Date Established		**SRB Approval:** 3/28/2013
Replaces Document Dated	**03/19/2013**	
Date Revised	**3/25/2016**	

1. Purpose or Objective

The purpose of this standard is to establish policy and procedures for use of the 800 MHz statewide law enforcement interoperability talkgroups. The LTAC and SIU talkgroups are a system wide resource to facilitate communications between law enforcement agencies including, but not limited to, Special Investigative Units that typically do not communicate with each other on a regular basis.

2. Technical Background

- **Capabilities**

It is possible to have access to one or more common pool of clear and encrypted talkgroups in radios used by agencies that share the statewide 800 MHz radio system. These clear and encrypted talkgroups can be used for a wide range of intercommunication when coordination of activities between personnel of different agencies is needed on an event.

- **Constraints**

LTAC5E through LTAC10E can be used by all law enforcement agencies with encrypted radios and can be programmed in law enforcement dispatch consoles.

Deleted: LTAC8E

The LTAC5E through LTAC10E and SIU1E through SIU4E talkgroups are always encrypted.

Deleted: LTAC8E

SIU1E through SIU4E are only to be use by Special Investigation Units; for example, Gang and Drug task forces, SWAT, etc. SIU1E through SIU4E may not be programmed in dispatch consoles.

When using SIU1E through SIU4E, if non-Special Investigation Unit officers and dispatchers need to participate in an activity, it is up to the local incident command to supply those persons with radios that have SIU1E through SIU4E.

SIU1E through SIU4E are not to be patched with any other talkgroup.

3. Operational Context

The LTAC and SIU talkgroups are a system wide resource to facilitate communications between law branch agencies including, but not limited to, Special Investigative Units that typically do not communicate with each other on a regular basis.

4. Recommended Protocol/ Standard

LTAC1 through LTAC4 TALKGROUPS

TG Requirements	For Whom?
Required	All Law Enforcement Users & PSAP
Recommended	
Optional	
Not Allowed	Non-law Enforcement
Site Access	System Wide – All Sites

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	As Needed
Hard Patch	No	

LTAC5E through LTAC10E TALKGROUPS

Deleted: LTAC8E

TG Requirements	For Whom?
Required	All Law Enforcement users with Encrypted Radios
Recommended	All Law Enforcement PSAPs
Optional	
Not Allowed	All others

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	Optional	Encrypted TGs only
Hard Patch	No	

SIU1E through SIU4E TALKGROUPS

TG Requirements	For Whom?
Required	
Recommended	SIU communications, i.e. Gang, Drug, Swat task forces
Optional	
Not Allowed	All others

Cross Patch Standard	YES / NO	To TalkGroups
Soft Patch	No	
Hard Patch	No	

The StatusBoard application will be used to manage the law enforcement pool talkgroup resources.

Console Resource Requirements and Patching

Integrated law enforcement ARMER dispatch consoles (Gold Elite, MCC7500, etc.) shall have LTAC1 through LTAC4 in their configuration, available for patching. If the patched talkgroups have different "home zones," multiple repeaters will be assigned, impacting system loading. Therefore, extended duration patching of statewide interoperability talkgroups to other talkgroups should be avoided. Users should transition to the statewide talkgroup as soon as it can be done safely, and the patch should be terminated. LTACs should not be patched to other statewide interoperability talkgroups. In order to meet the communications needs for an event, the LTAC talkgroups may be patched to:

- Conventional RF resources, such as VHF, UHF, etc.
- Private agency talkgroups, such as dispatch mains, tactical talkgroups, pools, etc.
- Patches between the LTAC talkgroups and regional TACs, although this would not be preferred as a method of resolving communications needs, because it reduces the number of talkgroups available for an incident.

LTAC5E through LTAC10E can optionally be programmed in law enforcement dispatch consoles but may not be patched to unencrypted ARMER talkgroups.

Deleted: LTAC8E

SIU talkgroups may not be programmed in dispatch consoles or any ARMER resource. When using SIU1E through SIU4E, incident command will provide radios for other non-SIU entities assisting, such as patrol officers, dispatchers, etc.

None of the SIU and LTAC-E talkgroups shall be part of any multi-group.

All radios using LTAC5E through LTAC10E and SIU1E through SIU4E must use the state assigned Data Encryption Standard (DES) encryption keys. The Minnesota Department of Transportation (MnDOT) System Administrator will be responsible for managing and periodically updating the statewide encryption keys.

Deleted: LTAC8E

It is highly recommended that SIU radio users program a sufficient quantity of SIU and LTAC-E talkgroups into their subscriber radios to meet interagency communications needs, starting with LTAC5E.

Dual Naming

Existing LETAC-1 through LETAC-4 talkgroups are renamed LTAC5E through LTAC10E. Existing LESIU-1 through LESIU-4 are renamed SIU1E through SIU4E. Dual names will be added to PSAP consoles and used for the renamed talkgroups and will remain in place until June 26, 2015, or until all affected ARMER radios have been reprogrammed. The old name will be primary until June 26, 2014, then secondary until June 26, 2015. Dual naming will be removed from PSAP consoles on June 26, 2015.

Deleted: LTAC8E

5. Recommended Procedure

The usage of LTAC1 through LTAC4 for **PREPLANNED NON-EMERGENCY** interoperability events should be LTAC4 through LTAC1, in that order.

The usage of LTAC1 through LTAC4 for **UNPLANNED EMERGENCY** incidents should be LTAC1 through LTAC4, in that order.

LTAC5E through LTAC10E may be patched **ONLY TO OTHER ENCRYPTED TALKGROUPS** during PREPLANNED NON-EMERGENCY interoperability events and UNPLANNED EMERGENCY incidents.

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SIU1E through SIU4E may only be used directly and not be patched to other resources to meet the communications needs of an event or incident.

The dispatch center will use the StatusBoard application to identify use of the LTAC and SIU resources.

When an SIU resource is needed, any SIU agency may contact an appropriate 800 MHz dispatch center, capable of assigning SIU resources, to have the next preferred available SIU assigned and recorded on the StatusBoard. There must be an agreement between the SIU agency and the dispatch center to provide this service.

At the end of the event, the 800MHz assigning dispatch center must clear the status, so the other dispatchers will know this resource is available for use.

6. Management

The PSAP managers for agencies on the statewide 800 MHz radio system shall ensure that there is a procedure for assigning LTAC and SIU talkgroups.

The MnDOT System Administrator shall be responsible for the StatusBoard application.

Dispatch center operators shall receive initial and continuing training on the use of this procedure.

Responsibility for monitoring performance and for modifying this procedure shall be a function of the agencies using this resource.

City of Maple Grove
12800 Arbor Lakes Parkway, P.O. Box 1180, Maple Grove, MN 55311-6180
FIRE-RESCUE DEPARTMENT
Fire Department
763-494-6300
Fire Inspection
763-494-6090

23, March 2016

Curt Meyer
800 MHz Coordinator / Assistant Radio Systems Manager
Hennepin County Sheriffs' Office
1245 Shenandoah Ln
Plymouth, MN 55447

Mr. Meyer,

This letter is in regards to our conversation regarding reprogramming of Maple Grove fire department portable radios.
I understand there is an issue in the programming of LTAC 1, 2, 3 and 4 due to a rule change regarding their use.
I am requesting permission on behalf of Maple Grove Fire, Police and Emergency Management to retain these talk groups in the police fleet map in our 10 command encrypted radios. These talk groups had been in our fleet map previously and had not encountered any issues

The 10 Command radios currently have the complete fleet map for each discipline (police, fire, public works, and emergency management) and are used to provide extra command encrypted capable radios for police or fire command staff.

There is no need for fire personnel to have access to these talk groups however it gives the Maple Grove public safety command staff additional interoperability.

I appreciate your assistance with this request.

Sincerely,

Kurt Kramer
Deputy Fire Chief
Emergency Management Coordinator
City of Maple Grove

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

Document Section 3	**Interoperability Standards**	**Status:** Complete
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Allina Health
EMERGENCY MEDICAL SERVICES

March 14, 2016

Metro Region Radio Board

Technical Operations Committee

To Committee Members,

Allina Health Emergency Medical Services (AHEMS) respectfully requests to modify its ARMER system participation plan. AHEMS is in the process of adding a Motorola AIS server on the ARMER system to accommodate for logging with a new Eventide logger. This configuration will be required due to the obsolescence of the Motorola Gold Elite console configurations.

Sincerely,

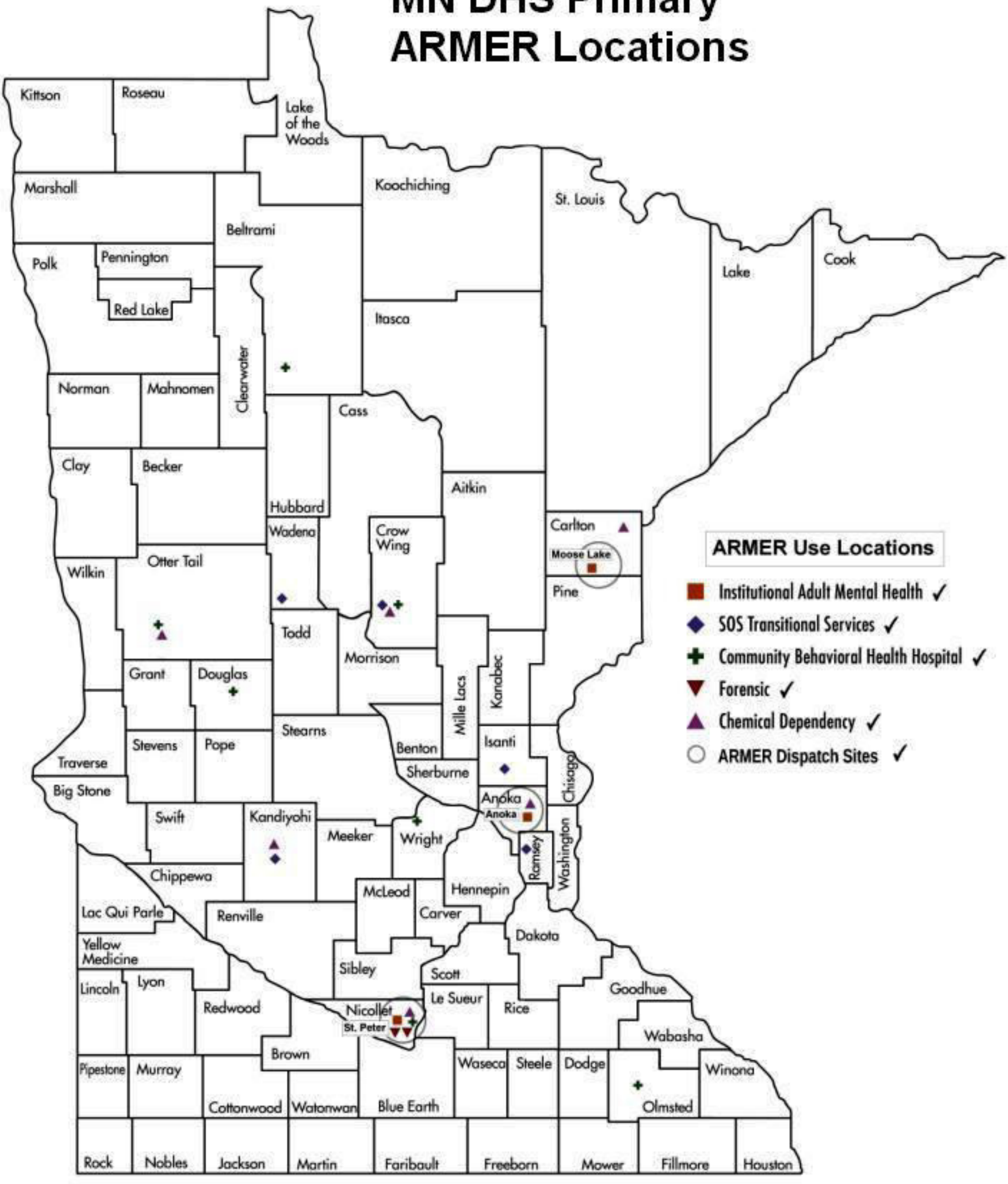
Victoria Peckman

Victoria Peckman
Communications Technology Specialist
Allina Health Emergency Medical Services

Minnesota Department of **Human Services**

Attachment 1A

MN DHS Primary ARMER Locations



Attachment 2 - DHS ARMER Plan

Low-Tier, Secondary Non-Dispatch Locations

Community Based Services - Owned and Leased Properties

	Site Name	Address 1	City	State	County	ARMER Site	Lease/ Own
1	Akeley Crossing	23653 County 25	Akeley	MN	Hubbard	Nevis	Leased
2	Akeley Road	23655 County 25	Akeley	MN	hubbard	Nevis	Leased
3	Alexandria	123 Bethesda Street	Alexandria	MN	Douglas	Garfield	Owned
4	Anoka/Burns	5361-189th Avenue NW	Anoka	MN	Anoka	Anoka Simul	Leased
5	Austin	1000 - 12th Street NW	Austin	MN	Mower	Austin	Owned
6	Austin - Shady Grove	2001 11th Street SW	Austin	MN	Mower	Austin	Leased
7	Austin - Turtle Creek Ind	2909 West Oakland	Austin	MN	Mower	Austin	Leased
8	Austin - Turtle Creek Ind new	2103 14th Street NE	Austin	MN	Mower	Austin	Leased
9	Baxter - Brentwood	4707 Brentwood Road	Baxter	MN	Crow Wing	Baxter	Leased
10	Baxter - Forestview	12936 Kingwood Drive	Baxter	MN	Crow Wing	Baxter	Leased
11	Baxter - Lynndale	14610 Lynndale Drive	Baxter	MN	Crow Wing	Baxter	Leased
12	Baxter - Quality Ent	8053 Industrial Park Road	Baxter	MN	Crow Wing	Baxter	Leased
13	Baxter - Quality Enterprises II	8053 Industrial Park Road	Baxter	MN	Crow Wing	Baxter	Leased
14	Bemidji	810 Clausen Avenue	Bemidji	MN	Beltrami	Bemidji	Leased
15	Big Lake - Ridge Place	4301 Ridge Circle	Big Lake	MN	Sherburne	Sherburne	Leased
16	Biwabik	101 Old Hwy 4	Biwabik	MN	St. Louis	Erie Hill	Owned
17	Bk Park - 89th Crescent	5422 North 89th Crescent	Brooklyn Park	MN	Hennepin	Henn/Brk Pk	Owned
18	Bk Park - 91st Crescent	5209 North 91st Crescent	Brooklyn Park	MN	Hennepin	Henn/Brk Pk	Owned
19	Bk Park - Prestwick	8920 Prestwick Circle	Brooklyn Park	MN	Hennepin	Henn/Brk Pk	Owned
20	Bk Park - West River Road	9241 West River Road	Brooklyn Park	MN	Hennepin	Henn/Brk Pk	Leased
21	Blaine	12949 Kenyon Street NE	Blaine	MN	Hennepin	Anoka Simul	Owned
22	Bloomingont - Old Shak Rd	10101 First Avenue S.	Bloomington	MN	Hennepin	Henn/Bloom	Owned
23	Bloomington	8634 Oakland Avenue	Bloomington	MN	Hennepin	Henn/Bloom	Owned
24	Bloomington - Solstice Voc	660 W. 92nd Street	Bloomington	MN	Hennepin	Henn/Bloom	Leased
25	Bloomington - Windfield	9741 Queen Road	Bloomington	MN	Hennepin	Henn/Bloom	Leased
26	Braham	215 South Eastgate Avenue	Braham	MN	Isanti	Isanti Simul	Leased
27	Brainerd - Hillcrest	2415 Hillcrest Drive	Brainerd	MN	Crow Wing	Baxter	Leased
28	Brainerd - N Street	1202 Northeast N Street	Brainerd	MN	Crow Wing	Baxter	Leased
29	Brainerd - Pickeral Lake	20124 Pickeral Lake Road	Brainerd	MN	Crow Wing	Baxter	Leased
30	Brainerd - Pine Street	1869 Dandelion Lane	Brainerd	MN	Cass	Baxter	Leased
31	Burnsville - Crystal	1101 West Crystal Lake Road	Burnsville	MN	Dakota	Dakota Simul	Owned
32	Burnsville - Dakota Crisis	300 Timberland Drive	Burnsville	MN	Dakota	Dakota Simul	Leased
33	Cambridge - East Central	245 10th Avenue SW	Cambridge	MN	Isanti	Isanti Simul	Leased
34	Cambridge - Evergreen	280 - 326th Lane	Cambridge	MN	Isanti	Isanti Simul	Leased
35	Cass Lake	16421 - 65th Ave. NW	Cass Lake	MN	Cass	Cass Lake	Leased
36	Champlin - Dean	310 Dean Avenue	Champlin	MN	Hennepin	Henn/Brk Pk	Owned
37	Clara City - Division Street	1126 N. Division Street	Clara City	MN	Chippewa	Granite Falls	Leased
38	Clara City - Sparks	14 NW 2nd Avenue	Clara City	MN	Chippewa	Granite Falls	Leased
39	Cloquet - Stephen Road	1399 Stephen Road	Cloquet	MN	Carlton	Cloquet WT	Leased
40	Dayton - Rosewood	14080 Rosewood Circle	Dayton	MN	Hennepin	Henn/Rogers	Owned
41	Duluth - Airpark I	4619 Air Park Blvd.	Duluth	MN	St. Louis	Duluth Simul	Leased
42	Duluth - Lincoln Park Lifeskills	2122 West Superior Street	Duluth	MN	St. Louis	Duluth Simul	Leased
43	Duluth - Pike Lake	5675 Birchway Road	Duluth	MN	St. Louis	Duluth Simul	Leased
44	Duluth - Swan Lake	1423 Swan Lake Road	Duluth	MN	St. Louis	Duluth Simul	Owned
45	Eagan - Sibley	3034 Sibley Memorial Highway	Eagan	MN	Dakota	Dakota Simul	Owned
46	East Grand Forks	2134 - 13th Avenue NW	EGF	MN	Polk	EGF	Owned
47	East Grand Forks - Red River	2132 13th Avenue NW	EGF	MN	Polk	EGF	Owned
48	Eden Prairie - Chatham Way	6204 Chatham Way	Eden Prairie	MN	Hennepin	Henn/Glen Lk	Owned
49	Eden Prairie - Dell Road	7198 Dell Road	Eden Prairie	MN	Hennepin	Henn/Glen Lk	Owned
50	Eden Prairie - Met Tech Park	Technology Park VIII	Eden Prairie	MN	Hennepin	Henn/Glen Lk	Leased
51	Eden Prairie - Met Unlimited	9600 West 76th Street	Eden Prairie	MN	Hennepin	Henn/Glen Lk	Leased
52	Elbow Lake NE	1107 - 1st Street NE	Elbow Lake	MN	Grant	Erdahl	Leased
53	Elbow Lake SE	114 - 11th Avenue SE	Elbow Lake	MN	Grant	Erdahl	Leased
54	Faribault - 3rd Street	1011 - 3rd Street SE	Faribault	MN	Rice	Faribault	Owned
55	Faribault - 7th Avenue	813 SW 7th Avenue	Faribault	MN	Rice	Faribault	Owned
56	Faribault - Allen Path	54 Allen Path	Faribault	MN	Rice	Faribault	Owned
57	Faribault - Cannon River	1400 Cannon Circle #9	Faribault	MN	Rice	Faribault	Leased
58	Faribault - Park Avenue	2307 Park Avenue NW	Faribault	MN	Rice	Faribault	Owned
59	Faribault - Shumway	1805 Shumway	Faribault	MN	Rice	Faribault	Owned
60	Faribault - Windsor PL	1309 Windsor Place	Faribault	MN	Rice	Faribault	Leased
61	Farmington - Donnelly	20345 Donnelly Avenue	Farmington	MN	Dakota	Dakota Simul	Owned
62	Farmington - Eaves Way	20359 Eaves Way	Farmington	MN	Dakota	Dakota Simul	Owned
63	Fergus Falls - Gustavus	229 West Gustavus	Fergus Falls	MN	Ottertail	Fergus Falls	Leased
64	Fergus Falls - Sterling Heights	2440 Sterling Heights	Fergus Falls	MN	Ottertail	Fergus Falls	Leased
65	Fergus Falls - Union	1024 Circle Lane	Fergus Falls	MN	Otter Tail	Fergus Falls	Leased
66	Forest Lake	22500 Iverson Avenue	Forest Lake	MN	Washington	Wash Co	Owned
67	Forest Lake - Irish	24130 Irish Avenue	Forest Lake	MN	Chisago	Forest Lake	Leased
68	Fridley - Metro Tech Ind	7270-7272 Commerce Cir E	Fridely	MN	Anoka	Anoka Simul	Leased
69	Golden Valley - Scott Avenue	3220 Scott Avenue	Golden Valley	MN	Hennepin	Henn/GV	Owned
70	Ham Lake	17635 Jefferson Street NE	Ham Lake	MN	Anoka	Anoka Simul	Leased
71	Harris	42756 Ginger Avenue	Harris	MN	Chisago	North Branch	Leased
72	Hayfield - Westfield	16839 - 750th Street	Hayfield	MN	Dodge	Hayfield	Leased
73	Hermanton - W Arrowhead Rd	5668 West Arrowhead Road	Hermantown	MN	St. Louis	Duluth Simul	Owned
74	Hermantown - W Marble St	5682 W. Arrowhead Road	Hermantown	MN	St. Louis	Duluth Simul	Leased
75	Hermantown Crisis	5223 Maple Grove Road	Hermantown	MN	St. Louis	Duluth Simul	Owned
76	Isanti - Rum River Orn	520 North 1st Avenue	Isanti	MN	Isanti	Cambridge	Leased
77	Kasson	1101 - 1st Avenue NE	Kasson	MN	Dodge	Dodge Cntr	Owned
78	Kasson - Region 10	106 NW 1st Avenue	Kasson	MN	Dodge	Dodge Cntr	Leased

Attachment 2 - DHS ARMER Plan

79	Lakeville - Hershey	20685 Hershey Avenue West	Lakeville	MN	Dakota	Dakota Simul	Owned
80	Lakeville - Jonquil	17041 Jonquil Avenue	Lakeville	MN	Dakota	Dakota Simul	Owned
81	Laporte	39915 Count Road 39	Laporte	MN	Hubbard	Cass Lake	Leased
82	Mahnomen	2559 - 140th Avenue	Mahnomen	MN	Mahnomen	Mahnomen	Owned
83	Maple Grove	10775 - 108th Avenue	Maple Grove	MN	Hennepin	Henn SO	Leased
84	Medford - Straight River Ent	405 First Ave. SE	Medford	MN	Steele	Owatonna	Leased
85	Moorhead	820 - 63rd Avenue N.	Moorhead	MN	Clay	Moorhead	Owned
86	Moose Lake	305 - 4th Street	Moose Lake	MN	Carlton	Moose Lake	Owned
87	Moose Tracks	471 North Arrowhead Lane	Moose Lake	MN	Carlton	Moose Lake	Leased
88	Moose Tracks 2	451 & 461 Arrowhead Lane	Moose Lake	MN	Carlton	Moose Lake	Leased
89	Morristown	400 SW 2nd Street	Morristown	MN	Rice	Morristown	Owned
90	Mounds View - Crestview	2406 Woodcrest Drive	Mounds View	MN	Ramsey	Ramsey/AH	Leased
91	Mpls - 19th Avenue	3740 - 19th Avenue S.	Minneapolis	MN	Hennepin	Henn	Owned
92	Mpls - 41st Avenue	3740 - 41st Avenue South	Minneapolis	MN	Hennepin	Henn	Owned
93	Mpls - Newton	4401 Newton Avenue N	Minneapolis	MN	Hennepin	Henn	Owned
94	North Branch	6171 Elm Street	North Branch	MN	Chisago	North Branch	Leased
95	North Branch - Zodiac	30382 Zodiac Street NE	North Branch	MN	Isanti	North Branch	Leased
96	Northfield - Canby Court	8631 Canby Court	Northfield	MN	Rice	Dundas	Owned
97	Northfield - Highland	300 Highland Avenue	Northfield	MN	Rice	Dundas	Owned
98	Northfield - Jefferson	1904 Jefferson Road	Northfield	MN	Rice	Dundas	Owned
99	Northfield - Sciota	1375 - 310th Street East	Northfield	MN	Dakota	Dakota Simul	Owned
100	Owatonna - 32nd Avenue	300 SW 32nd Avenue	Owatonna	MN	Steele	Owatonna	Owned
101	Owatonna - 8th Avenue	2020 - 8th Avenue NE	Owatonna	MN	Steele	Owatonna	Owned
102	Park Rapids	911 Pine Street	Park Rapids	MN	Hubbard	Nevis	Leased
103	Pillager - Lakes Employment	110 East 2nd Street	Pillager	MN	Cass	Pillager	Leased
104	Pillager - Northland Park	12418 - 43rd Avenue SW	Pillager	MN	Cass	Pillager	Leased
105	Pillager - Sylvan	12819 - 25th Avenue SW	Pillager	MN	Cass	Pillager	Leased
106	Pillager Creek	118 East 2nd Street	Pillager	MN	Cass	Pillager	Leased
107	Pine City	215 East 6th Avenue	Pine City	MN	Pine	Pine City	Owned
108	Pine City Crisis	12433 Loon Drive	Pine City	MN	Pine County	Pine City	Owned
109	Pine Island	611 County Road 13 SW	Pine Island	MN	Olmsted	Pine Island	Leased
110	Randall - Maplewood	121 Maplewood Drive	Randall	MN	Morrison	Little Falls	Leased
111	Raymond - Chippewa	5035-140th Avenue NE	Raymond	MN	Kandiyohi	Willmar/Woods	Leased
112	Redwood Falls	205 Baker Drive	RWF	MN	Redwood	Morton	Owned
113	Redwood Falls - Falls Place	628 Middle Street	RWF	MN	Redwood	Morton	Owned
114	Redwood Falls - Middle River	630 Middle Street	RWF	MN	Redwood	Morton	Owned
115	Richfield	6637 Fourth Avenue South	Richfield	MN	Hennepin	Hennepin Co	Owned
116	Richfield - South Stevens	7532 Stevens Avenue S.	Richfield	MN	Hennepin	Hennepin Co	Leased
117	Rochester	448 - 17th Street SW	Rochester	MN	Olmsted	Rochester	Owned
118	Rochester - Greenhouse	1613 8th Avenue	Rochester	MN	Olmsted	Rochester	Leased
119	Rochester - Hunter Hills	5502 - 22nd Avenue NW	Rochester	MN	Olmsted	Rochester	Leased
120	Rochester - Knotting Hill	4342 Knotting Hill Lane NW	Rochester	MN	Olmsted	Rochester	Leased
121	Rochester - Summerset	5405 Highway #63 S.	Rochester	MN	Olmsted	Rochester	Owned
122	Roseville - Woodcrest	1898 Huron Avenue	Roseville	MN	Ramsey	Ramsey Co	Leased
123	Sauk Rapids - Arbor Way	900 Arbor Way	Sauk Rapids	MN	Benton	St Cloud	Leased
124	Scandia	15565 - 220th Street	Scandia	MN	Washington	Scandia	Owned
125	St Paul - Aurora II	St. Paul Business Center	St. Paul	MN	Ramsey	Ramsey Co	Leased
126	St Peter - Valley Enterprises	1711 Gault Street	St. Peter	MN	Nicollet	Nic/St Peter	Leased
127	Stacy - Fawn Lake	6616 Fawn Lake Drive NE	Stacy	MN	Anoka	Anoka Simul	Leased
128	Staples - Oakwood Terrace	30480 Trader Trail	Staples	MN	Todd	Staples?	Leased
129	Vadnais Heights	3200 Labore Road	Vd Heights	MN	Ramsey	Ramsey Co	Leased
130	Vadnais Hgts - Aurora	3526 Labore Road	Vd Heights	MN	Ramsey	Ramsey Co	Leased
131	Virginia	700 South 7th Avenue	Virginia	MN	St. Louis	Virginia	Owned
132	Virginia - Range Area Voc	1006 8th Street South	Virginia	MN	St. Louis	Virginia	Leased
133	W St Paul - Christensen	1546 Christensen Avenue	West St. Paul	MN	Dakota	Dakota Simul	Leased
134	Warsaw - Ableman	23450 Falls Avenue	Warsaw	MN	Rice	Faribault	Owned
135	West Concord	406 - 6th Street	West Concord	MN	Dodge	Dodge Cntr	Owned
136	White Bear Lake	5103 Long Avenue	WBL	MN	Ramsey	Ramsey Co	Leased
137	White Bear Lake - Halper Way	1289 Halper Way	WBL	MN	Ramsey	Ramsey Co	Leased
138	Willmar - Crossroads	2000 SW Trott Avenue	Willmar	MN	Kandiyohi	Willmar	Leased
139	Willmar - Lakeland I	1021 Lakeland Drive NE	Willmar	MN	Kandiyohi	Willmar	Leased
140	Willmar - Lakeland II	913 Lakeland Drive NE	Willmar	MN	Kandiyohi	Willmar	Leased
141	Willmar - Terrace Drive	208 Terrace Drive SW	Willmar	MN	Kandiyohi	Willmar	Leased

Attachment 3A

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	DHS MN ARMER - Existing Talk Groups				
	Talk Group Alias	**Function**	**ID**	**Notes 1**	**Notes 2**
1	DHS-MSOP-ML1	MSOP Moose Lake	80036682		Recorded by DHS/DOC
2	DHS-MSOP-ML2	MSOP Moose Lake	80036684		Recorded by DHS/DOC
3	DHS-MSOP-ML3	MSOP Moose Lake	80036686		Recorded by DHS/DOC
4	DHS-MSOP-ML4	MSOP Moose Lake	80036688		Recorded by DHS/DOC
5	DHS-MSOP-ML5	MSOP Moose Lake	80036690		Recorded by DHS/DOC
6	DHS-MSOP-ML6	MSOP Moose Lake	80036692		Recorded by DHS/DOC
7	DHS-SOP-ML7	MSOP Moose Lake	80036694		Recorded by DHS/DOC
8	DHS-MSOP-ML8	MSOP Moose Lake	80036696		Recorded by DHS/DOC
9	DHS-MSOP-SP1	MSOP St Peter	80020196	Same as "Main" on console?	Recorded by DOC Fblt
10	DHS-MSOP-SP2	MSOP St Peter	80020198	Same as "Trans" on console?	Recorded by DOC Fblt
11	DHS-MSOP-SP3	MSOP St Peter	80020200	Same as "Emer" on console?	Recorded by DOC Fblt
12	DHS-MSOP-SP4	MSOP St Peter	80020202	Same as "MTC" on console?	Recorded by DOC Fblt
13	DHS-MSOP-SP5	MSOP St Peter	80020204	Same as "ICS" on console?	Recorded by DOC Fblt
14	DHS-MSOP-SP6	MSOP St Peter	80020206		Recorded by DOC Fblt
15	DHS-SOP-SP7	MSOP St Peter	80020208		
16	DHS-MSOP-SP8	MSOP St Peter	80020210		
17	MNMSH 2SPRCT(?)	MSOP St Peter	?	On console at St Peter	
18	DHSEME	DHS SW EM/REP	80000455	From existing radio matrix	
19	DHSEME1	DHS SW EM/REP	80000459	From existing radio matrix	
20	DHSEME2	DHS SW EM/REP	80000460	From existing radio matrix	
21	DHSEM3	DHS SW EM/REP	80000461	From existing radio matrix	
22	DHSROAM	Statewide Roam	80000462	From existing radio matrix	
23	DHSCO	DHS Central Office Metro	80000463	From existing radio matrix	
24	DHS-MSOP-AOSI	?	80000516		
25	DHS-MSOP-ATRF	?	80000518		
26	DHS-WLMR TRT CTR	?	80024119		
27	DHS-MSOP-OSI1	Statewide Roam	80000512		
28	DHS-MSOP-OSI2	Statewide Roam	80000514		

Attachment 3B

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	DHS MN ARMER Fleetmap: New/Proposed Talk Groups - Primary Locations				
	Talk Group Alias	**Function**		**Notes 1**	**Notes 2**
1	MNDHS AN OPS	Anoka Operations			AMRTC CARE
2	MNDHS AN TAC	Anoka Tactical			AMRTC CARE
3	MNDHS AN ADMIN	Anoka Administative			AMRTC CARE
4	MNDHS AN FACIL	Anoka Facilities Mtc			AMRTC CARE
5	MNDHS AN SEC	Anoka Security			AMRTC CARE
6	MNDHS STP OPS	St Peter Operations			MSHS
7	MNDHS STP TAC	St Peter Tactical			MSHS
8	MNDHS STP ADMIN	St Peter Administrative			MSHS
9	MNDHS STP FACIL	St Peter Facilities Mtc			MSHS
10	MNDHS STP SEC	St Peter Security			MSHS
11	MNDHS BRD OPS	Brainerd Operations			MSHS CARE
12	MNDHS BRD TAC	Brainerd Tactical			MSHS CARE
13	MNDHS BRD FACIL	Brainerd Facilities Mtc			MSHS CARE
14	MNDHS ALX OPS	Alexandria Operations			CBHH
15	MNDHS ALX TAC	Alexandria Tactical			CBHH
16	MNDHS ANN OPS	Annandale Operations			CBHH
17	MNDHS ANN TAC	Annandale Tactical			CBHH
18	MNDHS BXT OPS	Baxter Operations			CBHH
19	MNDHS BXT TAC	Baxter Tactical			CBHH
20	MNDHS BJI OPS	Bemidji Operations			CBHH
21	MNDHS BJI TAC	Bemidji Tactical			CBHH
22	MNDHS CAM OPS	Cambridge Operations			
23	MNDHS CAM TAC	Cambridge Tactical			
24	MNDHS CAR OPS	Carlton Operations			CARE
25	MNDHS CAR TAC	Carlton Tactical			CARE
26	MNDHS FF OPS	Fergus Falls Operations			CARE CBHH
27	MNDHS FF TAC	Fergus Falls Tactical			CARE CBHH
28	MNDHS RCH OPS	Rochester Operations			CBHH
29	MNDHS RCH TAC	Rochester Tactical			CBHH
30	MNDHS STP2 OPS	St Peter Operations			CARE CBHH
31	MNDHS STP2 TAC	St Peter Tactical			CARE CBHH
32	MNDHS WDN OPS	Wadena Operations			MSHS
33	MNDHS WDN OPS	Wadena Tactical			MSHS
34	MNDHS WIL OPS	Willmar Operations			MSHS CBHH CABHS
35	MNDHS WIL TAC	Willmar Tactical			MSHS CBHH CABHS

Attachment 3C

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	DHS MN ARMER - MSOCS Locations - New/Proposed Talk Groups			
	Talk Group Alias	**Function**	**Notes 1**	**Notes 2**
1	MNDHS AKY OPS1	Akeley Crossing		MSOCS
2	MNDHS AKY OPS2	Akeley Road		MSOCS
3	MNDHS ALX OPS	Alexandria MSOCS 2 Ops		MSOCS
4	MNDHS AN2 OPS	Anoka/Burns		MSOCS
5	MNDHS AUS OPS1	Austin		MSOCS
6	MNDHS AUS OPS2	Austin - Shady Grove		MSOCS
7	MNDHS AUS OPS3	Austin - Turtle Creek Ind		MSOCS
8	MNDHS AUS OPS4	Austin - Turtle Creek Ind new		MSOCS
9	MNDHS BAX OPS1	Baxter - Brentwood		MSOCS
10	MNDHS BAX OPS2	Baxter - Forestview		MSOCS
11	MNDHS BAX OPS3	Baxter - Lynndale		MSOCS
12	MNDHS BAX OPS4	Baxter - Quality Ent		MSOCS
13	MNDHS BAX OPS5	Baxter - Quality Enterprises II		MSOCS
14	MNDHS BJI OPS	Bemidji		MSOCS
15	MNDHS BLK OPS	Big Lake - Ridge Place		MSOCS
16	MNDHS BIW OPS	Biwabik		MSOCS
17	MNDHS BPK OPS1	Bk Park - 89th Crescent		MSOCS
18	MNDHS BPK OPS2	Bk Park - 91st Crescent		MSOCS
19	MNDHS BPK OPS3	Bk Park - Prestwick		MSOCS
20	MNDHS BPK OPS4	Bk Park - West River Road		MSOCS
21	MNDHS BLN OPS	Blaine		MSOCS
22	MNDHS BLM OPS1	Bloomingont - Old Shak Rd		MSOCS
23	MNDHS BLM OPS2	Bloomington		MSOCS
24	MNDHS BLM OPS3	Bloomington - Solstice Voc		MSOCS
25	MNDHS BLM OPS4	Bloomington - Windfield		MSOCS
26	MNDHS BHM OPS	Braham		MSOCS
27	MNDHS BRD OPS2	Brainerd - Hillcrest		MSOCS
28	MNDHS BRD OPS3	Brainerd - Pine Street		MSOCS
29	MNDHS BRD OPS4	Brainerd - Pickeral Lake		MSOCS
30	MNDHS BRD OPS5	Brainerd - N Street		MSOCS
31	MNDHS BVL OPS1	Burnsville - Crystal		MSOCS
32	MNDHS BVL OPS2	Burnsville - Dakota Crisis		MSOCS
33	MNDHS CAM OPS1	Cambridge - East Central		MSOCS
34	MNDHS CAM OPS2	Cambridge - Evergreen		MSOCS
35	MNDHS CLK OPS	Cass Lake		MSOCS
36	MNDHS CMP OPS	Champlin - Dean		MSOCS
37	MNDHS CLC OPS1	Clara City - Division Street		MSOCS
38	MNDHS CLC OPS2	Clara City - Sparks		MSOCS
39	MNDHS CLQ OPS	Cloquet - Stephen Road		MSOCS
40	MNDHS DAY OPS	Dayton - Rosewood		MSOCS
41	MNDHS DLH OPS1	Duluth - Airpark I		MSOCS
42	MNDHS DLH OPS2	Duluth - Lincoln Park Lifeskills		MSOCS
43	MNDHS DLH OPS3	Duluth - Pike Lake		MSOCS
44	MNDHS DLH OPS4	Duluth - Swan Lake		MSOCS
45	MNDHS EGN OPS	Eagan - Sibley		MSOCS
46	MNDHS EGF OPS1	East Grand Forks		MSOCS

Attachment 3C

47	MNDHS EGF OPS2	East Grand Forks - Red River		MSOCS
48	MNDHS EDP OPS1	Eden Prairie - Chatham Way		MSOCS
49	MNDHS EDP OPS2	Eden Prairie - Dell Road		MSOCS
50	MNDHS EDP OPS3	Eden Prairie - Met Tech Park		MSOCS
51	MNDHS EDP OPS4	Eden Prairie - Met Unlimited		MSOCS
52	MNDHS EBL OPS1	Elbow Lake NE		MSOCS
53	MNDHS EBL OPS2	Elbow Lake SE		MSOCS
54	MNDHS FAR OPS1	Faribault - 3rd Street		MSOCS
55	MNDHS FAR OPS2	Faribault - 7th Avenue		MSOCS
56	MNDHS FAR OPS3	Faribault - Allen Path		MSOCS
57	MNDHS FAR OPS4	Faribault - Cannon River		MSOCS
58	MNDHS FAR OPS5	Faribault - Park Avenue		MSOCS
59	MNDHS FAR OPS6	Faribault - Shumway		MSOCS
60	MNDHS FAR OPS7	Faribault - Windsor PL		MSOCS
61	MNDHS FRM OPS1	Farmington - Donnelly		MSOCS
62	MNDHS FRM OPS2	Farmington - Eaves Way		MSOCS
63	MNDHS FF OPS2	Fergus Falls - Gustavus		MSOCS
64	MNDHS FF OPS3	Fergus Falls - Sterling Heights		MSOCS
65	MNDHS FF OPS4	Fergus Falls - Union		MSOCS
66	MNDHS FLK OPS1	Forest Lake		MSOCS
67	MNDHS FLK OPS2	Forest Lake - Irish		MSOCS
68	MNDHS FDL OPS	Fridley - Metro Tech Ind		MSOCS
69	MNDHS GVL OPS	Golden Valley - Scott Avenue		MSOCS
70	MNDHS HAM OPS	Ham Lake		MSOCS
71	MNDHS HAR OPS	Harris		MSOCS
72	MNDHS HAY OPS	Hayfield - Westfield		MSOCS
73	MNDHS HER OPS1	Hermanton - W Arrowhead Rd		MSOCS
74	MNDHS HER OPS2	Hermantown - W Marble St		MSOCS
75	MNDHS HER OPS3	Hermantown Crisis		MSOCS
76	MNDHS ISN OPS	Isanti - Rum River Orn		MSOCS
77	MNDHS KSN OPS1	Kasson		MSOCS
78	MNDHS KSN OPS2	Kasson - Region 10		MSOCS
79	MNDHS LKV OPS1	Lakeville - Hershey		MSOCS
80	MNDHS LKV OPS2	Lakeville - Jonquil		MSOCS
81	MNDHS LPT OPS	Laporte		MSOCS
82	MNDHS MAH OPS	Mahnomen		MSOCS
83	MNDHS MPG OPS	Maple Grove		MSOCS
84	MNDHS MED OPS	Medford - Straight River Ent		MSOCS
85	MNDHS MHD OPS	Moorhead		MSOCS
86	MNDHS MLK OPS1	Moose Lake		MSOCS
87	MNDHS MLK OPS2	Moose Tracks		MSOCS
88	MNDHS MLK OPS3	Moose Tracks 2		MSOCS
89	MNDHS MOR OPS	Morristown		MSOCS
90	MNDHS MVW OPS	Mounds View - Crestview		MSOCS
91	MNDHS MSP OPS1	Mpls - 19th Avenue		MSOCS
92	MNDHS MSP OPS2	Mpls - 41st Avenue		MSOCS
93	MNDHS MSP OPS3	Mpls - Newton		MSOCS
94	MNDHS NBH OPS1	North Branch		MSOCS
95	MNDHS NBH OPS2	North Branch - Zodiac		MSOCS

Attachment 3C

96	MNDHS NTF OPS1	Northfield - Canby Court		MSOCS
97	MNDHS NTF OPS2	Northfield - Highland		MSOCS
98	MNDHS NTF OPS3	Northfield - Jefferson		MSOCS
99	MNDHS NTF OPS4	Northfield - Sciota		MSOCS
100	MNDHS OWT OPS1	Owatonna - 32nd Avenue		MSOCS
101	MNDHS OWT OPS2	Owatonna - 8th Avenue		MSOCS
102	MNDHS PRK OPS	Park Rapids		MSOCS
103	MNDHS PIL OPS1	Pillager - Lakes Employment		MSOCS
104	MNDHS PIL OPS2	Pillager - Northland Park		MSOCS
105	MNDHS PIL OPS3	Pillager - Sylvan		MSOCS
106	MNDHS PIL OPS4	Pillager Creek		MSOCS
107	MNDHS PIN OPS1	Pine City		MSOCS
108	MNDHS PIN OPS2	Pine City Crisis		MSOCS
109	MNDHS PNI OPS	Pine Island		MSOCS
110	MNDHS RAN OPS	Randall - Maplewood		MSOCS
111	MNDHS RAY OPS	Raymond - Chippewa		MSOCS
112	MNDHS RWF OPS1	Redwood Falls		MSOCS
113	MNDHS RWF OPS2	Redwood Falls - Falls Place		MSOCS
114	MNDHS RWF OPS3	Redwood Falls - Middle River		MSOCS
115	MNDHS RCH OPS1	Richfield		MSOCS
116	MNDHS RCH OPS2	Richfield - South Stevens		MSOCS
117	MNDHS ROC OPS1	Rochester		MSOCS
118	MNDHS ROC OPS2	Rochester - Greenhouse		MSOCS
119	MNDHS ROC OPS3	Rochester - Hunter Hills		MSOCS
120	MNDHS ROC OPS4	Rochester - Knotting Hill		MSOCS
121	MNDHS ROC OPS5	Rochester - Summerset		MSOCS
122	MNDHS RSV OPS	Roseville - Woodcrest		MSOCS
123	MNDHS SKR OPS	Sauk Rapids - Arbor Way		MSOCS
124	MNDHS SCN OPS	Scandia		MSOCS
125	MNDHS STP OPS	St Paul - Aurora II		MSOCS
126	MNDHS SP3 OPS	St Peter - Valley Enterprises		MSOCS
127	MNDHS SCY OPS	Stacy - Fawn Lake		MSOCS
128	MNDHS STA OPS	Staples - Oakwood Terrace		MSOCS
129	MNDHS VDN OPS1	Vadnais Heights		MSOCS
130	MNDHS VDN OPS2	Vadnais Hgts - Aurora		MSOCS
131	MNDHS VIR OPS1	Virginia		MSOCS
132	MNDHS VIR OPS2	Virginia - Range Area Voc		MSOCS
133	MNDHS WSP OPS	W St Paul - Christensen		MSOCS
134	MNDHS WAR OPS	Warsaw - Ableman		MSOCS
135	MNDHS WTC OPS	West Concord		MSOCS
136	MNDHS WBL OPS1	White Bear Lake		MSOCS
137	MNDHS WBL OPS2	White Bear Lake - Halper Way		MSOCS
138	MNDHS WIL OPS1	Willmar - Crossroads		MSOCS
139	MNDHS WIL OPS2	Willmar - Lakeland I		MSOCS
140	MNDHS WIL OPS3	Willmar - Lakeland II		MSOCS
141	MNDHS WIL OPS4	Willmar - Terrace Drive		MSOCS

Attachment 4 - DHS ARMER Plan

DHS MN ARMER Radio Inventory (Existing and Future)

Existing Locations	Facility		No. of Radios
Moose Lake MSOP	MSOP		345
St. Peter MSOP	MSOP		150
Carlton CARE	CARE		20
REP Program & Security	Admin & EM		20
Total Radios			535
Future Locations	**Facility**	**No. of Locations**	**Total no. of Radios**
Anoka MSHS	MSHS	1	117
St. Peter MSHS	MSHS	1	516
Anoka CARE	CARE	1	25
Anoka	MSOCS	1	2
Akeley	MSOCS	2	4
Alexandria	CBHH	1	25
Alexandria	MSOCS	1	2
Annandale	CBHH	1	21
Austin	MSOCS	4	8
Baxter	MSOCS	5	10
Baxter	CBHH	1	23
Bemidji	MSOCS	1	2
Bemidji	CBHH	1	23
Big Lake	MSOCS	1	2
Biwabik	MSOCS	1	2
Blaine	MSOCS	1	2
Braham	MSOCS	1	2
Brainerd	CARE MSHS	1	34
Brainerd	MSOCS	4	8
Brooklyn Park	MSOCS	4	8
Burnsville	MSOCS	2	4
Cambridge	CARE	1	23
Cambridge	MSOCS	2	4
Cass Lake	MSOCS	1	2
Champlin	MSOCS	1	2
Clara City	MSOCS	2	4
Cloquet	MSOCS	1	2
Dayton	MSOCS	1	2
Duluth	MSOCS	4	8
Eagan	MSOCS	1	2
East Grand Forks	MSOCS	2	4
Eden Prairie	MSOCS	4	8
Elbow Lake	MSOCS	2	4
Faribault	MSOCS	7	14
Farmington	MSOCS	2	4
Fergus Falls	CARE CBHH	1	47

Attachment 4 - DHS ARMER Plan

Fergus Falls	MSOCS	3	6
Forest Lake	MSOCS	2	4
Fridley	MSOCS	1	2
Golden Valley	MSOCS	1	2
Ham Lake	MSOCS	1	2
Harris	MSOCS	1	2
Hayfield	MSOCS	1	2
Hermantown	MSOCS	3	6
Isanti	MSOCS	1	2
Kasson	MSOCS	2	4
Lakeville	MSOCS	2	4
LaPorte	MSOCS	1	2
Mahnomen	MSOCS	1	2
Maple Grove	MSOCS	1	2
Medford	MSOCS	1	2
Moorhead	MSOCS	1	2
Moose Lake	MSOCS	3	6
Morristown	MSOCS	1	2
Moundsview	MSOCS	1	2
Minneapolis	MSOCS	3	6
North Branch	MSOCS	2	4
Northfield	MSOCS	4	8
Owatonna	MSOCS	2	4
Park Rapids	MSOCS	1	2
Pillager	MSOCS	4	8
Pine City	MSOCS	2	4
Pine Island	MSOCS	1	2
Randall	MSOCS	1	2
Raymond	MSOCS	1	2
Redwood Falls	MSOCS	3	6
Richfield	MSOCS	2	4
Rochester	CBHH	1	20
Rochester	MSOCS	5	10
Roseville	MSOCS	1	2
Sauk Rapids	MSOCS	1	2
Scandia	MSOCS	1	2
St Paul	MSOCS	1	2
St Peter	CARE CBHH	1	40
St Peter	MSOCS	1	2
Stacy	MSOCS	1	2
Staples	MSOCS	1	2
Vadnais Heights	MSOCS	2	4
Virginia	MSOCS	2	4
W St Paul	MSOCS	1	2
Wadena	MSHS	1	
Warsaw	MSOCS	1	2
West Concord	MSOCS	1	2

Attachment 4 - DHS ARMER Plan

White Bear Lake	MSOCS	2	4
Willmar	CABHS CARE	1	38
Willmar	MSHS	1	??
Willmar	MSOCS	4	8
GRAND TOTALS	**0**		**1761**

State of Minnesota DHS

Minnesota Department of **Human Services**

ARMER Radio Participation Plan

January 2016

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Attachment 2: List of Low-Tier, Secondary Non-Dispatch Locations

Attachment 3A: DHS Existing ARMER Talk Groups (Fleet map)

Attachment 3B: DHS Proposed ARMER Talk Groups (Primary locations)

Attachment 3C: DHS Proposed ARMER Talk Groups (Secondary locations)

Attachment 4: DHS ARMER Radio Inventory (Existing and Proposed)

ARMER Participation Plan

1. Introduction

A. ARMER System Application – State of Minnesota/Department of Human Services

The State of Minnesota Department of Human Services (DHS) requests approval of this new ARMER Participation Plan for continued participation in and use of the State of Minnesota Allied Radio Matrix for Emergency Response (ARMER) radio system. The agency is a "Full Participant" in the ARMER system, and has been utilizing the ARMER system at select locations for the past 5 years through the existing joint Participation Plan approved in 2009 for the State DHS and DOC (Department of Corrections).

DHS requests that this application and plan be reviewed and approved by the following agencies:

- ☐ Metropolitan Emergency Service Board (MESB)
- ☐ State of Minnesota Operations and Technical Committee (OTC)
- ☐ State of Minnesota Emergency Communications Board (SECB)

In 2009 the DHS and DOC jointly submitted and received approval of an ARMER Participation Plan developed to cover both agencies' use of the ARMER radio system. This plan specifically incorporated the physical locations where ARMER radio equipment was being implemented, and the system would be used on a constant basis. Both agencies established a contract to use the system through this initial plan process.

In 2014, the two agencies determined that each should employ independent ARMER plans, to better allow for changes in operations and equipment, in conjunction with use of the system. The DOC submitted a new plan in November 2014 which was approved, and effectively removed the DOC from the previous joint plan. The DHS has now prepared this plan to address their use of the ARMER system. Upon approval of this DHS plan, the joint plan submitted in 2009 will be deleted.

Additionally, DHS has an existing Limited Participation Plan that covers the use of a relatively small number of radios for the following agency operations:

- ☐ "REP" (Radiological Emergency Preparedness) program
- ☐ Security staff at various Minneapolis/St. Paul DHS administrative locations

The radios and operations included in these existing plans are incorporated into this new "Full" participation plan. Details of the use of the radios for these existing operations are provided in following sections of this new plan.

This new DHS plan has been developed based on the requirements and operational standards established for participation in and use of the ARMER radio system[1], and carries forth the core criteria established in the previous joint plan, along with the addition of new plan data. The agency desires to continue their

contract with the MESB and the State of Minnesota Department of Transportation (MnDOT) for use of the ARMER system.

A list of the department and locations within the agency to be included in the use of this system is provided in Section 1.D of this planning document.

B. Agency and Project Summary

The Department of Human Services is the largest agency within the State of Minnesota organization, and operates or oversees over 150 facilities of various sizes throughout the state. These facilities range from high security operations such as the MSOP (Minnesota Sex Offender Program) facilities in Moose Lake and St. Peter, State Hospitals (MSHS) in Anoka, Brainerd, and St. Peter to Community Behavioral Health Hospitals, as well as other lower-level facilities.

Currently, the only locations incorporated into previous joint ARMER plan were the Moose Lake and St. Peter MSOP facilities, along with the REP and Security use included in the existing Limited plan. The use of 800 MHz ARMER radio system equipment has proven critical to successful operations at these facilities. The DHS has been working to determine what additional facilities should be considered for the future implementation of 800 MHz ARMER radio system equipment; some locations now utilize UHF radio system equipment, and other locations have no radio communications and utilize cellular telephones.

The general classification of DHS facilities included in this plan are as follows:

1. High-tier, Primary Dispatch operations: 4 locations, including St. Peter and Moose Lake MSOP, etc. These facilities will include 100+ radios, along with dispatch console equipment and direct connectivity into the ARMER system infrastructure.
2. Mid-tier, Primary Non-dispatch operations: 1 existing and 11 proposed locations, including smaller State Hospitals and addiction recovery facilities. These facilities will include 20 to 40 radios, and not use any system-based dispatch console equipment.
3. Low-tier, Secondary Non-dispatch operations: Approximately 140 locations, including community-based juvenile and adult behavioral and addiction treatment facilities. These facilities will have no more than 5 radios, and no dispatch equipment.
4. Mobile/portable-only non-facility based operations, including the REP program and Facility Security and Maintenance operations at Metro office locations.

Refer to the detailed agency review in the next section of this plan, along with the associated facility acronym list.
Note: Although this plan incorporates many new locations for potential ARMER radio usage, no immediate plans are being made for the purchase and implementation of additional ARMER radios for any of the facilities or locations included in this plan. Any new radios included in this plan are to be considered potential long-term purchases. As such, this plan shall be considered a future long-term "phased" implementation plan, as funding and budgeting becomes available.

The total number of ARMER radios to be covered by this new ARMER plan are as follows:

- ☐ 500 existing radios (Moose Lake and St. Peter MSOP's, REP program, and)
- ☐ 20 existing REP and Security radio operations
- ☐ 1,220 new radios forecasted for future implementation at other facilities

The primary goals of a new radio communications system are:

- ☐ Provide improved radio communications reliability, coverage, and capacity through ARMER system use
- ☐ Replacement of the existing aging VHF and UHF radio system equipment
- ☐ Provide expanded DHS and region wide interoperability between public safety agencies

The usage of the ARMER system by DHS operations and personnel will be in the following areas:

- ☐ General operations
- ☐ Security
- ☐ Facility maintenance
- ☐ Wide-area event, emergency response and activity coordination

Through this planning process, the DHS has concluded that continued use, and eventual expansion of 800 MHz ARMER radio system use will best meet the needs of the agencies radio communications goals, and will provide the required level of interoperability between public safety agencies throughout the state.

The primary points of contact for this project are:

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C. Jurisdictional Coverage of System

The radio system is intended to provide radio communications services at the DHS facilities located throughout the State of Minnesota. ***The use of ARMER radios at most of the DHS locations is intended to provide coverage within and around the specific locations; the wide-area use of radios and talk groups will be very limited, and dealt with on a specific basis.*** There are no city or county geographical boundaries associated with the DHS's use of the ARMER system.

D. Entities and Users Participating in the Planned System

It is the intent of DHS and associated agencies within to implement a shared radio system that will incorporate both public safety and additional governmental agencies. For reference purposes, the following list of acronyms of DHS operations and facilities is provided for this plan:

- MSOP: Minnesota Sex Offender Program
- MSHS: Minnesota Specialty Health Systems
- CARE: Community Addiction Recovery Enterprise
- CBHH: Community Behavioral Health Hospital
- CABHS: Child and Adolescent Behavioral Health Services
- MSOCS: Minnesota State Operated Community Services
- REP: Radiological Emergency Preparedness program
- CO: Central Office/Facility and Security Management

As noted in the previous section of this document, the types of facilities incorporated into the DHS plan are grouped into four general classifications:

1. High-tier, Primary Dispatch Operations (4):
   a. MSOP Moose Lake (existing); 344 radios, dispatch consoles
   b. MSOP St. Peter (existing); 149 radios, dispatch consoles
   c. MSHS Anoka (future); 113 radios, dispatch consoles
   d. MSHS St Peter (future); 511 radios, dispatch consoles

   These existing facilities currently now have, and will continue to have the greatest ARMER radio inventory and associated system airtime use of the locations included in this plan. This is due to the type of operations involved, along with the number of radios now in service or planned for future usage. All four of these facilities are high-security locations, with high-risk patients and clients. A review of the existing and forecast system airtime usage is provided in Section 2.A.vii of this plan.

2. Mid-tier, Primary Non-dispatch operations (1 existing, 11 future locations):
   a. Alexandria (CBHH)
   b. Annandale (CBHH)

c. Baxter ((CBHH)
d. Bemidji (CBHH)
e. Brainerd (CARE, MSHS)
f. Carlton (CARE, existing)
g. Fergus Falls (CARE, CBHH)
h. Rochester (CBHH)
i. St. Peter (CARE, CBHH) (separate physical location from the MSOP and MSHS)
j. Wadena (MSHS)
k. Willmar (CABHS, CARE)
l. Willmar (MSHS)

Of these locations, only the Carlton CARE facility currently has and uses ARMER radios (20 radios). These facilities will use ARMER radios for a variety of uses, including security, general operations and coordinating patient care, facilities maintenance, and emergency operations. These facilities will have an average of 20 to 25 radios per locations.

Refer to Table 1 (page 10) of this Plan for a detailed list of these facilities and associated number of radios planned, along with a state wide map of DHS facilities (Attachment 1A) included in the ARMER planning process.

3. Low-tier, Secondary Non-dispatch operations (~140 future locations):

Refer to Attachment 1B for a map of these locations, and Attachment 2 for a detailed list of these facilities. These facilities will have a maximum of 2 to 5 radios per location, with a single Talk Group, and will be used mainly for emergency purposes and coordination with other facility personnel. The expected overall impact on the ARMER system will be very limited.

4. Mobile/portable-only non-facility based operations:
   a. REP program (12 existing radios)

      The Radiological Emergency Preparedness (REP) program is a tactical group designed to provide emergency response and coordination for an event or accident involving radiation leaks or exposure at the Monticello and/or Prairie Island nuclear power plants. It is the responsibility of this team to mobilize to the affected area(s) and provide emergency evacuation, decontamination of personnel and coordinate related emergency response activities. Communications and coordination with local law, fire and EMS agencies would be included in this work.

      The actual use of these radios would be focused in the Wright and Sherburne county areas for the Monticello nuclear plant, and the Goodhue (MN) and Pierce (WI) county areas for the Prairie Island nuclear plant.

The radios are stored in a cache at the DHS Central Office in St. Paul, and deployed when needed for emergency operations and training drills and exercises. The primary use of these radios will be for the purpose of conducting training drills and exercises.

As noted, there are only 12 ARMER radios associated with this program, and potentially 7 talk groups. Most of the talk groups are capable of statewide operation, as is needed for these operations.

b. Facility Security and Maintenance operations at Mpls/St. Paul Metro office locations (8 radios)

DHS currently has 8 radios being used by administrative, security and facilities maintenance staff at their "Anderson" and "Lafayette" locations in downtown St. Paul. There are 4 active talk groups associated with these operations.

E. Existing Radio System Configuration(s)

The DHS facilities included in this plan are now using both ARMER and non-ARMER VHF and UHF radio equipment at the various locations. The locations now using ARMER are:

- Moose Lake MSOP
- St. Peter MSOP
- REP program
- DHS main offices – St. Paul
- Carlton CARE Center (SOA channels only)

All other locations are using local VHF or UHF radio systems and equipment. There is no central dispatch center in place for communications with the different locations around the state, although this is being considered for future implementation.

2. ARMER System Technical Review

A. System Design

Since 2009, when the ARMER system was implemented for the DHS Moose Lake and St. Peter MSOP facilities, the system has proven to meet the operational needs of these facilities, and provides enhanced interoperability with the other state and local agencies also using the system.

During the current expanded DHS ARMER system planning process, work was done to determine that the system would meet the needs of the remaining DHS facilities. Because the system provides both local coverage as well as wide-area capabilities, it was concluded that the ARMER system could provide important benefits to the DHS operations. The primary factors included in the planning process:

- ☐ System infrastructure and equipment plans
- ☐ Tower site planning
- ☐ Tower site and Public Safety Answering Point (PSAP) connectivity
- ☐ 800 MHz channel requirements
- ☐ 800 MHz talk group requirements
- ☐ Quantity of end user radios

Specific details of how these system parameters will be addressed are provided in this section of the document.

i) System Infrastructure and Tower Site Planning

The DHS plan for use of the ARMER system is geographically diverse, spread out through many areas of the state, and will therefore utilize many of the ARMER tower sites throughout the entire state. The process of identifying the specific tower sites in a plan is to determine which sites will be used by the DHS radio users, the amount of radio traffic expected from these radios, and the potential impact on overall traffic and channel loading at these sites.

The DHS's overall use of the system's tower sites, and the resulting traffic loading will vary widely depending on the type of DHS facility being reviewed. The Moose Lake and St. Peter MSOP locations, with 100's of radios and dispatch console operations, will obviously have a much greater impact on the local tower sites than a smaller location such as Bemidji, which would have 23 portable radios, or Owatonna with 2 radios. It is possible to identify the tower site(s) associated with each proposed DHS facility, however with the large (~155) number of facilities being included in this plan, the approach being used to address this technical issue will be as follows:

- ☐ High-tier, Primary Dispatch locations: A review of the specific tower sites and traffic loading calculations are provided for these four facilities (Moose Lake, St. Peter [2], and Anoka).
- ☐ Mid-tier, Primary Non-dispatch locations: A review of the specific tower sites and traffic loading calculations are provided for these 11 facilities.

- Low-tier, Secondary Non-dispatch locations: The expected "target" tower site for each of the approximately 140 locations is included in the facility data included in Attachment 2. No coverage maps or traffic loading calculations are included for these locations, due to the very small number of radios and talk groups planned for these locations.
- Mobile/portable-only operations: Again due to the small number of radios (which are currently on the system and incorporated into the existing Limited Plan) and few talk groups, no loading calculations are included for these radios.

ARMER Tower Sites: A review of the tower sites associated with the High-tier and Mid-tier Primary locations is provided below; refer also to the Table at the end of this section for a summary of these tower sites. A review of the tower site usage and traffic loading data and calculations is provided in Section A. vii of this document.

- High-tier, Primary Dispatch locations

a) Moose Lake MSOP (existing)

The Moose Lake facility has been operation on the ARMER system since 2009/2010, with approximately 341 portable radios and 3 RF control stations. The DHS and DOC jointly implemented a new 800 MHz ARMER "ASR" tower site located at the agency's Moose Lake facility. The Moose Lake ASR tower site is a 5-channel RF site, and provides the primary coverage and system access for radios being used in and around the Moose Lake facility.

b) St. Peter MSOP (existing)

The St. Peter MSOP facility has been operational on the ARMER system for several years, with approximately 141 portable radios and 8 RF control stations. Radio traffic for the St. Peter MSOP is routed through the MnDOT St. Peter ARMER tower site, which is located on the top of the hill, within the boundaries of the state's St. Peter campus.

The St. Peter ARMER tower site is part of the St. Peter 6-site simulcast subnetwork. As such, all radio traffic for the St. Peter MSP is routed through all of the local tower sites associated with the simulcast subnetwork. This subnetwork includes 10 800 MHz RF channels per site; a system usage and capacity review is included in Section A. vii.

c) St. Peter MSHS (future)

The St. Peter MSHS facility is located on the same campus area as the MSOP operation, but is a completely separate building and operation located further up the hill, approximately ¼ mile from the MSOP location.

At such time in the future that MSHS operations convert to ARMER system operation, it will potentially add a significant number of radios (~500) to the (10 channel) simulcast subnetwork. A system usage and capacity review is included in Section A. vii.

d) Anoka MSHS (future)

Testing has been conducted with ARMER portable radios at the Anoka facility, and the radios routinely affiliate with the Hennepin West tower site, located in downtown Anoka, which is 1.3 miles southwest of the Anoka MSHS facility. Radios did not normally affiliate with Anoka County subsystem sites.

At such time in the future that Anoka MSHS operations convert to ARMER system operation, it will potentially add 117 radios to the Hennepin West subnetwork. A system usage and capacity review is included in Section A. vii.

☐ Mid-tier, Primary Non-dispatch facilities

Refer to Table 1 shown below.

☐ Low-tier, Secondary Non-dispatch facilities

Refer to Attachment 1B for a map of these locations, and Attachment 2 for detailed location and ARMER site affiliation data. Refer also to Section (v) of this plan for additional mobile and portable radio inventory data.

Table 1: DHS Primary ARMER tower site usage and radio inventory summary:

DHS Facility Location	ARMER Tower Site	ARMER Region	County	Qty of Radios
Moose Lake MSOP (existing)	Moose Lake ASR	NE	Carlton	344
St. Peter MSOP (existing)	St. Peter Simulcast	SC	Nicollet	150
Carlton CARE (existing)	None (using SOA)	NE	Carlton	20
REP Program & Security	As needed	--	Statewide	20
Future Locations:				
St. Peter MSHS	St. Peter Simulcast	SC	Nicollet	516
Anoka MSHS	Henn. Co West Simul	Metro	Anoka	117
Anoka CARE	Henn. Co. West Simul	Metro	Anoka	25
Alexandria CBHH	Garfield	CM	Douglas	25
Annandale CBHH	Annandale Simul	CM	Wright	21
Baxter CBHH	Baxter	NE	Crow Wing	23
Bemidji CBHH	Bemidji	NW	Beltrami	23
Brainerd CARE, MSHS	Baxter	NE	Crow Wing	34
Cambridge CARE	Cambridge	Metro	Isanti	23?
Fergus Falls CARE, CBHH	Fergus Falls	CM	Otter Tail	47
Rochester CBHH	Rochester Simul	SE	Olmstead	20
St. Peter CARE, CBHH	St. Peter Simul	SC	Nicollet	40
Wadena MSHS	Hewitt	CM	Wadena	17
Willmar CABHS, CARE	Willmar	CM	Kandiyohi	38
Willmar MSHS	Willmar	CM	Kandiyohi	20
MSOCS Facilities (141)	See Attachment 2	--	--	282

ii) Local Equipment Additions and Enhancements

The ARMER planning study conducted for DHS focused in two primary areas:

- Radio coverage and tower sites
- 800 MHz tower site channel capacity

As noted, this ARMER plan for DHS includes the potential addition of over 1,000 radios to the existing ARMER radio network, however many of these radios are scattered throughout the state, with anywhere from 2 to 35 radios being added at any single location (other than the St. Peter location).

The key areas of potential concern would be the two new High-tier Primary dispatch locations at St. Peter and Anoka, where larger groups of radios would be added.

- St. Peter: The plan includes the implementation of up to 511 radios at this facility, which would be affiliated with the local St. Peter tower site and simulcast subnetwork.

  The St. Peter MSHS operation currently uses two VHF repeater stations for operational communications, with approximately 141 portable radios. If this facility is converted to ARMER operational use, the number of radios may be increased up to a total of 511 radios.

  It would be expected that the level of radio system use and associated airtime would increase with the increased number of radios. To determine the overall estimated radio usage, a radio traffic airtime study was conducted with the existing repeater system. This data has been used to calculate the expected traffic from the larger inventory of new radios, and is provided in Section 2.A.viii of this plan.

- Anoka: The plan includes the implementation of up to 117 radios at this facility, which would be affiliated with the Hennepin County West simulcast network. A traffic review of the current use of the Hennepin West subnetwork is provided in Section 2.A.vii of this report.

  The Anoka MSHS currently uses two UHF repeater systems for Operations, Security and Maintenance operations. To again attempt to determine the potential impact on the Hennepin West subnetwork site usage by the addition of the DHS ARMER radios, an airtime study was conducted with the existing UHF systems to establish the typical amount of radio usage in the facility. This data is included in Section 2.A.viii of this plan.

Conclusions:

- Tower sites and coverage:

  Based on the results of ARMER system testing with portable radios at several of the High-tier and Mid-tier DHS locations, it was determined that the level of coverage provided by the existing ARMER system tower sites was sufficient at all locations and no new tower sites would be needed for any of the DHS locations.

  However, some locations have significant below-ground tunnels and office areas, which do not have reliable coverage from existing tower sites. On-site BDA's will be considered for these locations in the future.

- Tower site channel use and capacity:

  Though this proposed DHS ARMER plan brings a significant number of new radios to the ARMER radio system, it is our belief that the radios are spread out through such a large service area around the state, in conjunction with the limited number of talk groups for most of these locations, that the overall impact will be very minimal on the local tower site channels.

  The DHS believes that the two locations which require a deeper review of ARMER tower site channel capacity are the proposed St. Peter MSHS and Anoka hospitals. A significant number of radios are being considered for both of these locations, with resulting radio communications traffic at local ARMER tower sites.

  The review of this topic included in Section 2.B.viii of this ARMER plan included the following data:

  c. The number of radios planned for use at the target DHS locations
  d. The number of talk groups
  e. Existing ARMER tower site traffic usage
  f. A calculation of the expected radio traffic usage, based on existing radio airtime usage monitoring, whereby the amount of radio traffic currently being generated was quantified for use in this plan.

  The results of this work show a fairly limited overall impact on the traffic loading for the ARMER tower sites serving these facilities, other than the St. Peter location, which is estimated to bring a 9% increase in radio traffic to the St. Peter simulcast subnetwork.

  Refer to Section A. vii) of this plan for the detailed review of this topic.

iii) PSAP/Dispatch Center Console Equipment and Network Connectivity

The Moose Lake and St. Peter DHS dispatch centers are currently equipped with radio control consoles and are used for operations with the ARMER network:

- The Moose Lake MSOP control center is equipped with a two-position MCC7500 console system, connected to the Moose Lake ASR site via microwave radio link.

  This console system is equipped with 12 CCGW ports.

- ☐ The St. Peter MSOP control center is equipped with a two-position MIP5000 console system, connected to a group of eight (8) 800 MHz RF control stations, which connect via RF to the St. Peter ARMER tower site. No CCGWs are associated with this location.

No changes are planned for these two existing locations.

- ☐ The new Anoka and St. Peter MSHS control centers will utilize new Motorola MCC7500 control consoles for radio operations.

Each of these consoles will require a total of 10 Conventional Channel Gateway (CCGWs) ports.

High-level system connectivity diagrams are provided on the following pages.

Connectivity between the DHS dispatch/control centers and the ARMER system is required for operation of the system talk groups, as well other non-trunked conventional channel resources.

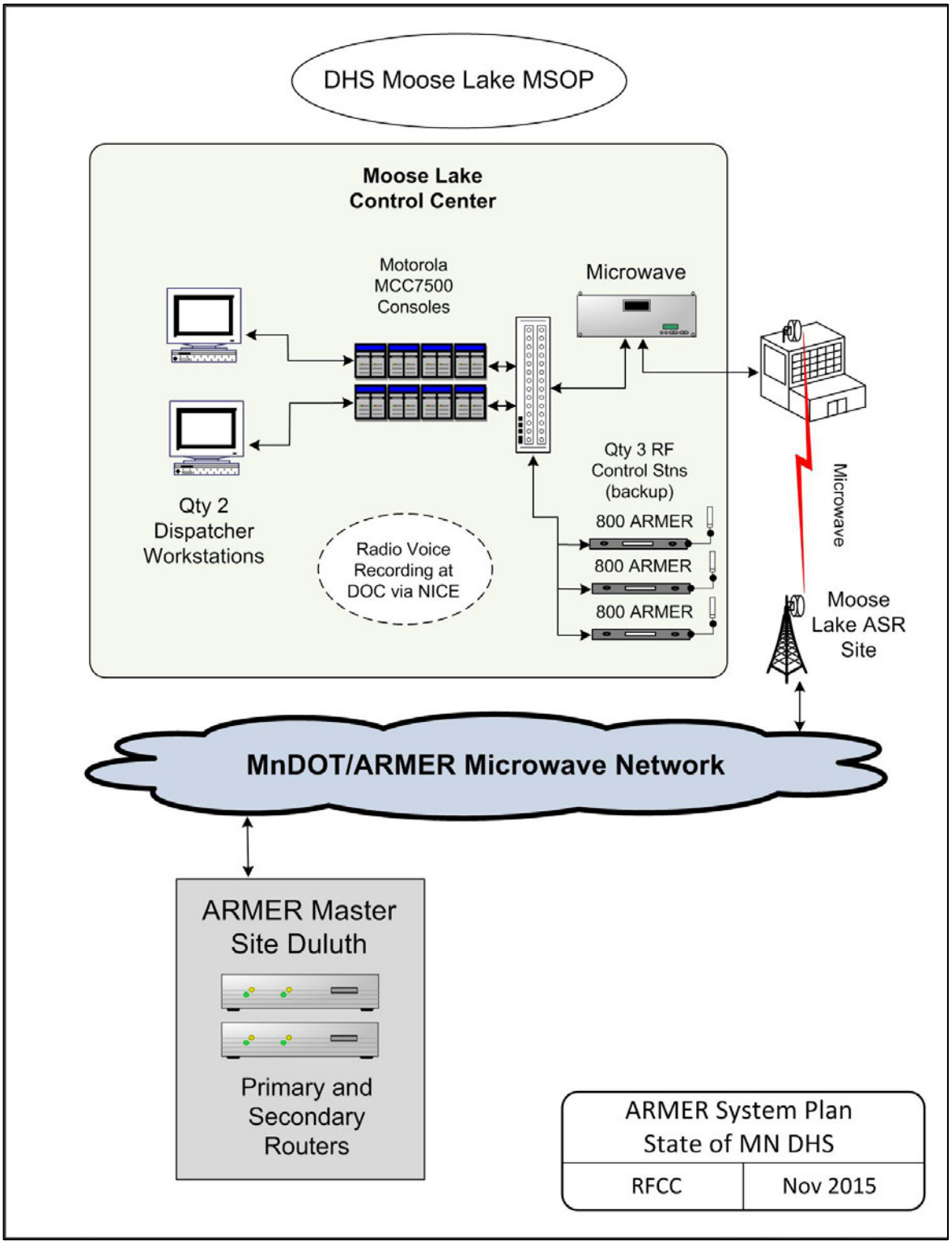
- ☐ The existing Moose Lake MSOP control center is connected via microwave radio to the Moose Lake ASR tower site
- ☐ The existing St. Peter MSOP control center uses 800 MHz RF control stations to communicate on-channel through the St. Peter ARMER tower site.
- ☐ The proposed Anoka MSHS control center will utilize microwave radio connectivity to the Hennepin West ARMER site
- ☐ The proposed St. Peter MSHS control center will utilize fiber optic connectivity to the St. Peter ARMER tower site

iv) Logging/Recording

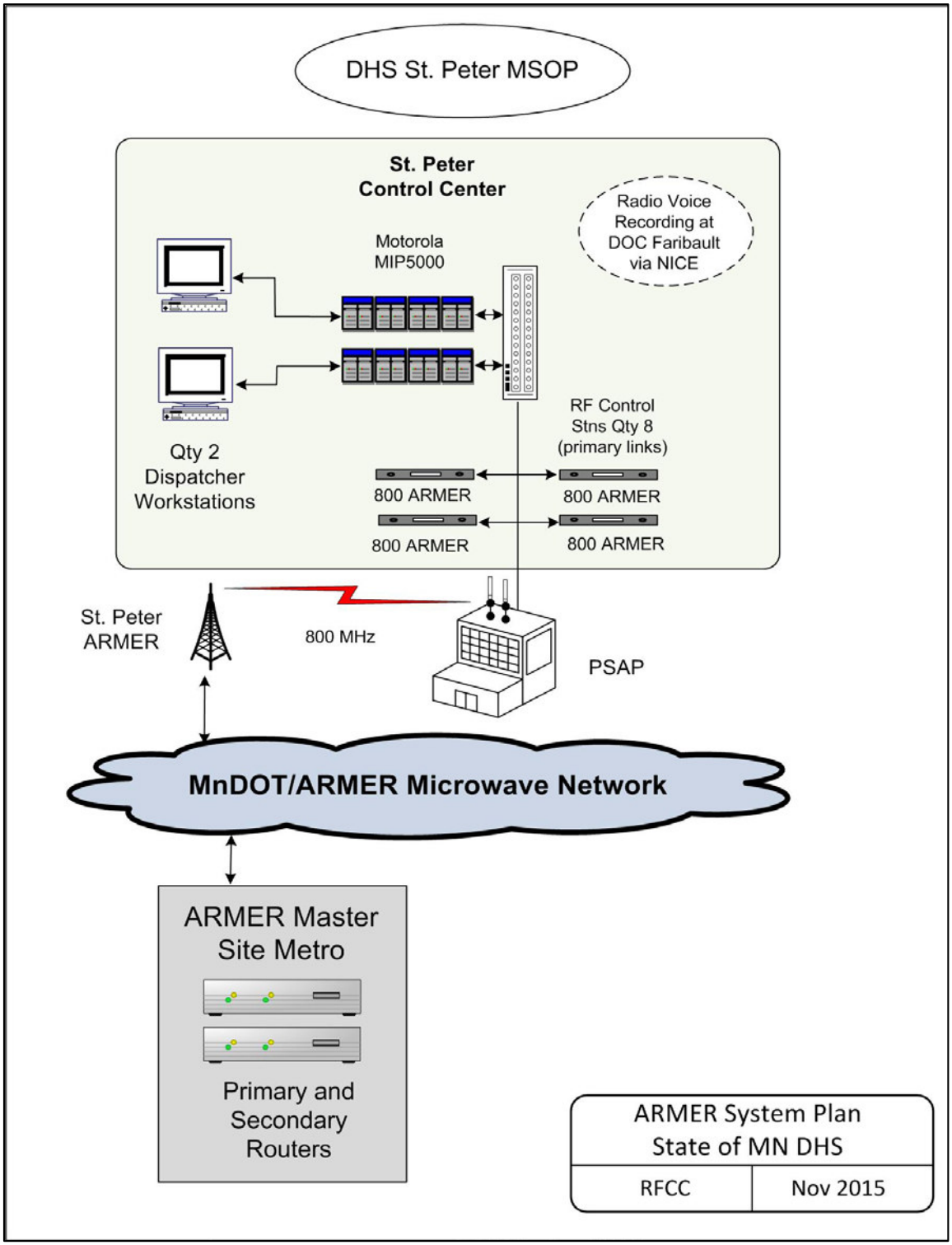
Voice Recording/Logging: The existing Moose Lake and St. Peter dispatch centers will continue to use their existing voice logging recorder systems for the recording of ARMER and conventional channel radio traffic.

- ☐ The Moose Lake MSOP control center utilizes the NICE network-based recording system, which is jointly operated and managed by the DHS and DOC. This recorder is located at the Moose Lake facility.
- ☐ The St. Peter MSOP control center utilizes a NICE network-based recording system, operated and managed by the DOC located at their Faribault facility.
- ☐ The new Anoka and St. Peter MSHS control centers will utilize a NICE network-based system for voice recording.

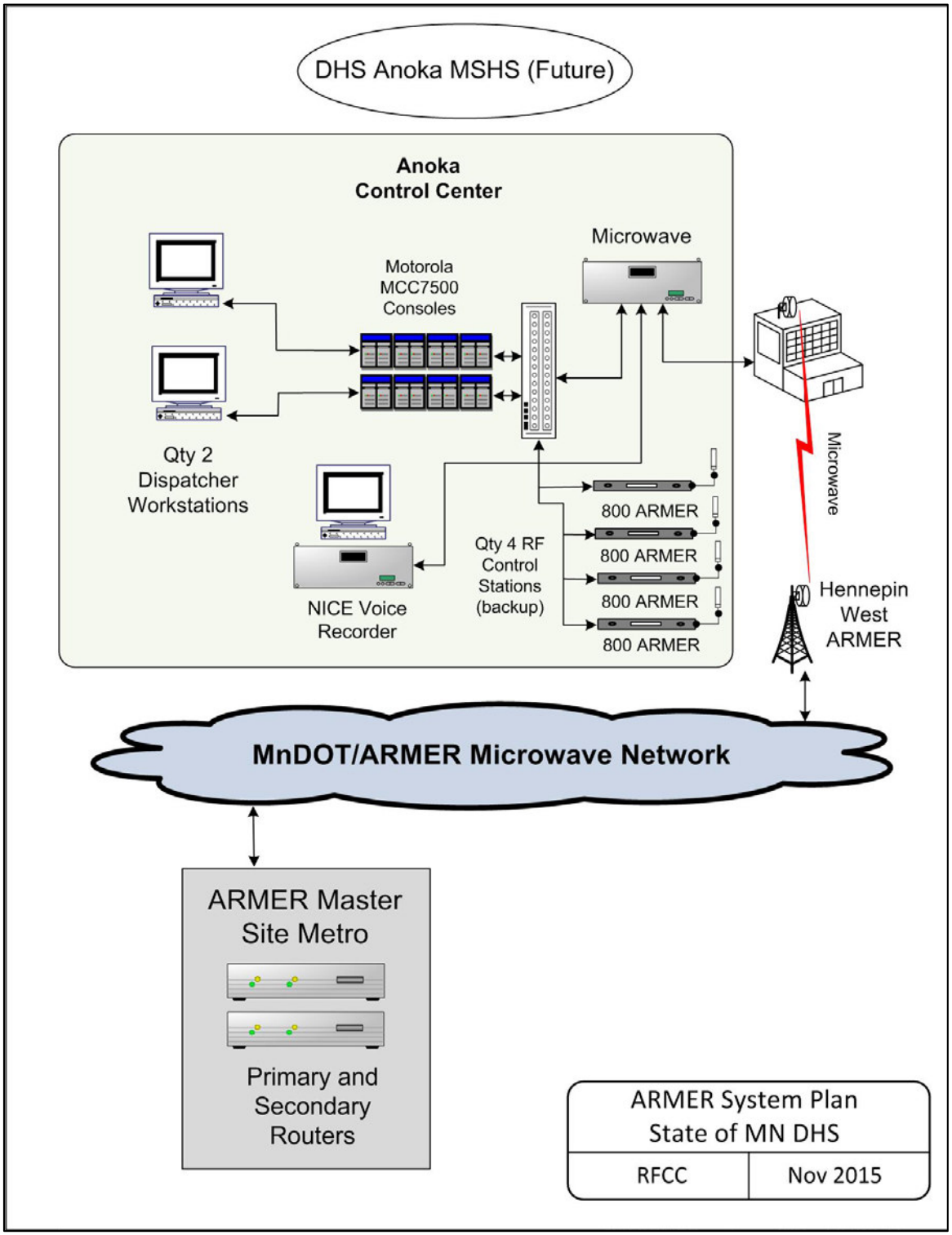
Moose Lake MSOP PSAP ARMER Architecture (existing)



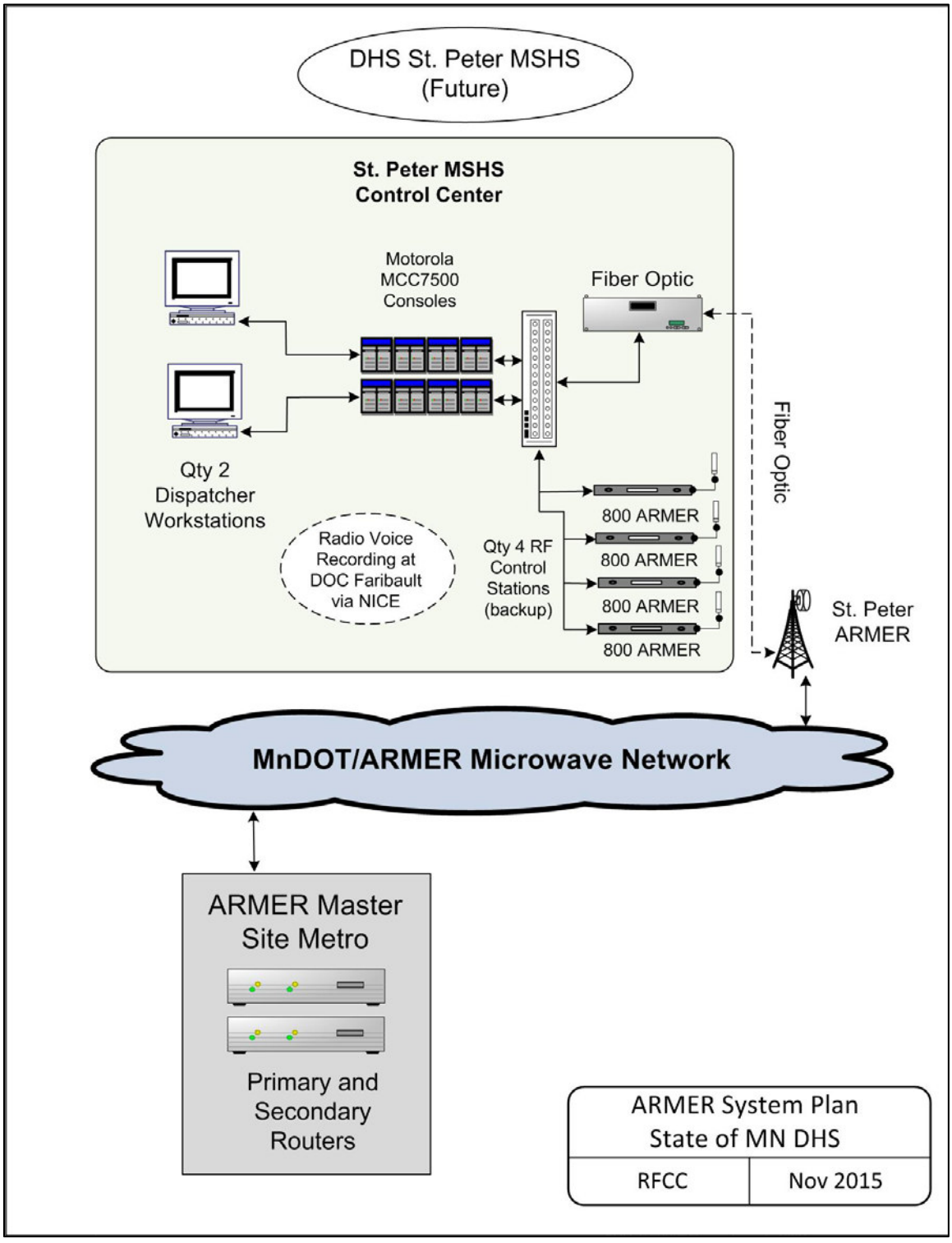
St. Peter MSOP PSAP ARMER Architecture (existing)



Anoka MSHS PSAP ARMER Architecture (future)



St. Peter MSHS PSAP ARMER Architecture (future)



v) Subscriber Radios

The 800 MHz subscriber (mobile and portable) radio inventory planning work conducted with DHS agencies has established an estimated total number of ARMER radios that would added to the system. A total of approximately 1,761 portable, mobile and control base radios would be implemented over some period of time in the system, if all agencies purchase or obtain the radios identified within this plan. This includes the total potential for long term planning for the agencies within the DHS.

The DHS agencies currently have a total of approximately 535 radios on hand, which are being used at multiple locations throughout the ARMER system. A detailed breakdown of DHS's existing and future mobile and portable radio inventory requirements are provided in Attachment 4.

Please note that no new or additional near-term radio purchases are planned at the time this ARMER plan is being prepared. All future radio purchases and implementation will be based on the funding available for a system-wide radio deployment.

vi) System Talk Group Planning and ID Requirements

The previous DHS/DOC ARMER plan submitted in 2009, along with Limited ARMER Plan now in place, included a total of 28 talk groups for use by the DHS agencies. These talk groups will be retained for existing operations, though some renaming may be required to meet current operational standards.

The revised Fleetmap for DHS has been updated based on the expanded long-term needs of DHS agencies, and will have a proposed total of 200 talk groups, including the existing talk group ID's currently active in the ARMER system database. The revised fleetmap and talk groups are organized as follows:

- ☐ 28 existing talk groups for current Moose Lake, St. Peter, REP and Administrative operations (refer to Attachment 3A)
- ☐ 31 new talk groups for the proposed Primary, non-dispatch facilities listed in Table 1 (refer to Attachment 3B)
- ☐ 141 new talk groups for the proposed Secondary, non-dispatch facilities listed in Attachment 2 (refer to Attachment 3C)

In addressing the talk group needs for the DHS agencies, the following basic outline will be used:

- ☐ Primary and secondary dispatch talk groups for primary location operations
- ☐ Talk groups for Security, Tactical, Administrative and Facilities Maintenance use
- ☐ Talk groups for interoperability
- ☐ Individual talk group(s) for each participating agency location

Radio usage: The existing radios incorporated into the current DHS ARMER plans are used for daily operations, security, maintenance and other activities as noted. This model will apply to the new/future Primary locations as well, at such time as they are implemented.

The radio usage at the 141 Secondary locations will be very limited, as only two radios and one talk group are planned for each of these facilities. The radio use at these sites will be general operations, emergencies and patient care. Because of this limited use, it is expected that these radios will have very little impact on ARMER site traffic loading throughout the state.

A total of 1,825 ARMER system IDs are expected for the DHS implementation, which includes three to five year estimated totals, if radios are implemented at all of the listed locations:

- ☐ 1,725 for mobile and portable subscriber units total expected on the system for all agencies
- ☐ 100 for Dispatch and base operations

All regional and statewide interoperability talk groups will be incorporated into DHS radios as defined by ARMER standards.

vii) 800 MHz System Traffic Loading Review

The DHS agencies and locations incorporated into this plan will be utilizing numerous ARMER tower sites and RF resources throughout many areas of the state. This includes high-usage operations such as the existing Moose Lake and St. Peter MSOP facilities, as well as the planned St. Peter MSHS hospital. Other Primary future locations such as the Anoka and Brainerd MSHS operations are projected to have a moderate level of use, based on the number of radios and talk groups. The numerous Secondary non-dispatch operations will have a very limited use of the system, as each location will only have two radios and one talk group, and are not expected to have any significant effect on overall site or system traffic.

The DHS recognizes that in a trunked radio system it is important that the tower sites be established with a sufficient number of 800 MHz channels to ensure that all radio users are able to access the system when needed for both routine and emergency radio communications traffic. A balance must be established between providing a sufficient number of channels and the cost of implementing those channels, as well as the number of 800 MHz frequencies available for the channels.

System usage calculations that are conducted to address this topic need to incorporate existing neighboring city, county and state radios along with the proposed radios for the system. The industry-standard Erlang-C process is often used to calculate or analyze the traffic loading data within a radio system.

However, the DHS believes that since the ARMER tower sites to be used by DHS have now been operational for years and have knowable levels of existing radio traffic and "System Busy" data, it would better to review the calculated additional traffic that would be generated by DHS radios added to the system and sites.

The DHS facilities included in this plan are grouped into four categories based on their operational needs and anticipated radio system usage; these groupings will be used to assess the existing and potential future use and impact on the ARMER network's tower sites and RF channel resources:

1. Existing Primary Dispatch Locations (Moose Lake and St. Peter MSOPs)
2. Proposed Primary Dispatch Locations (St. Peter and Anoka MSHS)
3. Proposed Primary Non-dispatch locations (14)
4. Proposed Secondary Non-dispatch locations (141)

A review of each of these categories and locations is provided within this plan.

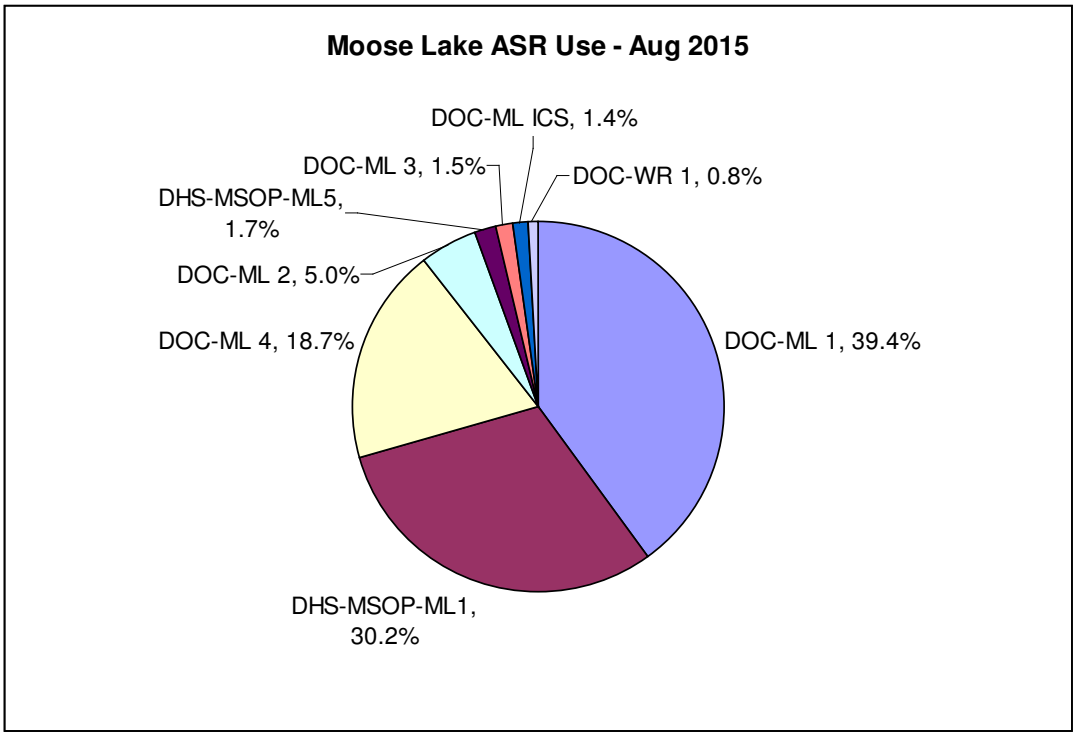
1. Existing Primary Dispatch Locations (Moose Lake and St. Peter MSOPs)

Both the Moose Lake and St. Peter MSOP locations have been operational for several years, and were included in the original joint DHS/DOC ARMER plan. No changes are planned for either of these locations, so existing traffic data is provided for reference purposes.

Moose Lake MSOP:

- 345 radios
- 8 Talk Groups

The majority of the radio traffic from the Moose Lake MSOP operation is routed through the local DHS/DOC ASR site, which is located on the DHS/DOC facility campus. A graph of the traffic for this site for the month of August 2015 is provided below. This site generally does not experience any Busy queues.



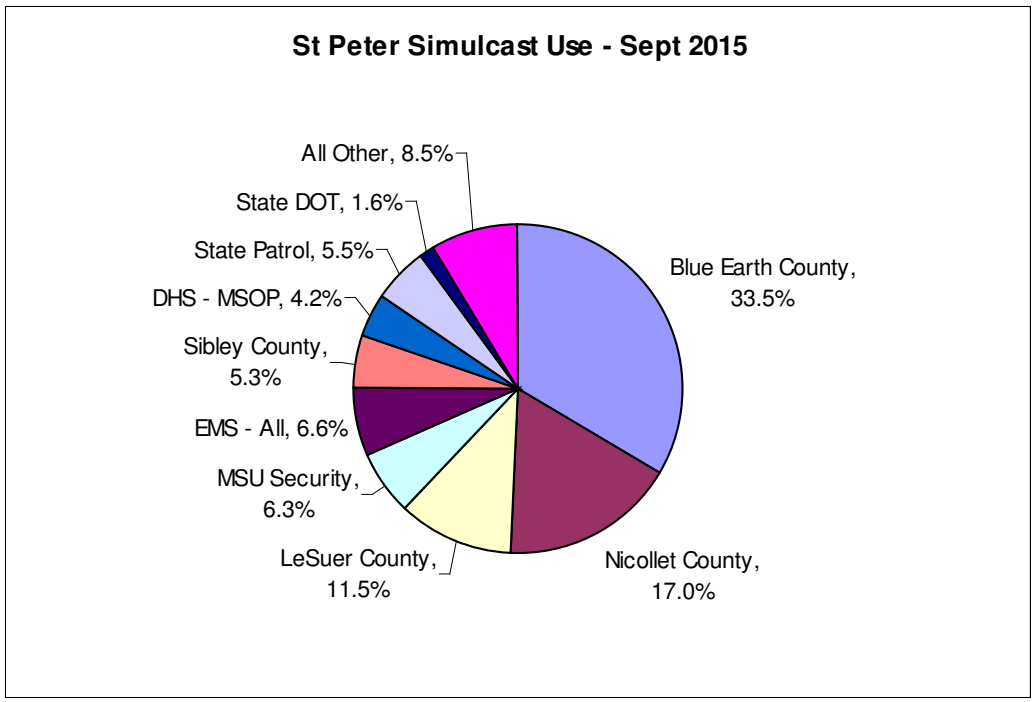
St. Peter MSOP:

- 150 radios
- 9 Talk Groups

All radio traffic from the St. Peter MSOP operation is route through the St. Peter Simulcast system, which is a 6-site, 10-channel subsystem. A review of the traffic for this site was conducted for the months of July, August and September 2015. The results of this review reflect the following:

- July 2015: DHS MSOP use = 4.4% of total subsystem traffic
- Aug 2015: DHS MSOP use = 5.2% of total subsystem traffic
- Sept 2015: DHS MSOP use = 4.2% of total subsystem traffic

Shown below is a chart of the St. Peter simulcast system traffic for September 2015:



A review of the monthly ARMER system traffic reports for the St. Peter simulcast subsystem show few or no "Busies" for the three months data reviewed for this plan.

2. Proposed Primary Dispatch Locations (St. Peter and Anoka MSHS)

The DHS ARMER plan includes new radios for the St. Peter and Anoka MSHS locations, as well as MCC7500 dispatch consoles.

St. Peter MSHS: As described in an earlier section of this plan, the St. Peter MSHS facility is located on the same campus as the existing MSOP facility, but is a completely separate operation, and is located in separate buildings on the northwest area of the campus. A two-channel UHF repeater system is currently used for radio communications at the MSHS facility.

As shown in the previous section of this plan (Existing Primary Locations – St. Peter MSOP), the MSOP operation with 141 radios utilizes approximately 4% - 5% of the monthly system airtime traffic.

Proposed Radio System Data:

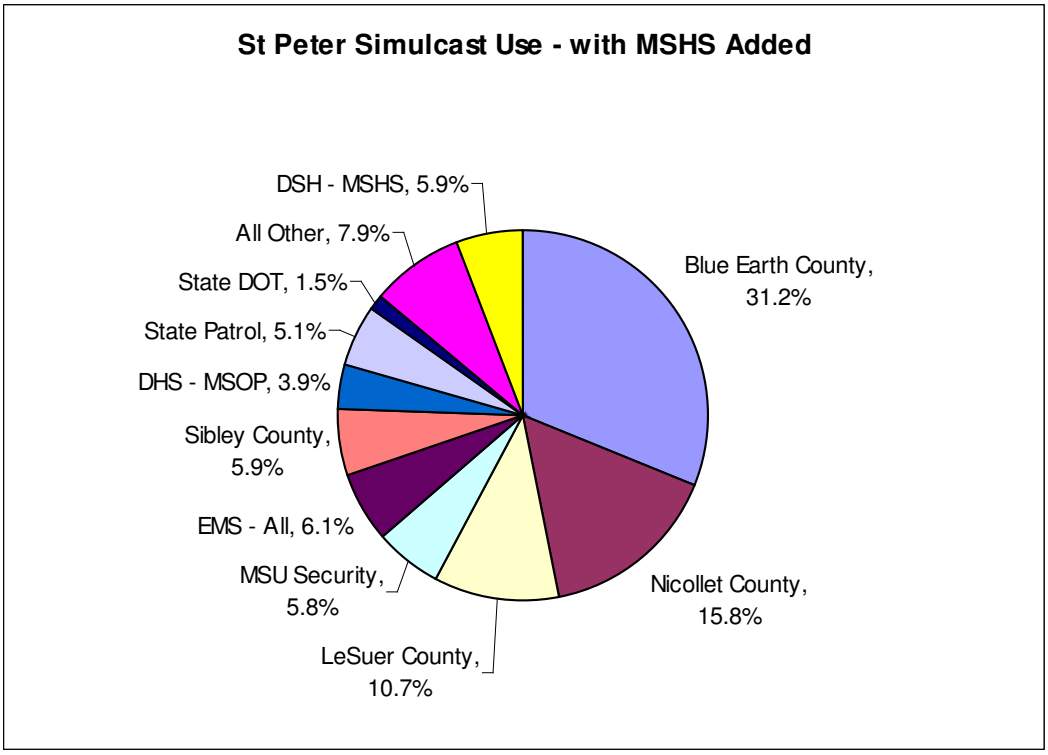
- 350 existing VHF radios (for reference purposes)
- 516 new ARMER radios (including RF control stations)
- 5 ARMER Talk Groups

To develop an estimate of what radio traffic levels might result from the implementation of 516 new radios at the MSHS facility, the following steps were taken to establish accurate estimates.

- The existing MSOP system use of 4% - 5% is based on a measured 21 to 27 monthly hours of actual system airtime (with 141 radios).
- A radio airtime study was conducted to determine the current use of the MSHS UHF repeater systems. This process showed a total daily airtime use of 40 minutes per day, which calculates to an airtime use of 20 hours per month (with 350 radios).
- If the number of radios were expanded from the existing 350 to a total of 511 (portables), which is an increase of roughly 46%, it would be expected that the monthly airtime use would rise by a similar amount. However, it has been seen that radio use potentially increases more than the calculated amount with a trunked radio system, and the expanded number of talk groups available to the users.

  With this in mind, DHS has calculated that the resulting monthly ARMER system airtime usage for the MSHS operation would be approximately 29 hours per month (20 hours x 1.46 = 29 hours). An additional 15% has been added to this number, which results in 33 hours of ARMER system airtime.

Assuming these calculations and estimates to be valid, the MSHS implementation would add 5% to 6% more traffic to the St. Peter simulcast subnetwork, and account for 5.3% of the overall traffic on the subnetwork. Shown below is a usage chart for the St. Peter simulcast subnetwork with the new DHS MSHS radio traffic added to it (shown in yellow). Compare this chart to the one shown above with existing St. Peter usage.



The question resulting from this work is whether this increase would result in the generation of "System Busies", which are not currently being experienced in the St. Peter Simulcast subnetwork. The DHS would argue that this traffic increase would not result in the generation of "System Busies", based on the lack of these now being experienced, along with the overall capacity of the 10-channel system.

However, should the addition of these radios result in a traffic increase which then results in an unmanageable amount of "System Busies", the DHS would be willing to cooperate with the other system users to develop a cost-sharing arrangement to add one channel to each of the subnetwork tower sites. Additional review and research would be needed before this type of action were to be taken in the future.

Anoka MSHS: The Anoka MSHS facility is located 1.5 miles north of downtown Anoka. A two-channel UHF repeater system is currently used for radio communications at the Anoka MSHS facility.

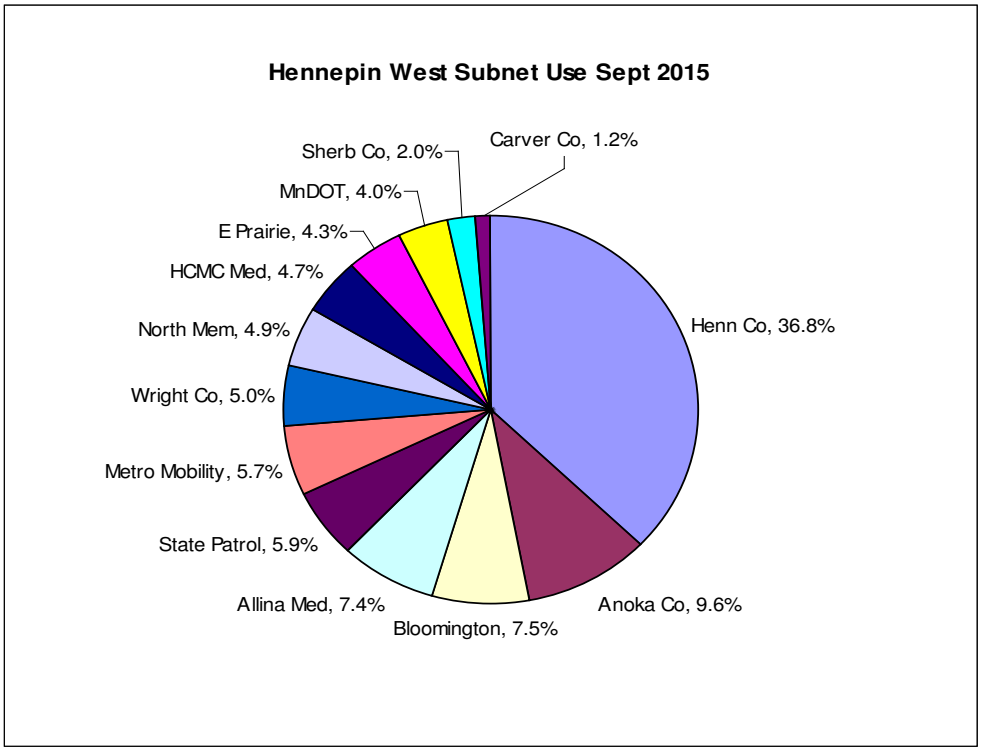
Proposed Radio System Data:

- 125 existing VHF radios (for reference purposes)
- 125 new ARMER radios (including RF control stations)
- 5 ARMER Talk Groups

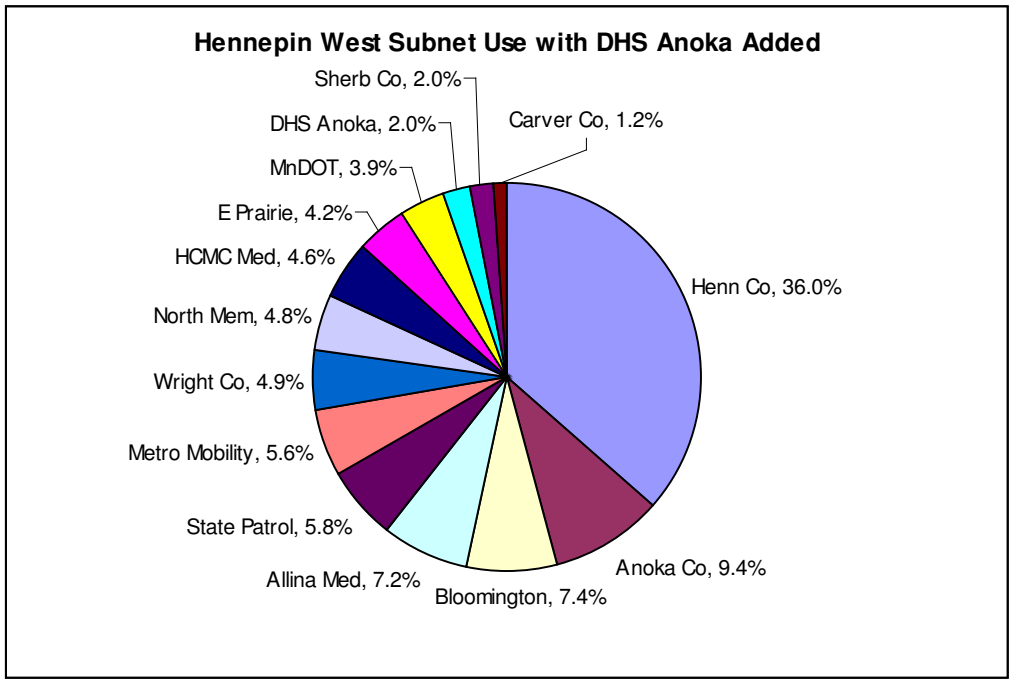
To develop an estimate of what radio traffic levels might result from the implementation of 125 new radios at the MSHS facility, the following steps were taken to establish accurate estimates.

- A radio airtime study was conducted to determine the current use of the Anoka MSHS UHF repeater systems. This process showed a total weekly airtime use of 6 hours per week, which calculates to an airtime use of 24 hours per month.
- Testing was conducted within the Anoka facility with ARMER portable radios to determine the level of ARMER system coverage within the building(s), as well as establish which ARMER tower site the radios would affiliate with. The results of this testing revealed that the Hennepin West tower site, in downtown Anoka, was the site preferred by the radios during all testing periods. This is due to the Hennepin West tower site being located only 1.5 miles from the Anoka MSHS facility.
- An existing radio traffic review was conducted of the Hennepin West simulcast subnetwork. The Hennepin West subnetwork is a 16-channel system.

Shown below is a chart of the Hennepin West simulcast system traffic for September 2015:



If the proposed Anoka MSHS traffic of 24 hours per month were added to the Hennepin West subnet, it would cause for an estimated 2% increase in overall traffic use, as shown in the chart shown below with Anoka DHS radio traffic added to it (shown in light blue). Compare this chart to the one shown above.



A review of the overall busy count for the Hennepin West subnetwork for the past 24 months shows very few traffic periods which resulted in Busy queues for system users, in spite of the large volume of radio traffic. The actual data shows that no Busy responses were generated in 8 of the 24 months, and even the busiest months had a maximum Busy level of less than .0001% (811,983 PTT's and 71 Busies); in other words, the system has more than sufficient capacity for existing radio users, and (in DHS opinion) would be unaffected by the addition of DHS Anoka MSHS radio traffic.

3. Proposed Primary Non-dispatch Locations (12)

This DHS plan includes 12 new mid-sized facility locations where new ARMER radios would be implemented. These locations are smaller than the larger primary facilities, and would utilize an average of 25 radios, and have two ARMER talk groups per location (Ops and TAC). The chart below shows the locations, along with the county in which the facility resides, the ARMER Region and target tower site, and number of radios planned.

DHS Facility Location	ARMER Tower Site	ARMER Region	County	Qty of Radios
Alexandria CBHH	Garfield	CM	Douglas	25
Annandale CBHH	Annandale Simul	CM	Wright	21
Baxter CBHH	Baxter	NE	Crow Wing	23
Bemidji CBHH	Bemidji	NW	Beltrami	23
Brainerd CARE, MSHS	Baxter	NE	Crow Wing	34
Cambridge CARE	Cambridge	Metro	Isanti	23
Fergus Falls CARE, CBHH	Fergus Falls	CM	Otter Tail	47
Rochester CBHH	Rochester Simul	SE	Olmstead	20
St. Peter CARE, CBHH	St. Peter Simul	SC	Nicollet	40
Wadena MSHS	Hewitt	CM	Wadena	17
Willmar CABHS, CARE	Willmar	CM	Kandiyohi	38
Willmar MSHS	Willmar	CM	Kandiyohi	20

A review of the overall existing traffic loading for each of these tower sites was conducted to determine if there were any obvious problems at these sites. None of the sites listed have experienced any levels of Busy queuing with the exception of Bemidji, which is a known issue, although the level of Busy queuing is still less than .0005%. The Busy issues at this site will be further improved with the installation of a new MCC7500 console system at the Beltrami PSAP. Based on a review of the above data, the DHS believes that the eventual implementation of ARMER radios as shown at these locations will not have a significant impact to channel loading at these tower sites and subnetworks.

4. Proposed Secondary Non-dispatch locations (141)

This plan includes the potential addition of radios at approximately 141 MSOCS state-owned or leased treatment facilities. These locations would be equipped with only two radios (for a total of 282 radios) and a single talk group, for use by the management staff; these radios would serve two primary purposes:

- Provide direct radio communications between primary management staff personnel for daily operations
- Allow the staff to communicate directly via radio to other DHS personnel outside of the local facility, using one of the DHS statewide talk groups
- Allow direct communications with local public safety agency personnel in the event of an emergency or other situation

Refer to Attachment 2 for a list of these facilities, and Attachment 3C for a list of the talk groups planned for them.

Because of the limited number of radios and talk groups at these locations, as well the diverse locations, DHS believes that the use of these radios would have no significant affect on tower site channel traffic loading throughout the system.

viii) Legacy Radio System Equipment

DHS will continue to operate and control existing VHF and UHF radio system equipment at DHS facilities until such time that the individual locations obtain ARMER radios and transition to the new system. Many of the locations have only portable radios, without any other system infrastructure or fixed-station equipment.

B. Coverage Review

i) Design Parameters

The overall system design and resulting communications coverage of the ARMER system can be affected by the following goals and concerns:

- ☐ Desire to obtain in-building coverage as best as possible within the DHS facilities
- ☐ Need to cover the geographic service area with the existing ARMER tower sites
- ☐ Cost of developing new tower sites, including structures, land acquisition, Federal Aviation Administration (FAA)/FCC/National Environmental Policy Act (NEPA) considerations, as well as local zoning
- ☐ Availability of and costs associated with existing and planned tower sites

The existing and planned tower sites planned for this project are being provided by the State's ARMER network. The coverage goals for the DHS use of the system are:

- ☐ 95% "on the street/outdoor" reliability to a portable radio using a standard antenna held at a height of five feet above ground level
- ☐ 90+% "in-building/above ground" reliability to a portable radio using a standard antenna, held at a height of five feet above ground level, within a 6db building. It is understood that many of the DHS buildings have loss factors higher than 6db, and in-building BDA's will be considered as needed for these locations.

ii) Coverage Propagation Mapping

In the planning for this project, coverage modeling and propagation analysis was done to determine if the basic tower site planning assumptions were valid and could be expected to result in a system that would meet the DHS's coverage needs.

These coverage maps were generated with the RadioSoft© ComStudy2© software program. The modeling for the coverage analysis was done with both the Okumura and Longley-Rice propagation models. The coverage maps were done for portable talk-in and talk-out usage, as this is the most difficult coverage scenario. If the basic system design shows the portable goals are attainable, then mobile coverage should not be a concern.

Provided below are the parameters used for the coverage modeling:

Site Parameters	Value
Transmit Antenna Gain	9 db, omnidirectional
Transmit Output Power (into main line)	35 watts
Transmission Line Size (tower over 300 feet)	1.25 inch Heliax®
Transmission Line Size (tower under 300 feet)	7/8 inch Heliax®
Transmission Line Length	Based on tower height
Receive Antenna Gain	9db, omnidirectional

Receive Tower Top Amplifier Gain	5db
Receive Transmission Line Size	7/8 inch Heliax®
Receive Transmission Length	Based on tower height
Field Unit Parameters	**Value**
Type of Unit	Portable radio
Environment	Outdoors, on-street
Antenna Height	5 feet
Transmit Power	3 watts

Preliminary coverage maps for portable radio talk-in and talk-out are shown on the following pages. The color coding for these maps is:

- Light Green: Reliable signal coverage 40 dBu or greater
- Yellow: Reliable signal coverage 33 dBu or greater
- Red: Marginal signal coverage 19 dBu or greater
- White: No useable coverage expected 10 dBu or less

3 predicted-coverage maps are provided in this plan; all maps utilize all tower sites within and outside of the DHS that provide coverage in the target service area:

1. Moose Lake ASR 12db coverage
2. St. Peter 12db coverage
3. Anoka 12db coverage

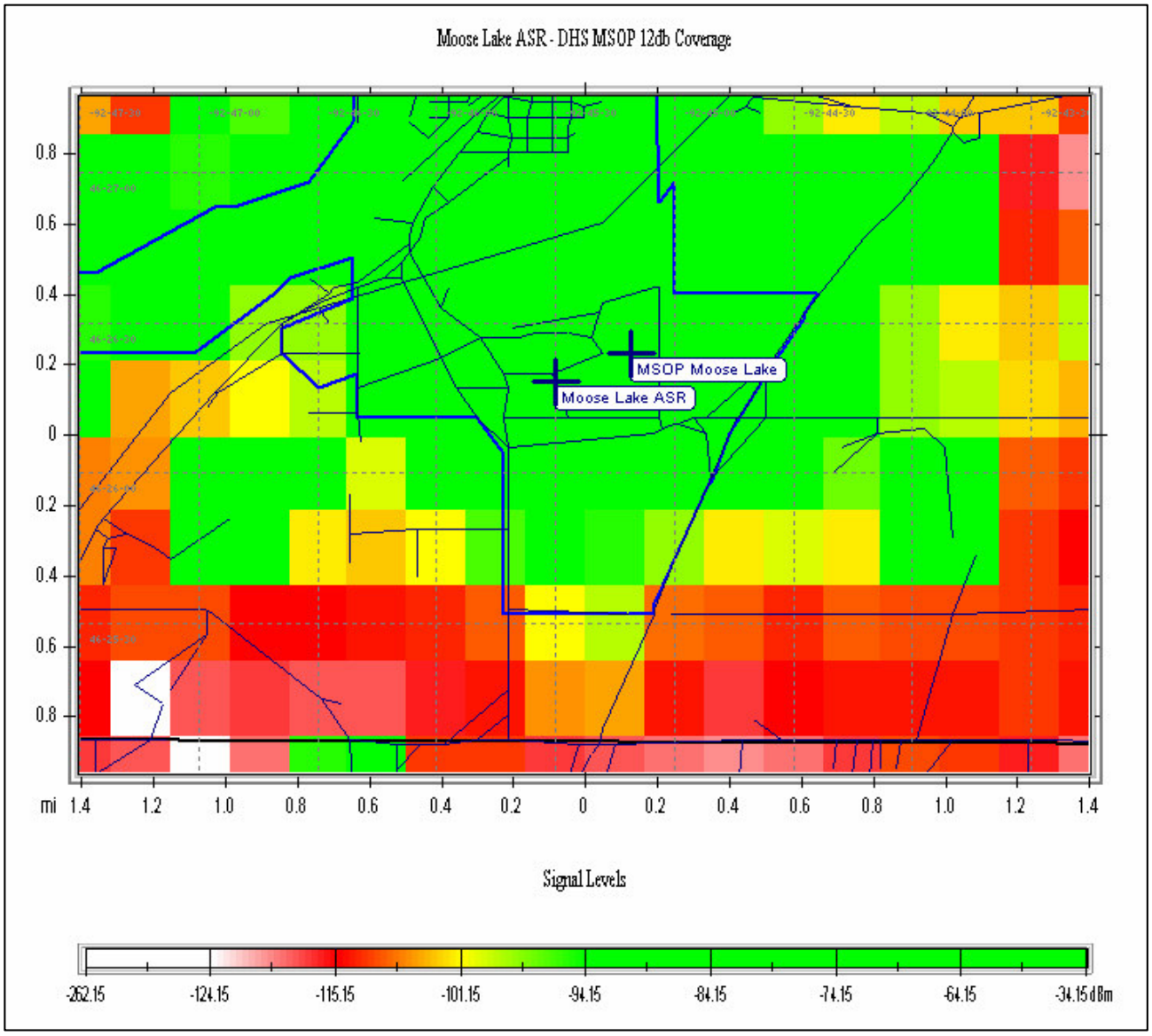
As shown in the predicted coverage maps on the following pages, the potential coverage for the system, using the selected sites and parameters is very good and is expected to meet the project coverage goals.

All maps were created using RadioSoft© ComStudy2© software program, and the modeling for the coverage analysis was done with the Longley-Rice and Okumura propagation models. The modeling parameters used by the State and RFCC are similar, however a somewhat different color-coding scheme is used. The State's maps use green areas represent a 40 dBu level of radio signal, which can generally be translated into a level where reliable portable and mobile radio coverage can be expected. The areas shaded in blue represent a 33 dBu level of radio signal, which typically reflects mobile (vehicle-mounted) radio coverage.

The areas shaded in white reflect a lower level of signal where coverage cannot be predicted, and can be interpreted to represent very weak areas of coverage. The only areas of the DHS where this is predicted to exist are in the far west and east corner of the DHS, and are not expected to be problematic.

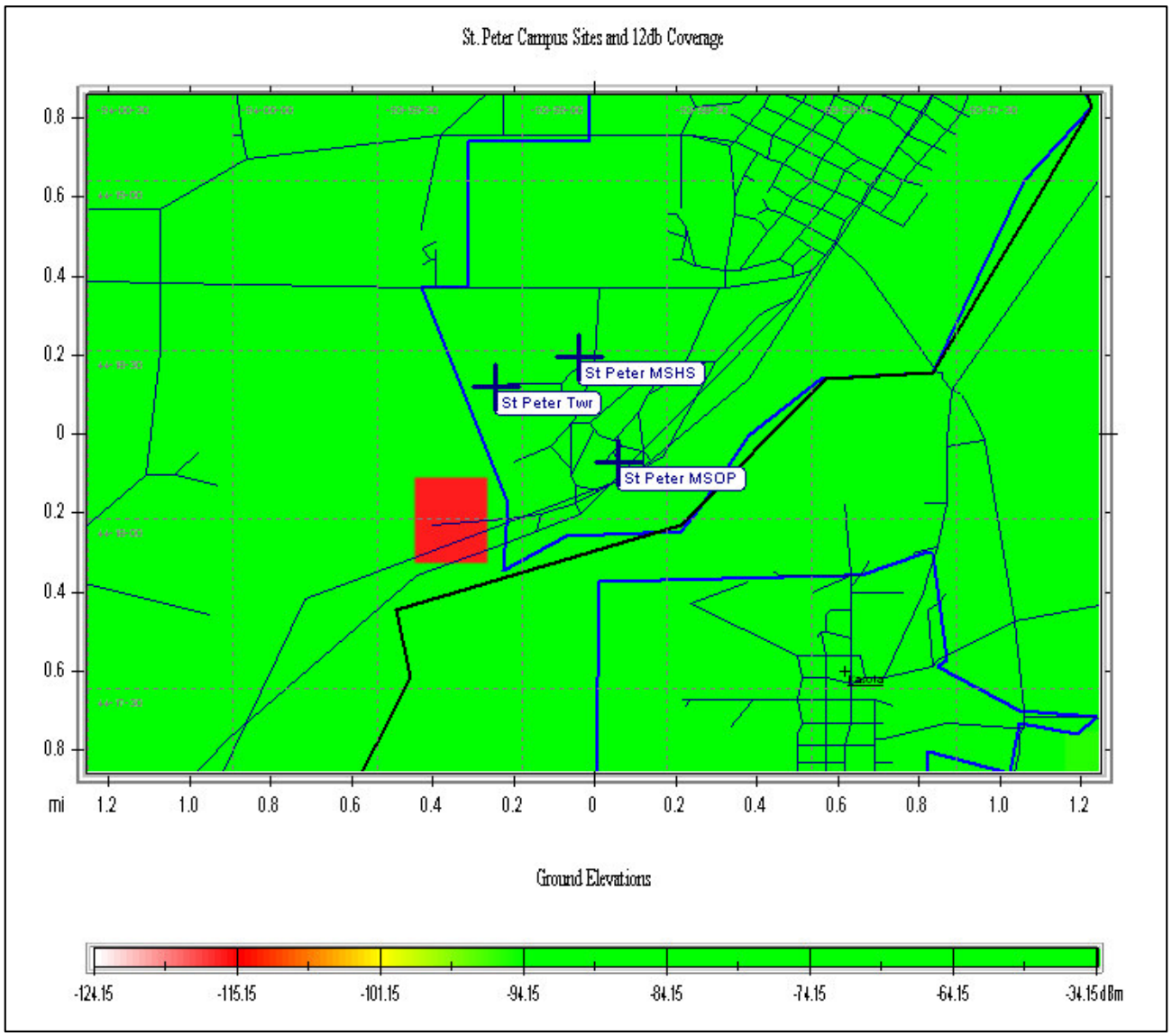
Map 1: Moose Lake ASR DHS and DOC Area Coverage (12db In-Building)

This map provides the predicted 12db loss coverage for the Moose Lake ASR tower site that was implemented by DHS and DOC for coverage in and around these agency's facilities.



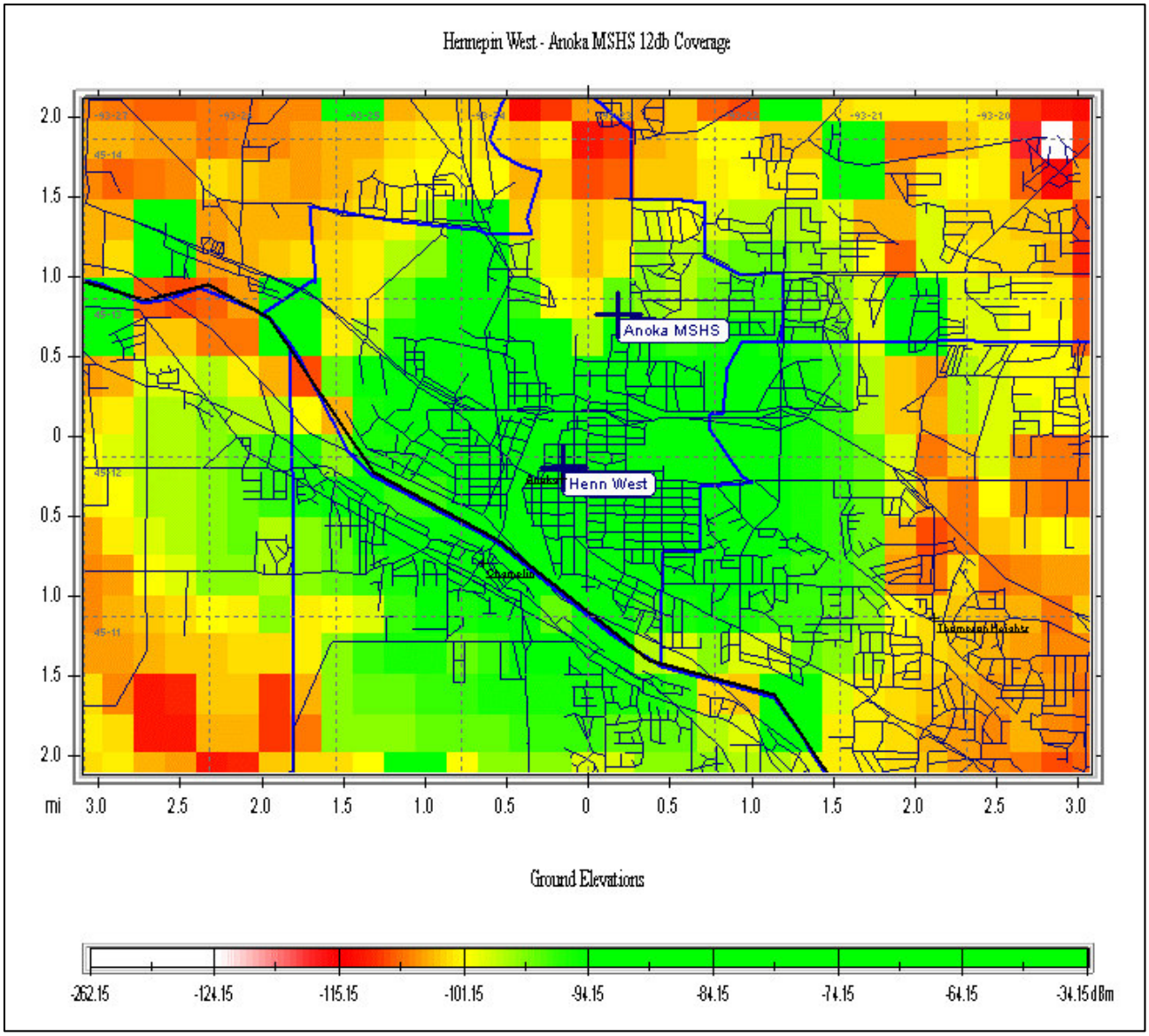
As shown, 12db coverage throughout the Moose Lake campus from the Moose Lake ASR site is very good. Note that the Moose Lake ASR tower site has an antenna height of only 25 feet AGL.

Map 2: St. Peter DHS MSOP and MSHS Campus Area Coverage (12db In-Building)
This map provides the predicted 12db loss coverage for the St. Peter tower site, which is located on the hill above the DHS St. Peter Campus.



The predicted mobile radio coverage throughout the St. Peter DHS campus is excellent with the planned tower site. In-building BDA's may be added for additional below-ground coverage.

Map 3: Anoka DHS MSHS Coverage from Hennepin West Tower Site (12db In-Building)
This map provides the predicted 12db loss coverage for the Anoka MSHS facility from the Hennepin West tower site, which is located in downtown Anoka.



The predicted mobile radio coverage for the Anoka MSHS facility is very good from the Hennepin West tower site. An in-building BDA may be added for additional below-ground coverage.

C. Contingency Planning

In planning for ARMER system migration and connecting to the ARMER system the following failure modes are being addressed:

1. Loss of connectivity between the dispatch center and the ARMER system.
2. Loss of microwave network (to ARMER tower sites), which will result in the system reverting to site trunking mode.

This plan includes four primary locations that will utilize dispatch consoles with connectivity into the ARMER network:

- ☐ St. Peter MSOP (existing)
- ☐ Moose Lake MSOP (existing)
- ☐ St. Peter MSHS (future)
- ☐ Anoka MSHA (future)

Of these locations, the St. Peter MSOP operation uses RF control stations for system access, with no direct microwave or fiber/T1 connectivity. The remaining locations now have or will incorporate a group of 800 MHz RF control stations at the primary dispatch locations. This would typically include one control station for each primary talk group. If the PSAP loses direct connectivity with the ARMER network, the control stations will allow the PSAP staff to access the DHS-specific and system interoperability talk groups over the air and function much like a mobile or portable radio.

If local ARMER site(s) lose connectivity to the master site, or the master site experiences a failure, the sites will revert to a Site Trunking mode, which results the sites operating independently from each other. The effect on field units is that they can only communicate with each other if they are in range of the same tower site. If they are not, communication is not possible.

D. Training

ARMER system implementation and associated operational standards require that all personnel who will be using the system receive proper training on the use, capabilities, and features of the system. Trunked radio systems, including the ARMER system, have operational requirements that differ from traditional conventional repeater systems, and it is necessary that dispatchers and end users be trained on the capabilities and proper operation of the system.

DHS agencies recognize this need, and have conducted initial in-house training for the current radio system users. Additional training is planned through the services of independent contractors recognized by the state as proficient in the operation of the ARMER radio system. The program will include training for the following workgroups and functions:

- ☐ Radio end user training
- ☐ PSAP dispatchers
- ☐ Local system administrator
- ☐ Interoperability

Funding for the end user and dispatcher training has been included in the project budget.

E. Interoperability

The need for interoperability exists on multiple levels within public safety radio operations. Establishing or enhancing interoperability at each of these levels has been a primary consideration in the DHS's decision to migrate to the ARMER system. The areas specifically addressed are:

Internal: Between and within the DHS agencies and locations. The radio system will be used for daily operational purposes. Also, the implementation of a common 800 MHz trunked radio system for all DHS locations will allow direct communications with management staff at DHS facilities on a statewide basis if needed.

External: Between the DHS locations and other local public safety (law, fire, and EMS) and government agencies providing emergency response services to DHS facilities, to include the following:

- ☐ Local city and county law, fire and EMS agencies
- ☐ State of Minnesota law enforcement agencies

As most of the public safety agencies within Minnesota have now converted to ARMER system radio operations, which greatly simplifies and improves communications interoperability for those agencies.

F. Standards

The primary technology standard applied to this project is that of the Project 25 (P25) ARMER system. The P25 standard is specifically for digital radios systems for public safety. In this case, the Phase I Frequency Division Multiple Access (FDMA) standard is currently in use.

DHS will adopt and comply with the standards published by the State Emergency Communications Board. Use of these standards will ensure that users in DHS will adopt the same naming conventions, talk group usage, and other operational and technical standards that are in use throughout the state.

G. Alarms and Monitoring

MnDOT – ARMER will have the primary tower site alarm monitoring for sites in the DHS.

H. Maintenance

Maintenance of the primary ARMER tower sites used by DHS will be handled by the MnDOT staff.

Maintenance of the radio equipment owned and operated by the DHS, including dispatch consoles, mobile, portable and base radio equipment is handled by the State of Minnesota/MnDOT radio service staff.

I. System Administration

Local system administration for the DHS ARMER equipment implementation is the responsibility of the DHS Facilities Management staff.

3. Project Costs and Budget

Funding for the expanded implementation of the ARMER system for DHS agencies is being considered from within the agency's operating and capital budgets, but no funding is currently in place for near-term equipment purchases. This process will continue to be reviewed by the DHS and considered for year 2016 or beyond.

Project Cost Estimates:

Equipment and Location	Min. Cost	Max. Cost
2-Position MCC7500 Control Consoles - Anoka	$200,000	$275,000
Microwave Radio Connectivity – Anoka	$ 60,000	$ 85,000
Qty 90 Portable Radios – Anoka	$270,000	$270,000
2-Position MCC7500 Control Consoles – St. Peter	$200,000	$275,000
Microwave Radio Connectivity – St. Peter	$ 60,000	$ 85,000
Qty 511 Portable Radios – St. Peter	$894,250	$1,379,700
Qty 330 Portable Radios – Primary Locations	$647,500	$695,000
Qty 300 Portable Radios – Secondary Locations	$525,000	$525,000
In-Building Amplifiers (BDA's)	$50,000	$75,000
Other Costs	$100,000	$110,000
Grand Total – Estimated Costs	**$3,006,750**	**$3,774,700**

4. Project Implementation

A. Schedule

Implementation of the ARMER radio network for an organizational group the size of the DHS, with the number of agencies and quantity of radios being planned, would typically be expected to require a 12 to 24 month period to complete.

The DHS Moose Lake and St. Peter MSOP facilities will continue to utilize the ARMER system with existing radio system equipment and configurations.

The other DHS agencies identified in this plan will continue to seek the funding needed to obtain ARMER-capable radios and related equipment needed for a conversion to the ARMER system. The DHS is also planning and budgeting for the implementation of new Motorola radio dispatch consoles at the Anoka and St. Peter MSHS facilities.

There are no current near-term plans to purchase and/or implement the future equipment and locations identified in this plan.

The DHS will continue to utilize their existing VHF and UHF radio systems over the next few years, and will retain such equipment as needed for Interoperability purposes.

References

1. State of Minnesota "Local Agency and Regional Planning and Contracting for ARMER Participation" (sic) dated September 8, 2008, as published at www.srb.state.mn.us
2. RadioSoft™ ComStudy2™ Terrain Database
3. ARMER Status Map, as posted at http://www.srb.state.mn.us/ dated October 2015
4. Region 22 (Geographic State of Minnesota) 800 MHz Regional Planning Committee "Regional Band Plan" as filed with the FCC, General Docket 87-112; 800 MHz NPSPAC Plan Amendment WT Docket No. 20-55; NPSPAC PR Docket No 93.130 dated June 2009

Minnesota Department of **Human Services**

Attachment 1B

MN DHS Secondary ARMER Locations

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

ARMER Use Locations

- ● Residential ✓
- ★ Vocational Services ✓

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

ROBERT M BEEM JR

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

IS-00700.a
National Incident Management System (NIMS)
An Introduction

Issued this 21st Day of January, 2016

0.3 IACET CEU

Tony Russell
Superintendent
Emergency Management Institute

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

ROBERT M BEEM JR

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

IS-00800.b
National Response Framework, An Introduction

Issued this 3rd Day of June, 2015

0.3 IACET CEU

Tony Russell
Superintendent
Emergency Management Institute

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

ROBERT M BEEM JR

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

IS-00100.b
Introduction to Incident Command System
ICS-100

Issued this 4th Day of June, 2015

Tony Russell
Superintendent
Emergency Management Institute

0.3 IACET CEU

Emergency Management Institute

FEMA

This Certificate of Achievement is to acknowledge that

ROBERT M BEEM JR

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

IS-00200.b
ICS for Single Resources and
Initial Action Incident, ICS-200

Issued this 27th Day of July, 2015

0.3 IACET CEU

Tony Russell
Superintendent
Emergency Management Institute

This certificate recognizes that

Robert Beem

Completed the All-Hazards Communications Technician (COMT) Course
July 11-15, 2011

Chris Essid
Director
Office of Emergency Communications
National Protection and Programs Directorate
U.S. Department of Homeland Security

VERIFICATION / CERTIFICATION OF COMPLETED TASK BOOK FOR THE POSITION OF ALL- HAZARDS COMOMUNICATIONS TECHNICIAN (COMT)

FINAL EVALUATOR'S VERIFICATION

I verify that all tasks have been performed and are documented with appropriate initials. I also verify that ROBERT BEGIN has performed as a trainee and should therefore be considered for certification in this position.

Final Evaluators Signature _____ Date 5/7/2015

Printed Name RONALD A. JANSEN Agency DAKOTA COUNTY

Phone Number (651) 322-8632 Email RON.JANSEN@CO.DAKOTA.MN.US

AGENCY CERTIFICATION

I certify that ROBERT BEGIN has met all requirements for qualification in this position and that such qualification has been issued.

Certifying Official's Signature _____ Date 1/22/16

Printed Name JOHN SUNDBERG Agency NEWTON CO. SHERIFF'S OFFICE

Title RADIO SYSTEMS MANAGER Phone Number 612-596-1921

VERIFICATION / CERTIFICATION OF COMPLETED TASK BOOK FOR THE POSTION OF COMT (All Hazards)

Agency Certification

I certify that ROBERT BEEM has met all requirements for qualifications in this position and that such qualification has been issued.

Certifying Official's Signature _____ Date 1/22/16

Printed Name JOHN GWOREK Agency HENNEPIN CO. SHERIFF'S OFFICE

Title RADIO SYSTEMS MANAGER Phone Number 612-596-1721

Pre Qualifications for COMT Training are but not limited to:

- A public safety communications background with exposure to field operations; this experience should be validated by the authority who supervised the student.
- Fundamental public safety communications technology, supervisory, and personnel management skills. These must be validated by the authority who supervised the student and include, but are not limited to:
    - Knowledge of local communications systems
        - Frequencies and spectrum
        - Technologies
    - Knowledge of local topography
    - Knowledge of system site locations
    - Knowledge of local, regional, and state communications plans
    - Knowledge of local and regional Tactical Interoperable Communications Plans, if available
    - Knowledge of local, regional and national communications and resource contacts
- Completion of the following training courses:
    - IS-700, IS-800b, ICS-100, and ICS-200

TO BE ATTACHED TO COMPLETED COMT (ALL HAZARDS) TASK BOOK

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
GENERAL			
1. Obtain and assemble information and materials needed for a response kit prior to receiving an assignment, including critical items needed for the assignment and items needed for functioning during the first 48 hours. The following items are suggested as basic information and materials kept in a go bag: • Appropriate ICS forms and logs • Working knowledge of local TICP • Tactical Interoperable Communications Plan (TICP), if available • Inventories or other lists of local and regional communications response equipment • Preplanned local system coverage maps • Pads of paper, pencils, pens, and tape • Food and beverage to be self-sustained for 48 hours or more • Portable radio(s) as appropriate for the region • Radio programming equipment (cloning cable or computer), adapters, and suitable tools.	O	3	1/22/16

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
2. Establish and maintain positive interpersonal and interagency working relationships. • Conduct self in a professional manner • Respectful and courteous • Respectful of public and private property	O	3	1/22/16
3. Provide for the safety and welfare of assigned incident personnel during the entire period of supervision. • Obtain the safety briefing • Recognize potentially hazardous situations. • Inform subordinates of hazards. • Provide safety and identifying equipment, such as vests identifying the communications function, flashlights, and glow sticks. • Provide for security of information • Ensure that special precautions are taken when extraordinary hazards exist.	I	A1	RAJ 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
MOBILIZATION			
4. Obtain complete information from the public safety communications center(s) serving the area and incident upon initial activation, including: • Incident name and, as appropriate, an order, request, or other unique number identifying the incident for tracking purposes • Reporting location • Reporting time • Transportation arrangements/travel routes • Contact procedures during travel (telephone/radio).	I	#1	RAS 5/7/2015
5. Gather information to assess the incident assignment. This is an ongoing task throughout all phases of the incident. Include assigned resources in a draft Incident Radio Communications Plan (ICS Form 205). Examples of important information include: • Frequencies and/or talkgroups already assigned Other mutual aid channels or equipment already in use • Gateway or other interoperability devices already in use • Other current incidents or events that may create conflicts communications plans or tax resources.	I	#1	RAS 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
INCIDENT ACTIVITIES			
6. Arrive at incident and check in. Arrive properly equipped at the assigned incident location within acceptable time limits.	I	#1	RAS 5/7/2015
7. Obtain briefing from supervisor. Examples of briefing items are: • Work space • Work schedule • Policies and operating procedures • Current resource commitments and expectations • Current situation • Expected duration of assignment • Special needs. **This list is not all inclusive; COMT is responsible for asking adequate questions.**	I	#1	RAS 5/7/2015
8. Determine requirements for communications as directed by the COML.	I	#1	RAS 5/7/2015
9. Evaluate needs and order supplies, materials and personnel to keep/provide necessary communications, as required. • Recommend to COML materials and supplies required. • Monitor levels of supplies and materials at a level to prevent shortage of any basic needed items. Report shortages to the COML. • Recommend adequate number of personnel to support the communications unit, technicians, technical specialists, etc. to the COML. • Assess current tactical communications equipment needs such as power sources for extended operations, report findings to the COML.	I	#1	RAS 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
10. Working with the COML, perform as the technical expert for communications needs. • Determine the feasibility and required equipment/personnel to provide the required communications support. • Provide operational and technical information on communications equipment available for the incident. • Provide operational and technical information on communications equipment and systems capabilities and restrictions.	I	#1	RAS 5/7/2015
11. Working at the direction of the COML, install or arrange for the installation of communications systems to meet incident operational needs. • Through the COML, request any additional communications vendor services; e.g., telephone, satcom, microwave and help identify costs associated with equipment. • Through the chain of command, document the locations for equipment to be installed; e.g., repeaters, satellite telephones, telephone lines, etc. • Provide communications support for external and internal data operations. • Create/update diagrams of current communication system(s). • Assist the COML to determine optimal locations for any future expansion of communications equipment using topographical maps to evaluate elevation and separation needs.	I	#1	RAS 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
12. Install, or provide for the installation of, communications equipment. • Obtain equipment as needed. • Install and test all components of the communications equipment to ensure the incident's systems are operational, for example: o Repeaters o Links (radio and wire-based) o Remotes o Gateways o Telephones o FAX o Data o Aircraft and other special needs • In cooperation with the COML develop installation priorities, while adhering to safety standards regarding communications needs of tactical personnel; i.e., operations before logistics. • Clone or program radios.	I	#2	5/6/15 RJ
13. Assign communications equipment. • Provide resources and unit leaders with appropriate equipment based on the communications plan. • Provide basic training as needed on equipment being fielded. • Maintain equipment inventory to provide accountability.	I	#2	5/6/15 RJ
14. Assist the COML to initiate and maintain accurate records of all communications equipment. • Maintain accountability system for issuing hand-held radio resources. • Document geographic locations of equipment and transfer this information to local maps (latitude/longitude, address, or access instructions). • Keep records for local and national resources to ensure return to proper locations.	I	#1	RAJ 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

TASK	O or I	EVAL #	EVALUATOR *Initial & date upon completion of task*
15. Monitor operational performance of communications systems throughout the duration of the incident. • Identify and take necessary action to accomplish minor field repair or place orders for replacement of equipment. • Monitor all gateways in use. • Plan for battery replacement. • Plan for generator refueling. • Act decisively to minimize interruptions in system operation.	I	#1	RAJ 5/7/2015
16. Maintain a 214 for the COMT when required. Unit Log will be kept current, legible, and will document all major activities, which may include: • Equipment locations. • Personnel changes.	I	#1	RAJ 5/7/2015
DEMOBILIZATION			
17. Demobilization and check out. • Submit all required information to the COML. • Receive demobilization instructions from the COML. • Brief subordinate staff on demobilization procedures and responsibilities. • Ensure that incident and agency demobilization procedures are followed. • Complete required ICS form(s) and turn in to the appropriate person. • Ensure that personnel in the unit are demobilized correctly. • Document lost equipment on agency specific forms.	I	#1	RAJ 5/7/2015

O	Can be performed in any situation (Simulation, Classroom, Daily job)
I	Must be performed on an Incident, Planned Event, or Full-Scale Exercise

There are four separate blocks allowing evaluations to be made. These evaluations may be made on incidents (may include preplanned events and full scale exercises), simulation in classroom, or in daily duties, depending on what the position task book indicates. This should be sufficient for qualification in the position if the individual is adequately prepared. If additional blocks are needed, a page can be copied from a blank task book and attached.

COMPLETE THESE ITEMS AT THE START OF THE EVALUATION PERIOD:

Evaluator's name, incident/office title, and agency: List the name of the evaluator, his/her incident position (on incidents) or office title, and agency.

Evaluator's home agency, address and phone: Self explanatory

#: The number in the upper left corner of the experience block identifies a particular experience or group of experiences. This number should be placed in the column labeled "Evaluation Record #" on the Qualification Record for each task performed satisfactorily.

Location of Incident/Simulation: Identify the location where the tasks were performed by agency and office.

Incident Kind: Enter kind of incident, e.g., hurricane, wildland fire, search and rescue, flood, preplanned event, full scale exercise, etc.

COMPLETE THESE ITEMS AT THE END OF THE EVALUATION PERIOD:

Number and Type of Resources: Enter the number of resources and types assigned to the incident pertinent to the trainee's task book position.

Duration: Enter inclusive dates during which the trainee was evaluated.

Management Level or Complexity Level: Indicates ICS organization level, i.e., Type 5, Type 4, Type 3, Type 2, Type 1, Area Command

Recommendation: Check as appropriate and/or make comments regarding the future needs for development of this trainee.

Date: List the date the record is being completed.

Evaluator's initials: Initial here to authenticate your recommendations and to allow for comparison with initials in the Qualifications Record.

Evaluator's relevant rating: List your certification relevant to the trainee position you supervised.

1	Name of Evaluator Ronald A. Jansen	Title COML	Agency Dakota County
Evaluator's Address 2860 160th Street West Rosemount MN 55068			

Name & Location of Incident - Agency and Area	Kind of Incident	Number and Type of Comm Resources	Duration of Incident	Management Level or Complexity Level
Crash Ex (LRTF)	Exercise	5	1045	Coml

☑ **The tasks initialed & dated by me have been performed under my supervision in a satisfactory manner by the above named trainee.**

I recommend the following for further development of this trainee.

The individual has successfully performed all tasks for the position and should be considered for certification.

The individual was not able to complete certain tasks (comments below) or additional guidance is required.

Not all tasks were evaluated on this assignment and an additional assignment is needed to complete the evaluation.

☐ **The individual is severely deficient in the performance of tasks for the position and needs further training (both required & knowledge and skills needed) prior to additional assignment(s) as a trainee.**

Recommendations: _____

Date: 5/7/2015 **Evaluator's initials:** RAJ

Evaluator's relevant agency certification rating: Coml

2	Name of Evaluator Rick Tieth	Title COML	Agency OPS/SECN
Evaluator's Address			

Name & Location of Incident - Agency and Area	Kind of Incident	Number and Type of Comm Resources	Duration of Incident	Management Level or Complexity Level

☐ The tasks initialed & dated by me have been performed under my supervision in a satisfactory manner by the above named trainee.

I recommend the following for further development of this trainee.

The individual has successfully performed all tasks for the position and should be considered for certification.

The individual was not able to complete certain tasks (comments below) or additional guidance is required.

Not all tasks were evaluated on this assignment and an additional assignment is needed to complete the evaluation.

☐ The individual is severely deficient in the performance of tasks for the position and needs further training (both required & knowledge and skills needed) prior to additional assignment(s) as a trainee.

Recommendations:____________________

Date: 5/6/15 Evaluator's initials: RJ

Evaluator's relevant agency certification rating:____________________

2015

CRTF Exercise

Incident Action Plan

May 7th, 2015

Ops Period 0730 hrs.-1600 hrs.

INCIDENT OBJECTIVES	1. Incident Name CRASHEX 2015	2. Date 5/7/2015	3. Time 0730 hrs.

4. Operational Period

0730 hrs – 1600 hrs.

5. General Control Objectives for the Incident (include alternatives)

- To be aware of your surroundings and those around you and assist in ensuring the CRTF Exercise is a safe environment
- Building off of the 2014 Dakota County Exercise, design a realistic scenario maximizing participation based off of pertinent past deployments/incidents in MN or elsewhere and current CRTF SOPs
- Activate the team for a deployment incorporating:
  - Participate in a Briefing similar to what would happen on a deployment
  - Have groups attend a 204 assignment briefing
  - Have groups work as a team completing assignments
  - Utilize ICS forms to assist you in your assignments
- Have available and utilize equipment that is available to the CRTF, set-up accountability procedures for the equipment including but not limited to checking out equipment, changing out batteries.
- Participate in a demobilization process and a hotwash prior to leaving.

6. Weather Forecast for Period

Thunderstorm

75 °F

Precipitation: 80%
Humidity: 65%
Wind: 19 mph

As of 1730 5/6/2015

There is 50% rain at 1200 hrs increasing to 64% chance

7. General Safety Message

- The exercise will have many "players & moving parts" always know your surroundings
- Monitor the weather
- It may be slippery in some areas
- Be ready to move to safety if/when directed, follow directions

8. Attachments (mark if attached)

X☐	Organization List - ICS 203	X☐	Medical Plan - ICS 206	☐	(Other)
X☐	Div. Assignment Lists - ICS 204	X☐	Incident Map	☐	
X☐	Communications Plan - ICS 205	N/A☐	Traffic Plan	☐	

9. Prepared by (Planning Section Chief)	10. Approved by (Incident Commander)

ORGANIZATION ASSIGNMENT LIST

1. Incident Name	CRTF Exercise
2. Date	5/7/2015
3. Time	0730 hrs – 1600 hrs
4. Operational Period	0830 hrs – 1600 hrs

Position	Name
5. Incident Commander and Staff	
Incident Commander	Kristi Rollwagen
Deputy	Jill Rohret
Safety Officer	Jake Thompson
Information Officer	MAC Staff
Liaison Officer	Chris Kummer (to CRASHEX)
6. SIMCEL	
Exercise	Name
CRASHEX	Kristi Stauffer
CRTF	Jeff Frederick - Controller
CRTF	Doris Lake
Exercise Director	Lance Ross
Scribe	Kassi Eloranta
CRTF	Mark Vandeberghe - Controller
7. Planning Section	
Chief	Lance Ross
Deputy	Kassi Eloranta
Resources Unit	Lance Ross
Situation Unit	Jay Sliwinski
Documentation Unit	Kassi Eloranta
Demobilization Unit	TBD
Technical Specialists	Ralph Bierbaum - Anoka County
Human Resources	Ross/Rohret
8. Logistics Section	
Chief	Chris Kummer
Deputy	Mark VandeBerghe
Facilities Unit	Chris Kummer
EOC COML	John Stelter
Communications Unit	John Gunderson
Medical Unit	Through SIMCEL
Security Unit	MAC PD
Food Unit	Salvation Army

9. Operations Section		
Chief	Kristi Rollwagen	
Deputy	Chris Kummer	
a. Communications Unit		
Leader	John Gunderson	
Deputy	Ron Jansen	
Shih Tzu Group	3	Spencer-Marks
Boxer Group	3	Philippi
Chihuahua Group	3	Olson
Pekingese Group	3	Peckman
COMT	6	Jansen/Juth
b. CRASHEX Communicators		
Branch Director	Chris Kummer	
Exercise Director	Rollwagen	O'Leary
EOC	Kewitsch Esbensen	Anderson
Fuel Spill	Stevens	Brandon
Law Enforcement	Christiansen	Freeman
Media	Elder	Hansen
Fire	Fecht	Jankovich
EMS	Lanenberg	Motley
Survivor Center	McNulty	Belisle
ECC	N/A	Groninga
Friends & Relatives	Bundt/Lopez	Sassor
10. Finance Section		
Chief	Jill Rohret	
Time/214's Unit	Kassi Eloranta	

Prepared by (Resource Unit Leader)

Lance Ross

ICS205 INCIDENT/EVENT COMMUNICATIONS PLAN	INCIDENT/EVENT NAME	DATE/TIME PREPARED	OPERATIONAL PERIOD DATE/TIME
	CRTF Spring 2015 Exercise (@Crashex 2015)	4/27/2015 1700	5/7/2015 0600-1600

Line	Function (COMMAND, TACTICAL, SUPPORT, AIR)	Talkgroup/Channel/Phone	Assignment (LAW, FIRE, EMS, OTHER)	RX Freq (N or W)	RX Tone/NAC	TX Freq (N or W)	TX Tone/NAC	Mode (A, D or M)	Remarks
1	COMMAND NET	SCOML	SIMCELL	ARMER 800MHz	N/A	ARMER 800MHz	N/A	D	All Controllers & Locations
2	SUPPORT NET	[redacted]	SIMCELL	N/A	N/A	N/A	N/A	N/A	SIMCELL Base (Dog Park)
3	SUPPORT NET	[redacted])	SIMCELL Secondary	N/A	N/A	N/A	N/A	N/A	SIMCELL Backup
4	SUPPORT NET	[redacted])	EXERCISE DIRECTOR	N/A	N/A	N/A	N/A	N/A	Lance Ross
5	TACTICAL NET	8TAC91	MNNG	851.5125	156.7CSQ	806.5125	156.7CSQ	A	Exercise Play
6	TACTICAL NET	8TAC94	MNNG	853.0125	156.7CSQ	808.0125	156.7CSQ	A	Exercise Play
7	TACTICAL NET	VTAC14R	STR	159.4725	156.7CSQ	154.6825	156.7CSQ	A	Exercise Play
8	TACTICAL NET	8SOA3	Initial Exercise Comms	853.9500	$293	853.9500	$293	A	Initial Exercise Play as Needed
9	SUPPORT NET	[redacted]	Crashex Logistics Section	N/A	N/A	N/A	N/A	N/A	Craig Brekke, COML & Jon Stetler, Deputy COML, assigned to the MAC EOC

SPECIAL INSTRUCTIONS

1. The CRTF Spring 2015 Exercise is a full scale communications exercise done in conjunction with the Metropolitan Airports Commission Crashex 2015. Equipment at the site includes the Minnesota National Guard SATCOW and associated support vehicles, Metro Region STR Trailer, Minnesota State Patrol Mobile Communications Unit, Allina EMS Mobile Communications Unit and the Anoka County Emergency Management Logistics Unit.
2. For logistics support during the exercise, contact the Deputy COML in the Logistics Section of the MAC EOC.

MSP AIRPORT 911 · POLICE · FIRE · EMS EMERGENCY COMMUNICATIONS

COML: Chris Kummer
CONTACT: 612-363-5422, chris.kummer@mspmac.org
Minneapolis-Saint Paul International Airport ECC - IDT
6920 34th Avenue South, Minneapolis, Minnesota 55450
612-726-5577

INCIDENT/EVENT LOCATION

Adjacent 6040 28th Avenue South, Metropolitan Airports Commission (Dog Park Area), 44.8918° N, 93.2328° W, US National Grid: 15TVK877081

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D" indicating analog or digital (e.g. Project 25) or "M" indicating mixed mode. All channels are shown as if programmed in a control station, mobile or portable radio. Repeater and base stations must be programmed with the Rx and Tx reversed.

1. Incident Name CRTF CRASHEX 2015	2. Operational Period (Date / Time) From: 0730 hrs. 5/7/2015 To: 1600 hrs. 5/7/2015	MEDICAL PLAN ICS 206

3. Medical Aid Stations

Name	Location	Contact #	EMTs On site (Y/N)
CRTF SIMCELL	Dog Park South Side	SCOML or [redacted]	Yes (No Medics)

4. Transportation

Ambulance Service	Address	Contact #	Paramedics On board (Y/N)
Allina - ALS	NOT ONSITE – Upon request	See Below	Yes
Airport Fire – BLS (non transport)	NOT ONSITE – Upon request	See Below	NO

5. Hospitals

Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		
Fairview Southdale	6401 France Avenue South, Edina, MN 55435	[redacted]	N/A	10	No	Yes
HCMC	701 Park Avenue, Minneapolis, MN		5	15	Yes	Yes
Regions	640 Jackson Street, St. Paul, MN 55101		5	20	Yes	Yes
United	333 Smith Avenue North, St. Paul, MN 55102		5	15	No	Yes
VA	1 Veterans Drive, Minneapolis, MN		N/A	10	No	Yes

6. Special Medical Emergency Procedures

For a **REAL WORLD EMERGENCY** alert exercise personnel immediately. Stay with injured party. The SIMCELL will dispatch the appropriate resources to your location to assist you.

By Radio = Announce on **SCOML**, "*REAL WORLD EMERGENCY, Who you are, Location, Nature of Emergency*"

By Phone = Call the **SIMCELL @ 651-262-6849**, "*REAL WORLD EMERGENCY, Who you are, Location, Nature of Emergency*"

7. Prepared by: (Medical Unit Leader)	Date/Time	8. Reviewed by: (Safety Officer)	Date/Time
Lance Ross	4/19/2015	Don Smiley	5/3/2015

DIVISION ASSIGNMENT LIST	1. Branch - Exercise	2. Division/Group
3. CRASHEX 2015	4. Operational Period Date: 5/7/2015 Time: 0730 hrs. – 1600 hrs.	

5. Operations Personnel

Operations Chief	Rollwagen, MAC EM	Logistics Section Deputy Chief	Mark VandeBerghe
Logistics Section Chief	Kummer, MAC ECC		

6. Resources Assigned this Period

Communicator	Assigned to	Number Persons	Trans. Needed	Reporting Location	Assignment Location
Dan Anderson	Kewitsch or Esbensen	2	Yes	MAC FD #1	EOC
James Brandon	Matt Stevens	2	Yes	MAC FD #1	Crash Site
Blake Freeman	Dean Christiansen	2	Yes	MAC FD #1	Crash Site
Seth Hansen	John Elder	2	Yes	MAC FD #1	JIC
Al Jankovich	Mike Fecht	2	Yes	MAC FD #1	Crash Site
Denise O'Leary	Kristi Rollwagen	2	Yes	MAC FD #1	All Access
Dan Motley	Jeff Lanenberg	2	Yes	MAC FD #1	Crash Site
Travis Belisle	Shannon McNulty	2	Yes	MAC FD #1	Survivor Center
Tom Groninga	N/A	2	Yes	MAC FD #1	MAC ECC
Sunny Sassor	Bundt/Lopez	3	Yes	MAC FD #1	Friends & Relatives Center

7. Control Operations

- Have CRTF or Agency ID in plain sight at all times
- Stay with your assigned Controller at all times
- Relay any received or originating communications as directed by your assigned Controller
- Capture any pertinent communication and/or information on provided exercise sheet
- Any questions contact-Chris Kummer on METAC 8 or 612-363-5422

8. Special Instructions

- In the event of severe weather, follow instructions provided to you
- In the event of a **"Real World Emergency"** let controller know and announce on the radio if you need assistance
- Make sure you Demob at the Dog Park "Tent 1" once cleared from the CRASHEX exercise Address to Dog Park
  6040 28th Avenue South; Minneapolis, MN 55450 – Questions contact Lance Ross at 651-249-9506
- Throughout the exercise track significant events on the provided 214 – **TURN IN AT DEMOB** at the Dog Park

9. Division/Group Communication Summary

Function	Talkgroup	System	Channel	Function	Talkgroup	System	Channel
Communicator Scribe	METAC 8	ARMER				ARMER	
Tactical Div/Group		ARMER				ARMER	

Prepared by (Resource Unit Leader)	Approved by	Date	Time
Lance Ross	Chris Kummer, MAC ECC	5/5/2015	1600 hrs

ASSIGNMENT LIST	1. Section - Logistics	2. Unit - Communications
3. CRTF CrashEX 2015	4. Operational Period Date: 5/7/2015 Time: 0730 hrs – 1600 hrs	

5. Personnel

Operations Chief	Rollwagen, MAC EM	Logistics Section Deputy Chief	Mark VandenBerghe/Juth
Logistics Section Chief	Kummer, MAC ECC	Communications Unit Leader	John Gunderson/

6. Resources Assigned this Period

Group	Leader	Number Persons	Group Members	Trans. Needed	Reporting Location
Shih Tzu	Spencer-Marks	3	Durst-MSP, O'Neil-North	No	Allina
Boxer	Philippi	3	Wanchena-DOC, Hermanson-Ramsey Cty	No	MNNG
Chihuahua	Olson	3	Holby – Isanti Cty, Selness – MSP	No	MSP
Pekingese	Peckman	3	LaVenture-Edina, Polz-MSP	No	STR Tower

7. Control Operations

- Have CRTF ID in plain sight at all times
- When assignment is completed contact John Gunderson for new assignment
- Work within your group as a group unless you are reassigned
- Each individual team member will keep track of assignments, significant events, etc. on the provided 214 – **TURN IN AT DEMOB**

8. Special Instructions

- In the event of severe weather, follow instructions provided to you
- In the event of a Medical Emergency contact the SIMCEL via SCOML or [redacted] Say "**REAL WORLD EMERGENCY**"
- Make sure you go through DEMOB prior to leaving

9. Division/Group Communication Summary

Function	Talkgroup	System	Phone	Function	Talkgroup	System	Phone
Command Located at AC 1	SCOML	ARMER	[redacted]	Logistics – COML John Stetler	8SOA3	ARMER	[redacted]
SIMCELL	SCOML	ARMER	[redacted]				

Prepared by (Resource Unit Leader)	Approved by (Planning Section Chief)	Date	Time
Lance Ross	Lance Ross	5/1/2015	1630 hrs.

ASSIGNMENT LIST	1. Section - Logistics	2. Unit - Communications
3. CRTF CrashEX 2015	4. Operational Period Date: 5/7/2015 Time: 0730 hrs – 1600 hrs	

5. Personnel

Operations Chief	Rollwagen, MAC EM	Logistics Section Deputy Chief	Mark VandenBerghe/Juth
Logistics Section Chief	Kummer, MAC ECC	Communications Unit Leader	John Gunderson

6. Resources Assigned this Period

Name	Agency	Leader	Notes	Trans. Needed	Reporting Location
Ralph Bierbaum	Anoka County	Yes		No	Anoka Trailer
Brian Lakeman	Anoka County	Asst Leader		No	Anoka Trailer
Jennifer Lukas	Anoka County			No	Anoka Trailer
Kyle Cold	Anoka County			No	Anoka Trailer
Frank Thurner	Anoka County			No	Anoka Trailer
Dave Healy	Anoka County			No	Anoka Trailer
Molly Weisenburger	Anoka County			No	Anoka Trailer

7. Control Operations

- Have Anoka County ID in plain sight at all times
- Deploy Tents, Tables, Chairs, and Generators according to provided site plan
- Set-up Anoka Trailer for Situational Unit Support
- Set-Up Lights and other equipment on solar powered
- Set-Up Weather Station
- Support CRTF Exercise
- When assignment is completed contact Ralph Bierbaum for new assignment

8. Special Instructions

- In the event of severe weather, follow instructions provided to you
- In the event of a Medical Emergency contact the SIMCEL via SCOML or [redacted] Say "**REAL WORLD EMERGENCY**"
- Make sure you go through DEMOB prior to leaving
- Work within your group as a group unless you are reassigned
- Each individual team member will keep track of assignments, significant events, etc. on the provided 214 – **TURN IN AT DEMOB**

9. Division/Group Communication Summary

Function	Talkgroup	System	Phone	Function	Talkgroup	System	Phone
Command Located at AC 1	SCOML	ARMER	[redacted]	Logistics - COML John Stetler	8SOA3	ARMER	6[redacted]
SIMCELL	SCOML	ARMER		Anoka County USE AS PRIMARY TALKGROUP	Anoka Cty EM OPS	ARMER	Lance Ross 6[redacted]

Prepared by (Resource Unit Leader)	Approved by (Planning Section Chief)	Date	Time
Lance Ross	Lance Ross	5/1/2015	1630 hrs.

ASSIGNMENT LIST	1. Section - Logistics	2. Unit - Communications
3. CRTF CrashEX 2015	4. Operational Period Date: 5/7/2015 Time: 0730 hrs – 1600 hrs	

5. Personnel

Operations Chief	Rollwagen, MAC EM	Logistics Section Deputy Chief	Mark VandenBerghe/Juth
Logistics Section Chief	Kummer, MAC ECC	Communications Unit Leader	John Gunderson

6. Resources Assigned this Period

Name	Agency	Leader	Notes	Trans. Needed	Reporting Location
Ron Jansen	Dakota County	Yes - COMTs	COMTs	No	MNNG Tower
Rick Juth	State	Yes - COML	Juth will work with Polzin on COML Tasks	No	MNNG Tower
Tom Polzin	Allina		COML & COMT Trainee	No	MNNG Tower
Robert Beem	Hennepin County		COMT Trainee	No	MNNG Tower
Bob Cooper	MAC ECC		COMT Trainee	No	MNNG Tower
King Fung, Possibly	Hennepin County		Possible COMT Trainee	No	MNNG Tower

7. Control Operations

- Have CRTF ID in plain sight at all times
- When COMT assignment is completed contact Ron Jansen for new assignment
- Polzin when COML assignment is completed contact Rick Juth for new assignment

8. Special Instructions

- In the event of severe weather, follow instructions provided to you
- In the event of a Medical Emergency contact the SIMCEL via SCOML or [redacted] Say "**REAL WORLD EMERGENCY**"
- Make sure you go through DEMOB prior to leaving
- Work within your group as a group unless you are reassigned
- Each individual team member will keep track of assignments, significant events, etc. on the provided 214 – **TURN IN AT DEMOB**

9. Division/Group Communication Summary

Function	Talkgroup	System	Phone	Function	Talkgroup	System	Phone
Command Located at AC 1	SCOML	ARMER	[redacted]	Logistics – COML John Stetler	8SOA3	ARMER	[redacted]
SIMCELL	SCOML	ARMER		Anoka County USE AS PRIMARY TALKGROUP			

Prepared by (Resource Unit Leader)	Approved by (Planning Section Chief)	Date	Time
Lance Ross	Lance Ross	5/1/2015	1630 hrs.