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**May 12, 2015**

**REGULAR BOARD MEETING AGENDA**

Notice is hereby given that the Board of Commissioners of Roseau County will meet in session on May 12, 2015, at **9:00** a.m., in the Roseau County Courthouse, Room 110, Roseau, MN, at which time the following matters will come before the Board:

**9:00 Call to Order**

1. Presentation of Colors
2. Approve Agenda
3. Comments and Announcements
4. Approve Bills

**9:10 Board Appointments/Public Comments\***

1. Rey Freeman – Roseau County ARMER Participation Plan

**9:30 Consent Agenda**

1. April 28, 2015 Board Proceedings
2. Roseau County Trailblazers – Grant Application/Resolution and 4<sup>th</sup> Benchmark

**9:40 Department Reports**

**9:45 County Board Items**

1. NACo *Stepping-Up Initiative* Resolution of Support
2. Commissioner Committee Reports

**10:15 Unfinished Business**

**10:15 Adjourn**

**\*Limited to five minutes**





# Roseau County, Minnesota

## ARMER Radio System Participation Plan

May 2015

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# ARMER Participation Plan

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## I. Introduction

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### A. ARMER System Application – Roseau County

Roseau County, Minnesota, and the city and county agencies within the county, request approval for participation in and use of the State of Minnesota Allied Radio Matrix for Emergency Response (ARMER) radio system. The county and its agencies plan to be “Full Participants” in the ARMER system, and will migrate all primary voice communications services to the network, once fully implemented.

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

- Northwest Minnesota Regional Advisory Committee (NW RAC)
- Northwest Minnesota Regional Radio Board (NW RRB)
- State of Minnesota Radio Board Operations and Technical Committee (OTC)

In 2011 Roseau County had submitted a “Limited ARMER Interoperability Plan” which outlined the county’s intent to use both ARMER and VHF radio system resources for the next several years, while updates were being made to their radio networks. Decisions were also being made regarding what level of ARMER system use and involvement were desired by the county. Since that time, all law enforcement operations have migrated to the ARMER system and no longer use VHF, other than for interoperability with neighboring agencies. The fire and EMS agencies within the county now also have some number of ARMER radios, and are slowly migrating to ARMER use.

The plan now being presented replaces the previous plan, and reflects the county’s increased and continued use of the ARMER system. VHF resources will continue to be used for interoperability and voice paging services.

Roseau County’s plan has been developed based on the requirements and operational standards established for participation in and use of the ARMER radio system.<sup>1</sup> The county desires to contract as required with the Northwest Regional Radio Board and the State of Minnesota Department of Transportation (Mn/DOT) for use of the ARMER system once approved.

A list of the local city and county agencies within the county that plan to be included in the use of this system is provided in Section I.D of this planning document.

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<sup>1</sup> All endnotes are attached at the end of the report (Attachment 2) under the heading of “References.”

## B. Project Summary

Roseau County, Minnesota, and the public safety entities within Roseau County have developed a plan for the migration from existing VHF public safety radio systems currently used by those agencies to the ARMER network. A comprehensive radio system analysis was conducted in 2009, which presented options for either continued VHF radio operations, or a migration to the 800 MHz ARMER system.

The primary goals of a new radio communications system are:

- Provide improved radio system reliability, coverage, and capacity
- Replacement of the existing aging VHF radio system equipment
- Provide expanded county and region wide interoperability between public safety agencies, whether utilizing VHF or 800 MHz radio systems

After a thorough review of the options available, the county has determined that a migration to the 800 MHz ARMER radio system, utilizing the system's multi-site, digital, and Trunking technologies would best meet the county agencies radio communications goals, and will provide the required level of interoperability between public safety agencies in the region.

The primary points of contact for this project are:

Sheriff Steve Gust  
Roseau County Sheriff's Office  
605 – 5<sup>th</sup> Ave SW  
Roseau, MN 56751  
218-463-1421 Phone  
[steve.gust@co.roseau.mn.us](mailto:steve.gust@co.roseau.mn.us)

Rey Freeman  
RFCC  
13517 Larkin Drive  
Minnetonka, MN 55305  
952-541-0747 Phone  
[rfreeman@isd.net](mailto:rfreeman@isd.net)

## C. Jurisdictional Coverage of System

The radio system is intended to provide radio communications throughout the geographic area of Roseau County, Minnesota. Roseau County is located in the northwest area of Minnesota, covering 1,672 square miles, with a population of 15,629 people. The terrain of Roseau County is relatively flat, with ground elevations ranging from 984 feet in the north western areas to 1,250 feet in the southeastern area.

## D. Entities and Users Participating in the Planned System

It is the intent of Roseau County and the agencies within to implement a shared radio system that will incorporate both public safety and additional governmental agencies. The list contains all of the agencies planning to participate in the system at this time.

<b>Participating Public Safety Agencies (11)</b>	
Roseau County Sheriff's Office	Greenbush Fire Department
City of Roseau Police Department	Greenbush EMS
Warroad Police Department	Roosevelt First Responders
City of Roseau Fire Department	Warroad Fire Department
Roseau EMS	Wannaska First Responders
Badger Fire Department	
<b>Participating Public Works and School Departments (2)</b>	
Roseau County Highway Department	Roseau School District

### E. Existing VHF System Configuration

The existing Roseau County voice radio systems operate on VHF (150-160 MHz) frequencies, providing radio channels for law enforcement, fire, and Emergency Medical Service (EMS)/ambulance operations. The dispatch center is physically located at the Roseau County Sheriff's Office in the city of Roseau, Minnesota.

The existing Roseau County radio system consists of multiple VHF base and repeater stations located at tower sites around the county. The following primary tower site(s) are used for the Roseau County system.

- Roseau County Sheriff's Office

All radio equipment located at the tower or other remote sites is controlled from the dispatch center via in-house telephone circuits or VHF radio links. The primary VHF radio system infrastructure equipment used by the county is a variety of newer Harris base and repeater stations. Most stations are in good operating condition, and are operating on narrowband (12.5 kHz) radio frequencies. A 2-position Zetron 4048 PC-based radio control console is used in the Roseau dispatch center.

The radio system consists of separate VHF channels and base/repeater stations for Sheriff/law, and fire/EMS operations, which are located at the tower site(s) noted above, as well as at various fire halls throughout the county. The Sheriff/law radio network consists of multiple law repeater channels and sites, along with local Minnesota Statewide Emergency Frequency (MNSEF/VLaw31) and point-to-point stations. The fire/EMS radio networks consist of multiple independent stand-alone base stations located at various tower sites around the county, which also provides tone-and-voice paging capabilities. The radio users and dispatchers manually select the proper tower site based on the radio or service location.

## 2. ARMER System Technical Review

### A. System Design

During the local ARMER system implementation planning process, work was done to determine what type of configuration would be appropriate for the Roseau County radio system. Since the basic structure of the ARMER system as a multicast digital trunked radio system will meet the needs of Roseau County agencies, they plan to utilize the system in this planned multicast configuration.

Primary planning factors:

- 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 ARMER system plan that exists for the Roseau County area includes four tower sites within the county borders, as well as additional sites outside the county borders that will provide some level of coverage within the county. The following sites are planned for within Roseau County:

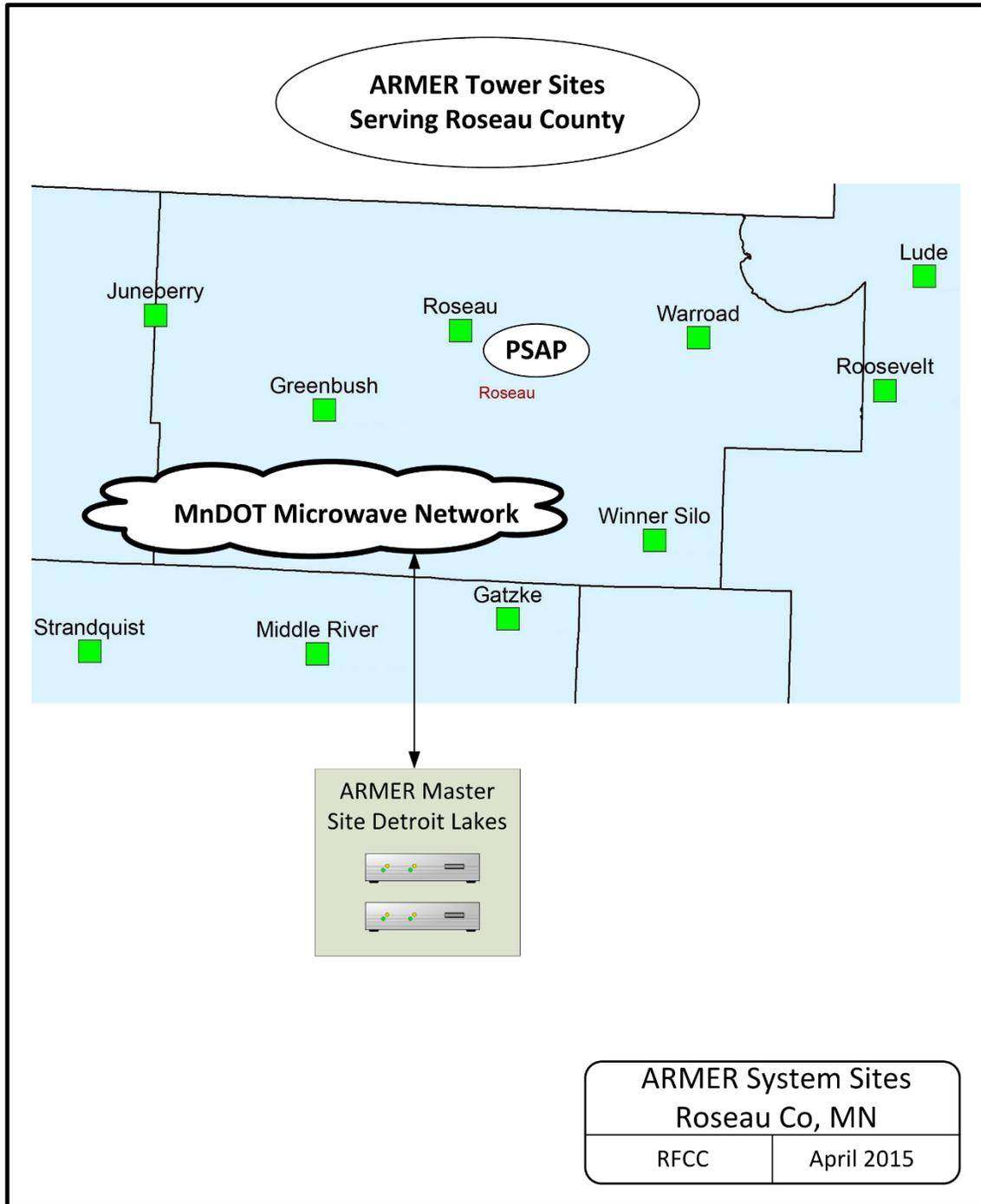
Roseau	Greenbush	Warroad	Winner Silo
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The following sites are located outside of but on or near the county border and will provide coverage within Roseau County:

Juneberry	Middle River	Gatzke
Roosevelt	Lude	Strandquist

Refer to the diagram below for a high-level overview of the ARMER tower site details for the proposed system implementation for Roseau County.

### Roseau County ARMER System Tower Site Architecture



## ii) Local Equipment Additions and Enhancements

The ARMER planning study conducted for Roseau County determined that no additional local enhancement, tower sites (coverage), or channel capacity are required or planned. The ARMER tower sites in Roseau County and surrounding areas have demonstrated a high level of reliable coverage for the county's agencies, based on use over the past year, and no additional tower sites are planned. Refer to Section B of this plan for a review of 800 MHz coverage.

A review of the number of radios planned for use in Roseau County, along with the number of talk groups, in conjunction with current and expected radio traffic levels was conducted to determine if any additional 800 MHz channel capacity will be needed at the local ARMER tower sites. Considering these factors, and the resulting traffic loading calculations included in this ARMER Plan, no channel expansion should be needed at the ARMER sites serving the county. Refer to Section A. vii) of this plan for a review of calculated 800 MHz channel traffic loading.

## iii) PSAP/Dispatch Center Equipment and Logging/Recording

The Roseau County dispatch center currently utilizes a two-position Zetron 4048 PC-based radio console control system. This console system is now connected to the county's existing VHF system equipment, as well as eight (8) 800 MHz RF control stations, for use on local Roseau County, NW Region talk groups, as well as selected statewide talk groups.

Roseau County is including a two-phased approach for PSAP console equipment in this ARMER participation plan:

Phase 1 of the implementation plan, which is their current configuration, will retain the existing Zetron 4048 console equipment and eight 800 MHz RF control stations for access to the local, regional and statewide talk groups available to Roseau County. It is expected that this configuration will be used for the next two to three years.

Phase 2 of the implementation plan, which is being considered as a long-term option (dependent on funding), will replace the existing Zetron consoles with a new Motorola MCC7500 3-position console system for use with the ARMER system. The county would notify the Region, State and OTC at the time the Phase 2 transition was being planned.

*A total of 20 Conventional Channel Gateway (CCGWs) ports are being planned for the Phase 2 (MCC7500) implementation.*

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

**Voice Logging:** The dispatch center will continue to use its existing local voice logging recorder for the recording of ARMER and conventional channel radio traffic. A limited number of local ARMER talk groups will be recorded at the PSAP, and will be handled via local 800 MHz RF control stations.

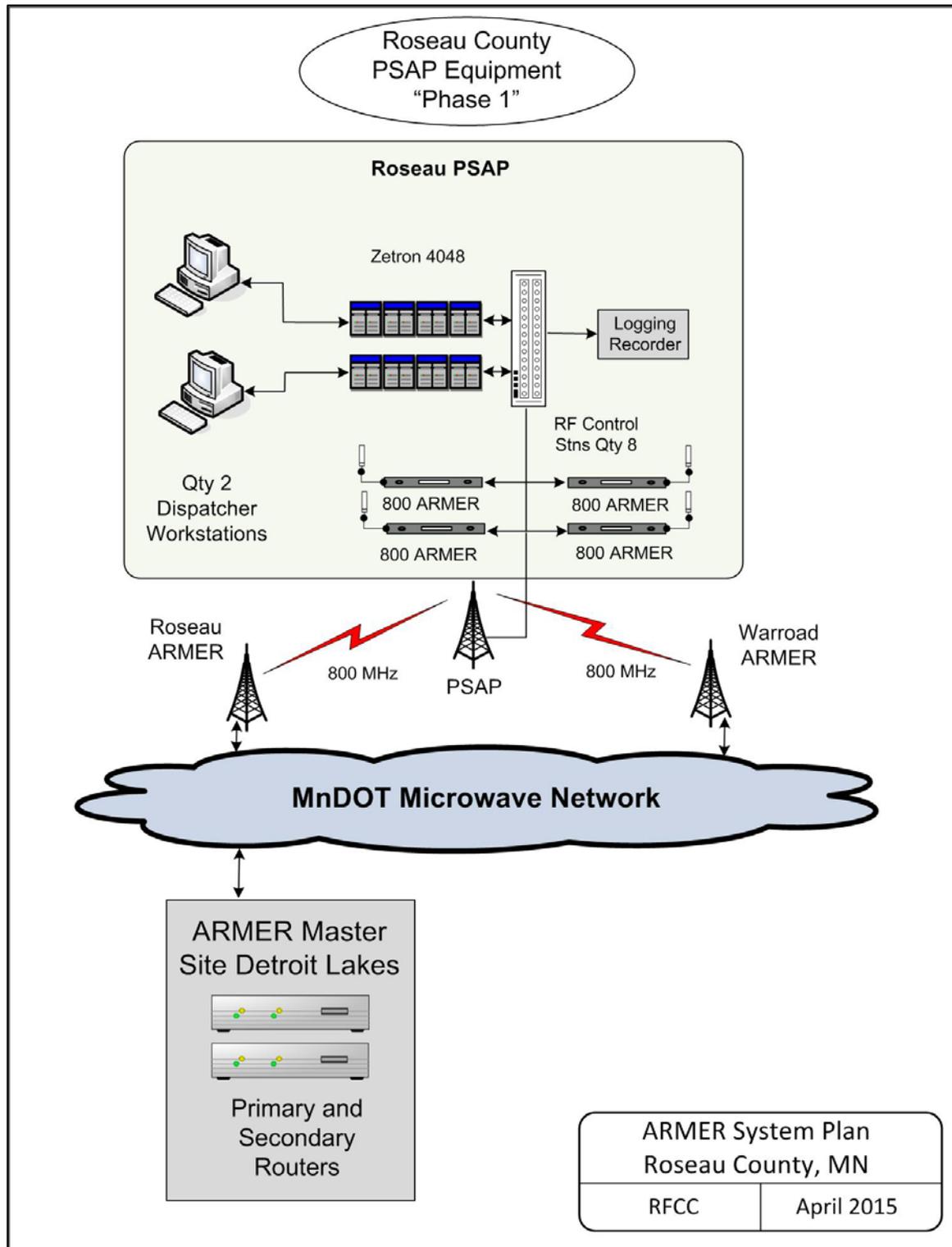
#### **iv) PSAP Connectivity**

Connectivity between the Roseau County dispatch center and the ARMER system is required for operation of the system talk groups, as well other non-trunked conventional channel resources.

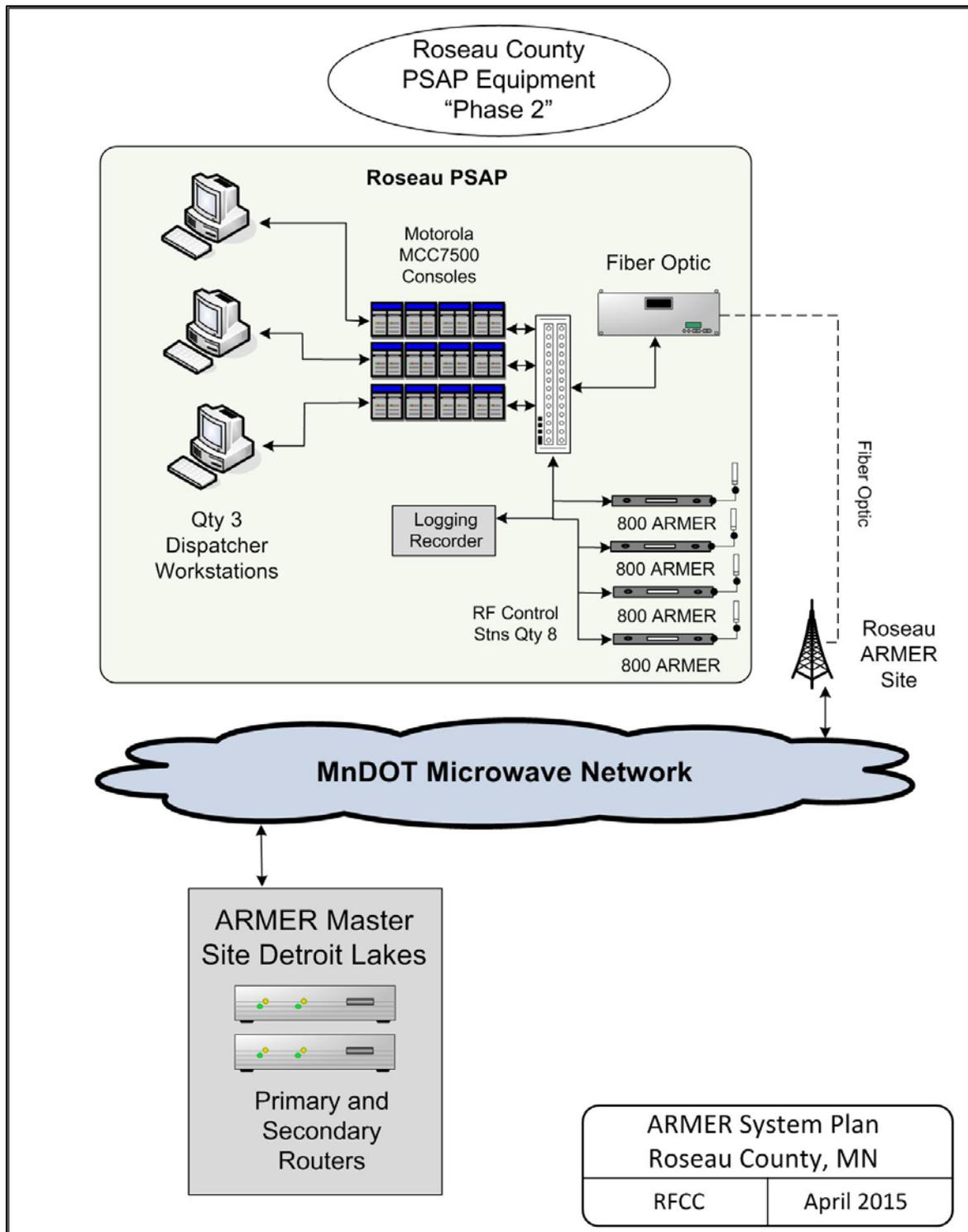
**Phase 1:** The Zetron consoles currently being used by the county are connected to a group of eight (8) 800 MHz RF control stations located at the county's PSAP. These stations communicate on-channel with the Roseau and other ARMER tower sites.

**Phase 2:** Roseau County has an existing fiber optic link between the PSAP in Roseau to the Roseau ARMER tower site, which is located approximately three miles west of the PSAP. The county will utilize this fiber optic link if/when new MCC7500 consoles are implemented at the PSAP.

### Roseau County PSAP ARMER Architecture (Phase I)



### Roseau County PSAP ARMER Architecture (Phase 2)



**v) Subscriber Radios**

The 800 MHz subscriber (mobile and portable) radio inventory planning work conducted with Roseau County agencies has identified the following maximum estimated quantities of radios to be utilized on the system:

<b>Agency Type</b>	<b>Mobile</b>	<b>Portable</b>	<b>Base</b>
Law Enforcement	14	29	8
Fire/EMS	27	127	3
Public Works	2	2	0
Schools/Other	0	14	0
<b>Totals</b>	<b>45</b>	<b>174</b>	<b>11</b>

A total of 230 mobile, portable and control base radios would be implemented in the system, if all agencies purchase or obtain the radios identified within this plan. This includes the total potential for three year growth for the agencies within the county. The county agencies currently have a total of 61 radios on hand, which are now being used on the ARMER system. A detailed breakdown of Roseau County’s mobile, portable, and VHF radio pager inventory requirements and cost estimates is provided on the next page. Agencies throughout the county will be able to use this opportunity to purchase and implement standard radio types for use within the system, which will promote user commonality and interoperability between the various agencies. As noted previously, the Sheriff’s Office has purchased all mobile and portable radios required for law enforcement operations on the ARMER system.

**Roseau County MN  
 800 MHz Radio Inventory and Cost Data**

Total of 800 MHz Mobile and Portable Radio Equipment Required for System Implementation											Totals
Agency	Dual Band Mobile @ \$6,000	Mid-Tier Mobile Radios w/DES @ \$4,000	Mid-Tier Mobile Radios no DES @ \$3200	Mid-Tier Mob Radios Dual Control @ \$3800	Dual Band Portable @ \$6,000	Mid-Tier Port Radios w/DES @ \$3,300	Mid-Tier Port Radios no DES @ \$2500	Low-Tier Mobile Radios @ \$2,200	Low-Tier Portable Radios @ \$1,900	800 Mhz RF Control Stations @ \$6,000	Total Agency Radio Equipment Costs (Maximum)
Roseau Co Sheriff (on hand)	10					14					NA
Roseau Police (on hand)	2					8					NA
Warroad Police (on hand)	2					7					NA
RS County 911 Dispatch (on hand)										8	NA
<b>Law Agency Totals</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>\$ -</b>
Badger Fire (on hand)							2				NA
Badger Fire (near term)			8							1	\$ 31,600
Badger Fire (long term)									26		\$ 49,400
Greenbush Fire (on hand)							2				NA
Greenbush Fire (near term)			5							1	\$ 22,000
Greenbush Fire (long term)									26		\$ 49,400
Roseau Fire (on hand)							4			1	NA
Roseau Fire (near term)			5								\$ 16,000
Roseau Fire (long term)									24		\$ 45,600
Warroad Fire (on hand)							2				NA
Warroad Fire (near term)			6								\$ 19,200
Warroad Fire (long term)									24		\$ 45,600
Greenbush EMS (on hand)				1			2				NA
Roseau EMS (on hand)				2			3				NA
Warroad EMS (on hand)				2			2				NA
Wannaska First Responders									6		\$ 11,400
Roosevelt First Responders									6		\$ 11,400
<b>Fire/EMS Agency Totals</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>112</b>	<b>3</b>	<b>\$ 301,600</b>
Roseau County Highway Dept								2	2		\$ 8,200
Roseau Public Works								2	2		\$ 8,200
Roseau School District									10		\$ 19,000
<b>Public Works Agency Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>\$ 35,400</b>
<b>GRAND TOTALS</b>	<b>14</b>	<b>0</b>	<b>24</b>	<b>5</b>	<b>0</b>	<b>29</b>	<b>17</b>	<b>4</b>	<b>126</b>	<b>11</b>	<b>\$ 337,000</b>

**Total Quantity of Radios: 230**

## vi) System Talk Group Planning and ID Requirements

The original Roseau County Limited/Interoperability ARMER plan submitted in 2011 included 83 talk groups for use by the agencies within the county. A recent check of the ARMER system database indicates that there are 59 talk groups currently affiliated with Roseau County, with eight (8) of these talk groups showing system traffic (March 2015).

The Fleetmap for Roseau County has been updated based on the revised needs of Roseau County agencies, and will have a total of 59 talk groups, using the same talk group ID's currently active in the ARMER system database. Some revision of the talk group names in the database will be needed once the new plan is completed.

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

- Primary and secondary dispatch talk groups for law enforcement
- Primary and secondary dispatch talk groups for fire service
- Primary and secondary dispatch talk groups for EMS service
- Individual dispatch talk groups for non-traditional public safety agencies
- Countywide talk groups for special events
- Countywide talk groups for interoperability
- Individual talk group(s) for each participating agency
- Non-trunked tactical talk groups for "Scene of Action" use

Refer to Attachment I for a copy of the preliminary Roseau County fleet map.

A total of 230 ARMER system IDs are expected for the Roseau County implementation, which includes three year estimated totals:

- 220 for mobile and portable subscriber units total expected on the system for all agencies
- 10 for PSAP operations

## vii) 800 MHz Traffic Loading and Frequency Planning

The ARMER system sites within Roseau County will operate in a trunked multicast mode of operation. The state has planned for a group of five 800 MHz frequency pairs to be implemented at each site, and these channels will be shared by all users of the system/sites in the area. These users will include:

- Roseau County agency users
- Neighboring county agency users
- State of Minnesota and Federal agency users

The county 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. However, a balance must be

established between providing a sufficient number of channels and the cost of implementing those channels, as well as the increasingly limited number of 800 MHz frequencies available for the channels.

With a maximum radio inventory of approximately 226 local radio units planned for this system, it is expected that the planned five channels will be sufficient at the Roseau County ARMER sites.

When neighboring county and state radios are added to this total, it is possible that a greater number of channels would be needed at the sites. To better calculate the expected traffic loading the Roseau County radio would have on the local tower sites, the industry-standard Erlang-C process has been used in this plan to determine the expected voice traffic on the ARMER system. This process can be used for both telephone and radio networks, where a shared and limited number of communications paths (trunks) are used to handle the voice traffic.

A full discussion of how this process works is beyond the scope of this plan; however, several critical factors are used to determine the expected radio traffic usage of the tower sites:

- Number of local (Roseau County) radios
- Number of neighboring county agency radios that are likely to use any given tower site
- Number of State of Minnesota agency radios that are likely to use the sites
- Number of 800 MHz radio channels available at the site(s)
- Estimation of how many radios are in use/service at a point in time
- Average radio transmission length of time (in seconds)
- Average expected number of transmissions from the radios (per hour)

When these radio inventory and usage parameters are entered into the Erlang calculation formula, a resulting Grade of Service (GOS) parameter is generated, indicating the calculated or expected availability of the radio system channels for the radio users. This GOS number could also be viewed as a “likelihood of getting a busy signal” when pressing the transmit button on a radio. The lower the number, the better GOS.

Public Safety Wireless Network (PSWN), the governmental agency which establishes operational standards and recommendations for public safety radio communications, has established a minimum GOS for these radio systems at “equal or less than two percent.”

In other words, there should be less than a two percent chance that a radio user’s transmission would be blocked by the system due to radio traffic levels. This could also be viewed as “greater than 98 percent” chance of a radio user’s transmission being properly handled by the system when needed. This two percent GOS is considered a “Standard Busy Hour” level of usage. It should be noted that many agencies have elected to move beyond the PSWN recommendation and a common goal in Public Safety today is a GOS of 1 or better.

The parameters used for the Roseau County radio traffic calculations are as follows:

- Quantity 230 Roseau County radios (three year maximum)
- Quantity 150 neighboring county radios (interoperability use in Roseau County)
- Quantity 150 State of Minnesota agency radios
- 33 percent estimate percentage of how many radios are in use/service at one time
- 8 seconds average radio transmission length of time (in seconds)
- .51 average expected number of transmissions from the radios (per hour)
- 1.5 seconds average busy time (in seconds)

The GOS is then calculated for each site, based on the number of radio channels planned for the sites, to show the impact of the differing number of channels that would be implemented at the sites.

This formula does not necessarily incorporate any parameter for the number of talk groups being planned for use by the local county agencies. The number of talk groups can have a dramatic effect on system loading, as the larger the number of talk groups, the greater potential for spreading the traffic among the RF channels. Nonetheless, it remains the most reliable method for calculating radio traffic levels.

The table shown below contains the predicted 800 MHz radio channel and tower site traffic loading for typical operational radio activity for the sites that are located within Roseau County, based on the parameters in the previous data table:

**Predicted 800 MHz Standard Voice Channel Traffic Loading for Roseau County**

Site and GOS	Number of Voice Channels Normal Conditions				
	1	2	3	4	5
Roseau	30.5%	3.7%	0.3%	0.0%	0.0%
Greenbush	26.5%	2.9%	0.2%	0.0%	0.0%
Juneberry	19.7%	1.6%	0.1%	0.0%	0.0%
Roosevelt	26.5%	2.9%	0.2%	0.0%	0.0%
Warroad	25.7%	2.7%	0.2%	0.0%	0.0%
Winner Silo	19.7%	1.6%	0.1%	0.0%	0.0%

One channel at each site is allocated as the Control Channel, which is not used for voice and not reflected in the table above. As shown, a GOS of better than one percent is achieved with three channels per site (highlighted in yellow), less that the total quantity being installed by the state at each of the county sites. This would indicate that no additional channels should be needed at the county sites.

The above calculations are again based on the PSWN “Standard Busy Hour” calculations, and do not account for the increased traffic loads that would be expected during emergency periods (tornado, large fire, multiple events). PSWN has established a recommendation of an additional 20 percent capacity for

these events. Refer to the following table for the predicted ARMER system traffic loading and GOS for the Roseau County sites when the PSWN 20 percent additional emergency operations data is incorporated into the usage calculations.

**Predicted 800 MHz Voice Channel Traffic Emergency Loading for Roseau County**

Site and GOS	Number of Voice Channels Emergency Conditions				
	1	2	3	4	5
Roseau	67.8%	15.3%	2.7%	0.4%	0.0%
Greenbush	58.7%	12.2%	2.0%	2.0%	0.0%
Juneberry	26.9%	2.9%	0.2%	0.0%	0.0%
Roosevelt	58.7%	12.2%	2.0%	2.0%	0.0%
Warroad	61.1%	12.8%	2.1%	0.3%	0.0%
Winner Silo	26.9%	2.9%	0.2%	0.0%	0.0%

As shown, three voice channels are adequate to maintain the minimum recommended GOS during emergency traffic periods at all sites other than Roseau and Warroad, where 4 channels are needed. The State of Minnesota will be implementing four voice channels at all sites, so no additional channels should be needed at the ARMER sites. Because of the reasonable number of talk groups planned by Roseau County agencies (59), we do not believe that Roseau County’s implementation will have a significant impact on the system loading at the remaining sites, and should not be a factor requiring additional RF channel capacity. This also includes additional future capacity for the local sites in the event that other governmental agencies (schools, transportation) elect to join the system in the future.

The State of Minnesota has obtained the 800 MHz frequency assignments for the basic five channel configuration needed for the five tower sites within Roseau County. The table on the following page is the current available 800 MHz frequency data for the Roseau County ARMER tower sites. The channels listed as “Roseau Co.” have been assigned to Roseau County via the state’s 800 MHz NPSPAC channel plan, and while they have not yet been assigned to a specific site, they could be used for the system at some point. Channels and sites with a “?” listed may have been assigned a non-NPSPAC 800 MHz channel, but this information is not readily available at this time.

### 800 MHz Frequency Assignments for ARMER Sites in Roseau County

Site	Chan 1	Chan 2	Chan 3	Chan 4	Chan 5
Roseau County	91	118	138	197	217
Roseau	22	38	58	157	174
Greenbush	16	132	146	172	PS
Juneberry	2	70	88	183	PS
Warroad	7	66	126	151	191
Winner Silo	36	78	143	160	PS

**(PS = Public Safety/Non-NPSPAC channels)**

#### viii) Legacy VHF Equipment

The county will continue to operate and control a number of existing or updated VHF radio system channels, for local paging and interoperability. Emergency paging for fire and EMS operations is currently conducted via county-owned VHF system(s). These existing systems will be retained and modified or expanded as needed for improved paging coverage. This expansion will include the installation of some equipment at ARMER tower sites for improved coverage and reliability.

In addition, the existing law enforcement VHF repeater channels may be utilized for local interoperability between VHF and 800 MHz radio system users.

## 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 in more densely populated areas of the county
- Need to cover the geographic area with a reasonable number of 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 goal for Roseau County is 95 percent "on-the-street/outdoor" reliability to a portable radio with a standard antenna held at a height of five feet above ground level.

## 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 Roseau County'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 Heliac®
Transmission Line Size (tower under 300 feet)	7/8 inch Heliac®
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 Heliac®
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

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

1. State of Minnesota prepared coverage map for Roseau County (from 2008).
2. Mobile (vehicle-mounted) radio coverage
3. On-Street portable radio coverage
4. In-building countywide coverage
5. In-building coverage in the City of Roseau area
6. In-building coverage in the City of Warroad area

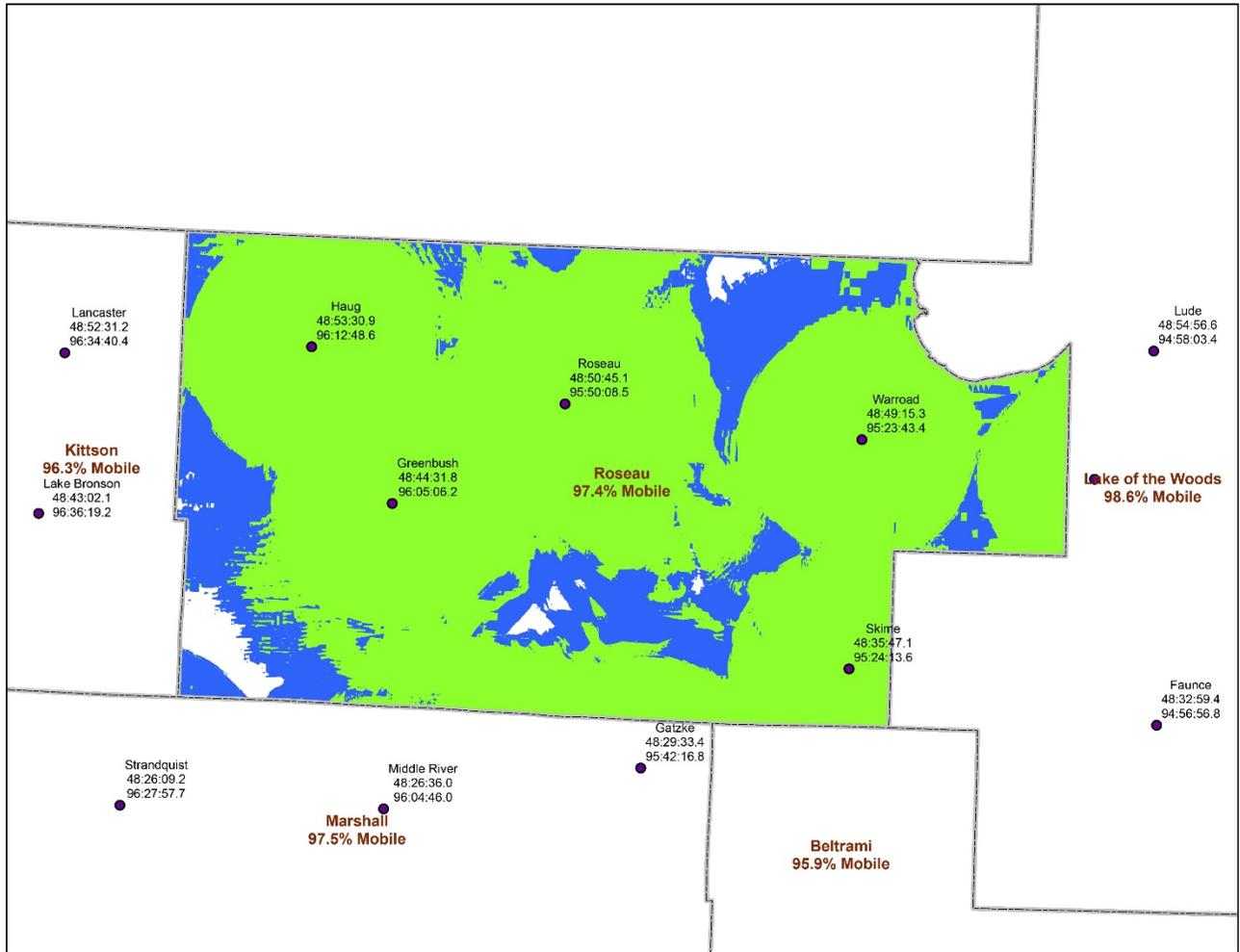
As shown in the predicted coverage maps on the following pages, the potential coverage for the system, using the selected sites and parameters is very good and is expected to meet the project coverage goals. The first map presented in this plan is the predicted coverage map provided by the State of Minnesota for the Roseau County geographical area.

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 county where this is predicted to exist are in the far west and east corner of the county, and are not expected to be problematic.

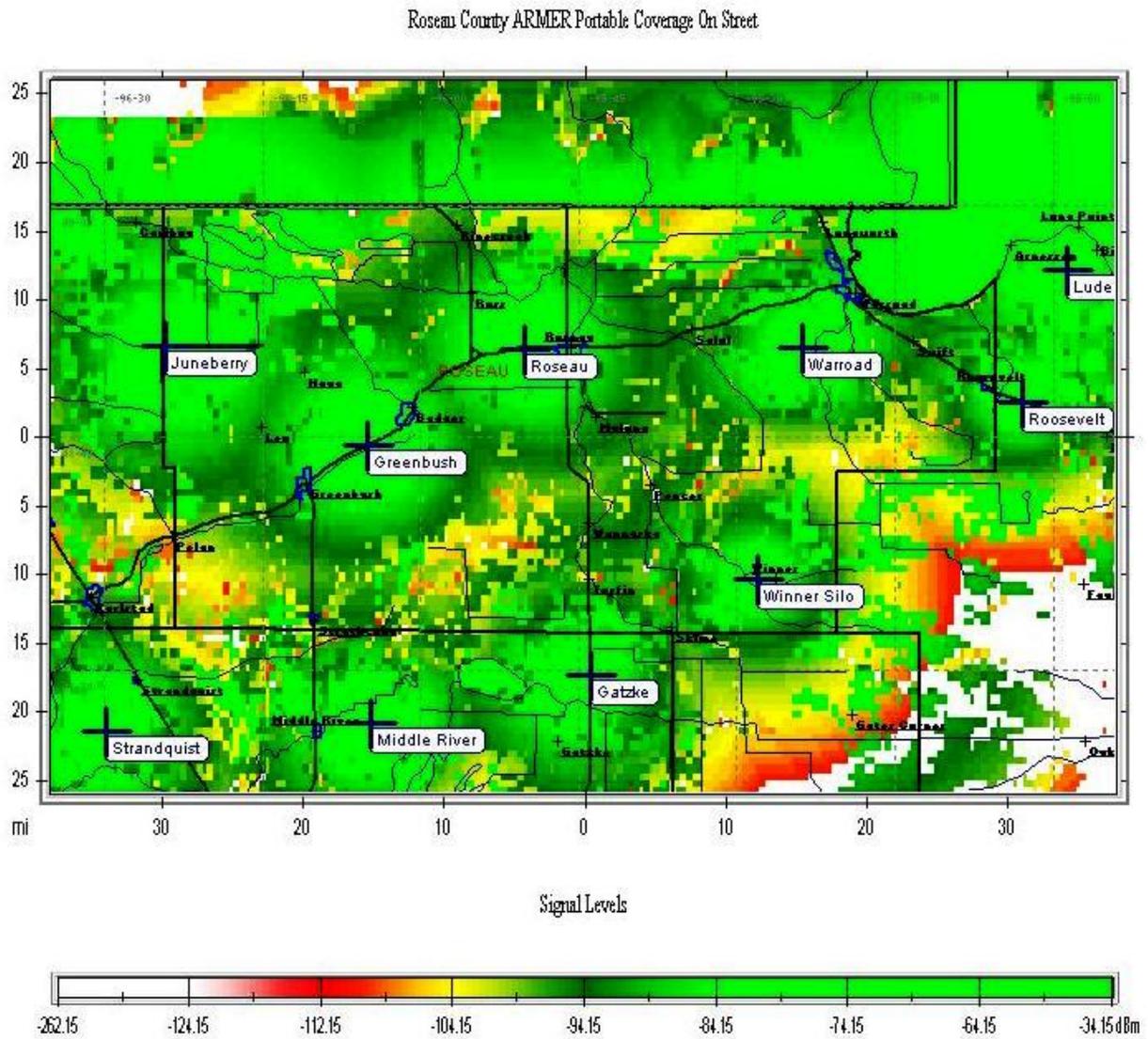
**Map I: Roseau County Predicted ARMER Coverage**

(Originally provided by the State of Minnesota in 2008; this map is provided for reference only, and is considered outdated due the changes in tower site locations that have been established since the time of original publication).



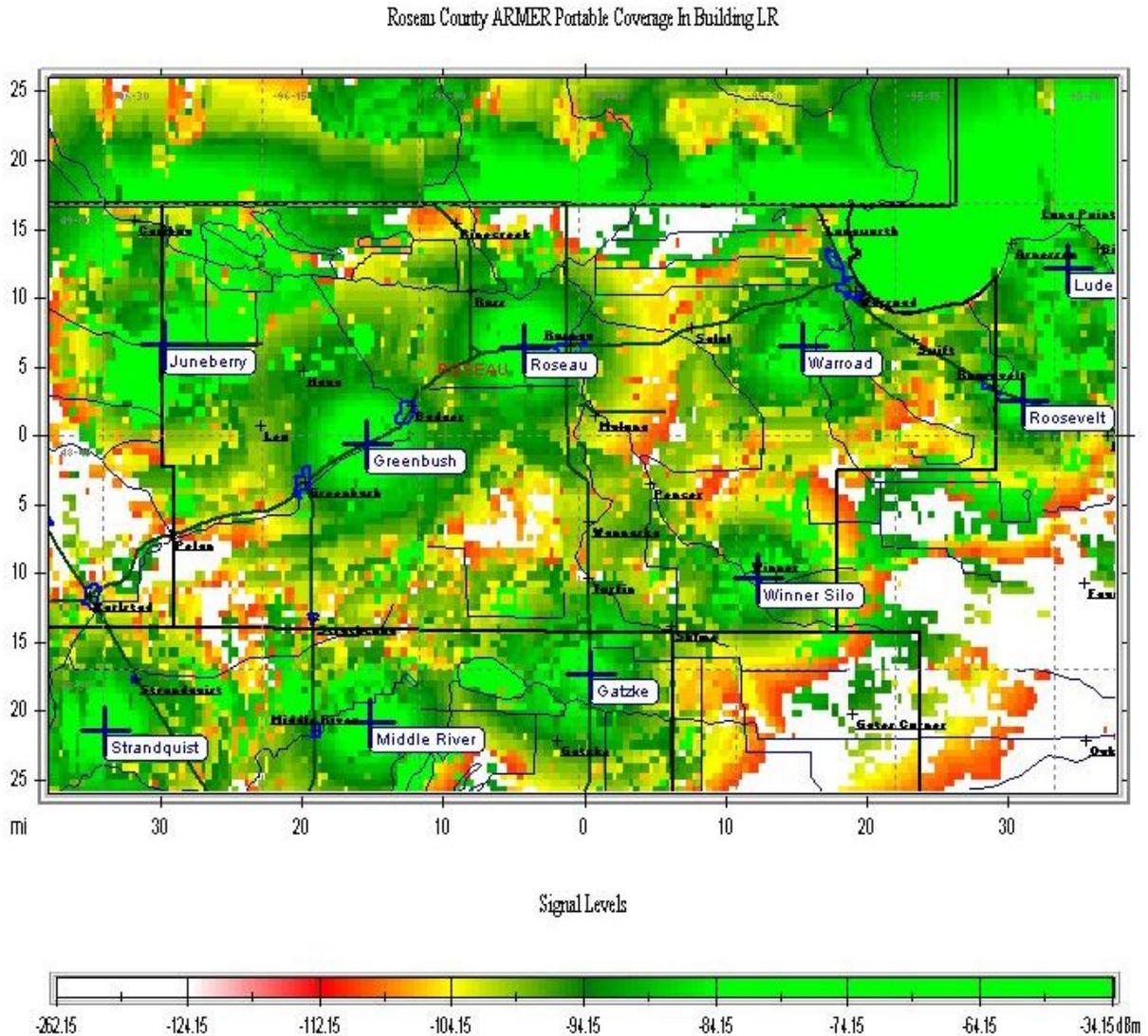


**Map 3:** The map shown below demonstrates the predicted coverage to be expected for portable (handheld) radios “On Street/Outdoors” from the ARMER tower sites to be located within Roseau County, including the first-tier sites outside the county borders.



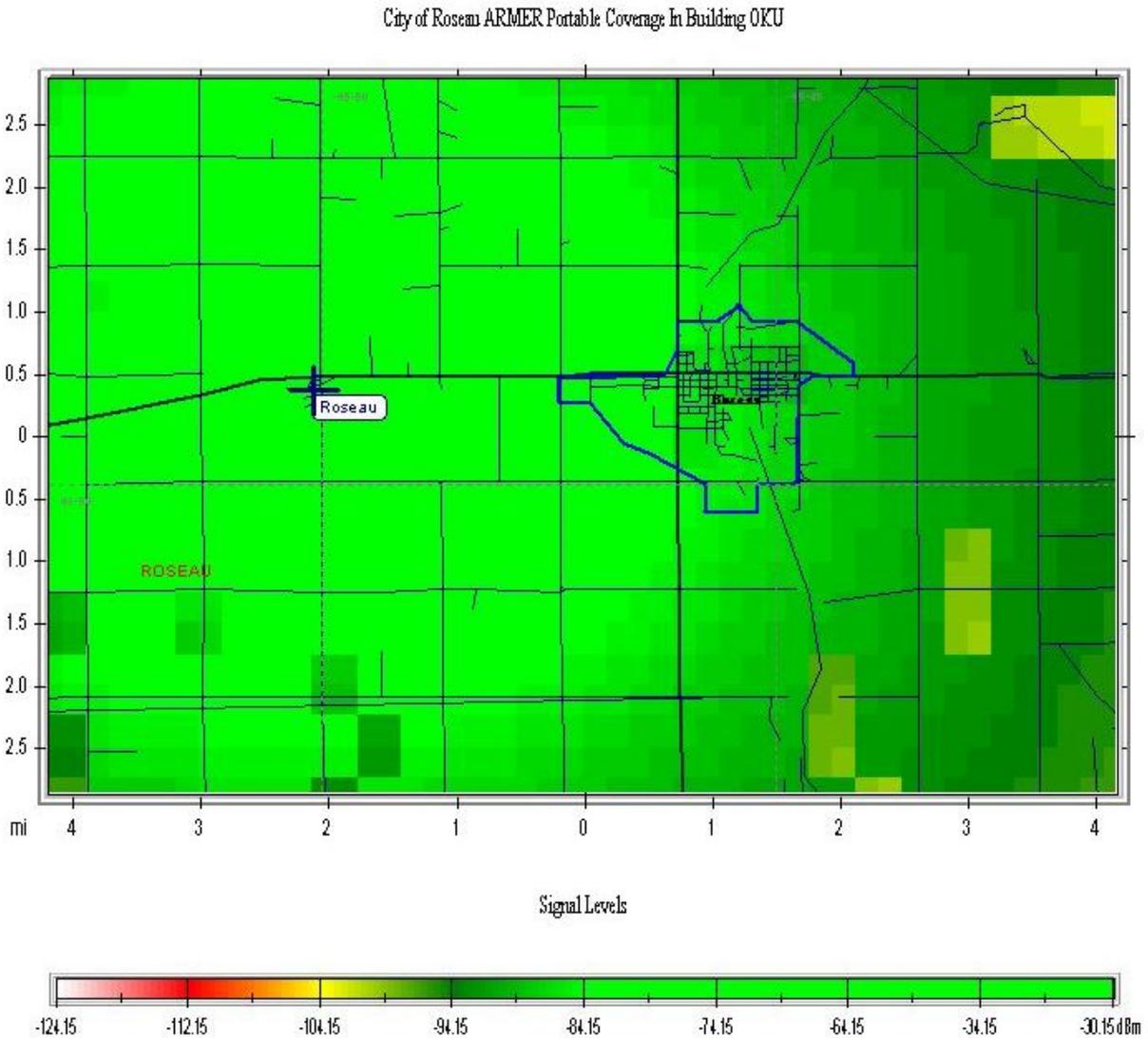
The predicted portable radio coverage throughout most of the county is very good with the planned tower sites, and coverage within the county is enhanced by tower sites outside of the county borders. The only areas of potentially weak coverage would be southeast of Greenbush, and in the far southwest corner of the county.

**Map 4:** The map shown below demonstrates the predicted in-building (6db loss) coverage to be expected for portable/hand held radios in Roseau County from the ARMER system when all tower area sites in the region are included in the calculations.



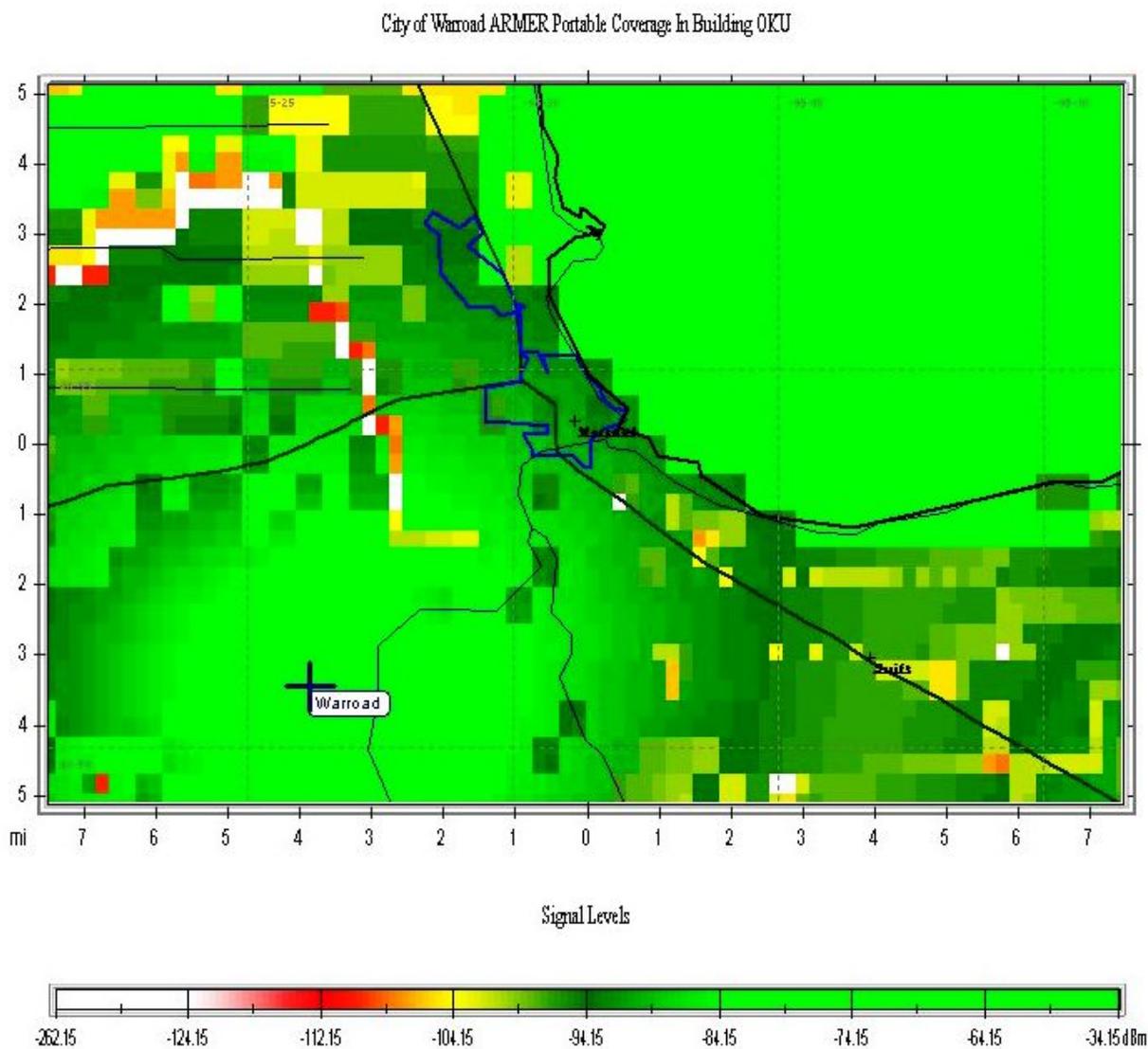
The predicted 6db in-building coverage for Roseau County is good in many areas, including the cities of Roseau and Warroad. Refer to the maps on the next pages for more detail of the predicted coverage in these two areas. Roseau County is fortunate that the ARMER sites exist in close proximity to the more populated cities in the county.

**Map 5:** This map demonstrates the predicted in-building (6db loss) portable radio coverage to be expected in the City of Roseau area from the ARMER system when all tower area sites in the region are included in the calculations.



The blue lines on the map indicate the city limits of Roseau, and the dark blue lines indicate highways and main roads. The predicted in-building coverage should be good within the city, although this will depend on the type of building involved. As an example, testing has been conducted in the high school, located in east central area of town; it has been determined that an in-building booster (BDA) will be needed for reliable coverage. Other facilities will be tested as well.

**Map 6:** This map demonstrates the predicted in-building (6db loss) coverage to be expected for portable radios in the City of Warroad area from the ARMER system when all tower area sites in the region are included in the calculations.



The blue lines on the map indicate the city limits of Warroad, and the dark blue lines indicate highways and main roads. The predicted in-building coverage should be good within the city, although this will depend on the type of building involved. The Warroad tower site is located 5.8 miles southwest of the city. Coverage testing within the Marvin Windows facilities has shown good results, primarily due to existing BDA's installed for cellular telephone coverage. Coverage within schools is not good, and will require additional equipment be installed.

## 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.

The primary method of redundancy for Roseau County operations will be the implementation of multiple 800 MHz RF control stations at the main PSAP location. This would typically include one control station for each primary public safety discipline, such as:

- Law operations
- Fire operations
- EMS operations

If scenario 1 occurs, the PSAP loses direct connectivity with the ARMER network, and talk group access and control is lost. The control stations will allow the PSAP staff to access the county-specific and system interoperability talk groups over the air and function much like a mobile or portable radio.

If scenario 2 occurs, (local ARMER sites lose connectivity to the master site in Detroit Lakes, 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. This is due to the local sites and network operating in a multicast mode of operation (rather than simulcast).

The resulting effect on the dispatch center is the same; however, it is possible to implement multiple RF control stations at the dispatch center, with access to all of the tower sites within the county. The challenge with this approach is that the number of stations could be cumbersome and difficult to manage, depending on the number of talk groups incorporated in the backup station plan.

No final determination has been made for Roseau County as to the specific number of 800 MHz RF control stations that will be implemented at the PSAP, but a plan will be based on the county's final dispatch console implementation decisions.

## 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.

Roseau County 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 Roseau County's decision to migrate to the ARMER system. The areas specifically addressed are:

**Internal:** Between the many agencies within the general jurisdictional area of Roseau County (i.e. law enforcement, fire service, and EMS agencies). The implementation of a common 800 MHz trunked radio system for all public safety agencies, as well as other units of local government, should resolve most interoperability communications issues that may currently exist. To make the ARMER system work effectively will require careful fleet map planning and the proper training of all radio system users.

**External:** Between the county agencies and other public safety (law, fire, and EMS) and government agencies operating both within and sharing borders with Roseau County, to include the following:

- Lake of the Woods County agencies
- Beltrami County agencies
- Kittson County agencies
- Marshall County agencies
- Minnesota State Patrol, Mn/DOT, Department of Natural Resources (DNR) enforcement, and fire agencies
- Border Patrol and other Federal law enforcement and fire agencies
- Canadian public safety agencies

Many agencies within the Northwest Region of Minnesota have been moving forward with the ARMER participation planning and implementation process, which will improve communications interoperability for those agencies. Roseau County is currently bordered by county agencies operating both on 800/ARMER and VHF systems, which will require a combination of solutions to ensure reliable communications between all agencies in the region, regardless of radio system type. Roseau County will have neighboring agencies operating on both types of systems for the foreseeable future.

To accommodate communications between agencies that may operate with Roseau County that are not on the ARMER system in the short-term using legacy system technology, access to the ARMER radio system, a variety of interconnectivity options will be needed:

- The most basic requirement will be for Roseau County to continue operation of their VLaw3 I 155.4750 MHz base station. This can be patched to an 800 MHz talk group via the PSAP console system when required.
- All Roseau County Law Enforcement agencies use dual-band radios, capable of both VHF and ARMER/800 MHz operations.
- Roseau County Fire and EMS agencies will maintain the use of VHF radios in their vehicles, in conjunction with new ARMER/800 MHz radios.
- Roseau County repeater channels will be retained, and will become local “interoperability” channel resources, capable of being patched to the ARMER system, to allow local VHF radio users a simple and effective link to county agencies operating on the ARMER system.

## 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.

Roseau County will adopt and comply with the standards published by both the State Radio Board and the Northwest Minnesota Regional Radio Board. Use of these standards will ensure that users in Roseau County 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**

Mn/DOT – ARMER will have the primary tower site alarm monitoring for sites in the county.

## **H. Maintenance**

Maintenance of the primary ARMER tower sites within Roseau County will be handled by the Mn/DOT staff. Roseau County currently contracts with a local authorized service facility for maintenance of any additional 800 MHz system equipment planned for the Roseau County implementation, including the PSAP equipment.

## **I. System Administration**

Local system administration for Roseau County will be the responsibility of the Roseau County Sheriff's Office.

## **J. Other Local Enhancements**

The primary local enhancements to the planned system implementation are:

- VHF interoperability systems

No other tower site or 800 MHz channel expansion local enhancements are planned for the system.

### 3. Project Costs and Budget

Funding for implementation of the ARMER system within Roseau County is being considered from three different sources:

- Local bonding
- Local levy
- Grant opportunities

Grant funding has been received for the purchase of a many of the existing 800 MHz mobile and portable radios for public safety agencies in the county. Funding for the remaining system infrastructure equipment has not yet been finalized, but is being reviewed by the county and considered for year 2015 or beyond.

#### Project Cost Estimates – Phase 1:

Item/Category	Estimated Costs
Zetron Console Modifications	\$ NA
800 RF Control Stations	\$ NA
800 MHz Subscriber Radios (Law Enforcement)	\$ NA
800 MHz Subscriber Radios (Fire agencies)	\$ 88,000
<b>Grand Total Estimated Costs</b>	<b>\$ 88,000</b>

#### Project Cost Estimates – Phase 2:

Item/Category	Estimated Costs
MCC7500 ARMER Console Equipment	\$350,000
Other System Equipment	\$ 50,000
800 MHz Subscriber Radios (Fire and EMS)	\$212,800
800 MHz Radios (Public Works and Schools)	\$ 35,400
Other Services	\$ 25,000
<b>Grand Total Estimated Costs</b>	<b>\$637,800</b>

## 4. Project Implementation

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### A. Schedule

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

However, Roseau County has slowly migrated to ARMER system use over the past two years, and all Law agency radio operations are now conducted via the ARMER system. Local EMS agencies have also obtained ARMER radios, and are using the system. The county agencies will continue to seek the funding needed to obtain the remaining ARMER-capable mobile and portable radios needed for Fire agencies. The County is also planning and budgeting for the long-term replacement of its existing Zetron radio dispatch console with a new Motorola console, and direct connectivity into the ARMER network, although no specific time frame has been established for this work. Roseau County will notify the regional and state technical committees at such time that this change is being planned.

The County will continue to utilize their existing VHF radio systems over the next few years, and will retain such equipment as needed for Interoperability purposes. The PSAP console equipment is configured to operate both systems (legacy VHF and ARMER).

**Attachment I: Roseau County Fleet Map**

	<b>Law Enforcement Operations</b>	<b>TG Alias</b>
1	Roseau County Law 1 (main)	RS Law 1
2	Roseau County Law E1 Encrypted	RS Law E1
3	Roseau County Law 2	RS Law 2
4	Roseau County Law E2 Encrypted	RS Law E2
5	Roseau County Law Car-Car	RS C2C
6	Roseau Sheriff's Office Ops 1	RS RSO Ops 1
7	Roseau Sheriff's Office Ops 1 Encrypted	RS RSO Ops E1
8	Roseau Sheriff's Office Admin	RS RSO Adm
9	Roseau Police Dept. Ops 1	RS RPD Ops 1
10	Roseau Police Dept. Ops 1 Encrypted	RS RPD Ops 1E
11	Roseau Police Dept. Admin	RS RPD Adm
12	Warroad Police Dept. Ops 1	RS WPD Ops 1
13	Warroad Police Dept. Ops 1 Encrypted	RS WPD Ops 1E
14	Warroad Police Dept. Admin	RS WPD Adm
15	Roseau County Emergency Management/EOC	RS EOC 1
16	Roseau County EOC Ops 1	RS EOC Ops 1
	<b>Fire and EMS Operations</b>	<b>TG Alias</b>
17	Roseau County Fire 1 (main)	RS Fire 1
18	Roseau County Fire 2	RS Fire 2
19	Badger Fire Dept. Ops	RS BFD Ops
20	Badger Fire Dept. Admin	RS BFD Adm
21	Badger First Responders Ops	RS B1st Ops
22	Greenbush Fire Dept. Ops	RS GFD Ops
23	Greenbush Fire Dept. Admin	RS GFD Adm
24	Roosevelt First Responders Ops	RS R1st Ops
25	Roseau Fire Dept. Ops 1	RS RFD Ops 1
26	Roseau Fire Dept. Ops 2	RS RFD Ops 2
27	Roseau Fire Dept. Admin	RS RFD Adm
28	Wannaska First Responders Ops	RS W1st Ops
29	Warroad Fire Dept. Ops 1	RS WFD Ops 1
30	Warroad Fire Dept. Ops 2	RS WFD Ops 2
31	Warroad Fire Dept. Admin	RS WFD Adm
32	Roseau County EMS 1 (main)	RS EMS 1
33	Roseau County EMS 2	RS EMS 2
34	Roseau County EMS 3	RS EMS 3

**Attachment I: Roseau County Fleet Map (continued)**

	<b>Fire/EMS Operations (cont.)</b>	<b>TG Alias</b>
35	Roseau County EMS Admin	RS REMS Adm
36	Greenbush EMS Admin	RS GEMS Adm
37	Roseau County EMH 1	RS EMH 1
38	Roseau County EMH 2	RS EMH 2
	<b>Local Interoperability</b>	<b>TG Alias</b>
39	Roseau County Announcement Group	RS ANNC ALL
40	Roseau County Call	RS Call
41	Roseau County Emergency Button	RS EMER
42	Roseau County Emergency 911	RS 911
43	Roseau County Public Safety Statewide Roam	RS Roam
44	Roseau County Public Safety Common 1	RS Com 1
45	Roseau County Public Safety Common 2	RS Com 2
46	Roseau County Public Safety Common 3	RS Com 3
47	Roseau County Public Safety Common 4	RS Com 4
48	Roseau County Public Safety Common 5	RS Com 5
	<b>Public Works and Schools</b>	<b>TG Alias</b>
49	Roseau County Highway Operations 1	RS Hwy 1
50	Roseau County Highway Operations 2	RS Hwy 2
51	Roseau County Transit	RD TRNST
52	Future Public Works 1	RS PW 1
53	Future Public Works 2	RS PW 2
54	Future Public Works 3	RS PW 3
55	Roseau County School Security	RS SCH SEC
56	Roseau County School Transportation 1	RS School 1
57	Roseau County School Transportation 2	RS School 2
58	Roseau County Future Use 1	RS Future 1
59	Roseau County Future Use 2	RS Future 2

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

## Attachment 2: 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](http://www.srb.state.mn.us)
2. Federal Engineering “Radio System Needs Assessment and Alternatives Report for Roseau County” December, 2009
3. RadioSoft™ ComStudy2™ Terrain Database
4. ARMER Status Map, as posted at <http://www.srb.state.mn.us/> dated March 2015
5. 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



## PROCEEDINGS OF THE ROSEAU COUNTY BOARD OF COMMISSIONERS

April 28, 2015

The Board of Commissioners of Roseau County, Minnesota met in the Courthouse in the City of Roseau, Minnesota on Tuesday, April 28, 2015 at 9:00 a.m.

### CALL TO ORDER

The meeting was called to order at 9:00 a.m. by Board Chair Jack Swanson. The Pledge of Allegiance was recited. Commissioners present were Roger Falk, Mark Foldesi, Todd Miller, Glenda Phillipe, and Jack Swanson.

### APPROVAL OF AGENDA

A Legislative Update discussion was added to County Board Items. A motion to approve the amended Agenda was made by Commissioner Phillipe, seconded by Commissioner Falk and carried unanimously.

### COMMENTS AND ANNOUNCEMENTS

Commissioner Phillipe reminded the Board about the upcoming Minnesota Power Open Houses in the area the week of May 4, 2015. Commissioner Swanson informed the Board of a webinar (being offered by NACo on April 30, 2015) that will introduce the Stepping Up program aimed at reducing the number of mentally ill persons in jail.

### APPROVAL OF BILLS

A motion was made by Commissioner Falk, seconded by Commissioner Phillipe and carried unanimously to approve the payment of the following bills:

#### Warrants Approved For Payment 4/16/2015

<u>Vendor Name</u>	<u>Amount</u>
INSTITUTE FOR PSYCHOLOGICAL THERA	3,000.00
MN DEPT OF FINANCE –TREAS	2,170.50
ROSEAU CITY	8,663.22
10 Payments less than 2,000.00	3,415.55
<b>Final Total:</b>	<b>17,249.27</b>

#### Warrants Approved For Payment 4/23/2015

<u>Vendor Name</u>	<u>Amount</u>
MN DEPT OF EMPLOYMENT	9,100.40
MN ENERGY RESOURCES	3,855.75
5 Payments less than 2,000.00	2,565.58
<b>Final Total:</b>	<b>15,521.73</b>

### CONSENT AGENDA

A motion to approve the Consent Agenda was made by Commissioner Phillipe, seconded by Commissioner Miller and carried unanimously. The Board, by adoption of its Consent Agenda, approved the April 14, 2015 Board Proceedings; approved the hire of a Child Support Officer (Grade 6, Step E); and, approved the Roseau County Lake of the Woods Sportsman's Club Request for Reimbursement in the amount of \$6,442.00.

## **DEPARTMENT REPORTS**

### **Highway Department**

Engineer Ketring met with the Board to request approval to call for bids and to award contracts for the County ditch brushing projects.

A motion to approve a call for bids on the Warroad Shop construction project, to be opened June 1, 2015 at 2:00 p.m., in the Commissioners Board Room at the Courthouse, was made by Commissioner Miller, seconded by Commissioner Phillippe and carried unanimously.

### **County Ditch Brushing Contracts**

A motion to approve a brushing and cleaning contract with Northwest Concrete on CP15:07, CD #21, CD #23 and JD #63 (137,280 linear feet @ \$1.90 per linear foot) for a total of \$260,832.00, was made by Commissioner Miller, seconded by Commissioner Falk and carried unanimously.

A motion to approve a brushing and cleaning contract with Steven E. Stoskopf, Inc., on CP 15:08, CD #20, CD #25, and CD #26 (55,440 linear feet @ \$.81 per linear foot) for a total of \$44,906.40, was made by Commissioner Miller, seconded by Commissioner Falk and carried unanimously.

A motion to approve a brushing and cleaning contract with Northwest Concrete on CP 15:09, CD #17, SD #69 and SD #72 (172,920 linear feet @ 1.90 per linear foot) for a total of \$328,548.00, was made by Commissioner Foldesi, seconded by Commissioner Miller and carried unanimously.

A motion to approve a brushing and cleaning contract with Steven E. Stoskopf, Inc. on CP 15:10, CD #18, JD #61, CSAH #45 and CSAH #46 (72,600 linear feet @ \$1.41 per linear foot) for a total of \$102,366.00, was made by Commissioner Phillippe, seconded by Commissioner Falk and carried unanimously.

A motion to approve a brushing and cleaning contract with Northwest Concrete, CP 15:11, JD #19 and SD #91 (88,440 linear feet @ \$1.90 per linear foot) for a total of \$168,036.00, was made by Commissioner Falk, seconded by Commissioner Phillippe and carried unanimously.

A motion to approve a brushing and cleaning contract with Northwest Concrete, CP 15:12, SD #91 and SD #95 (112,200 linear feet @ \$1.90 per linear foot) for a total of \$213,180.00, was made by Commissioner Foldesi, seconded by Commissioner Falk and carried unanimously.

Commissioner Foldesi requested an update on the progress of replacing the Greenbush Highway shop. Engineer Ketring stated that plans are in place for this project with blueprints complete and added that a cost analysis will be completed after the bids for the Warroad Shop have been received.

## **COUNTY BOARD ITEMS**

### **Legislative Update**

Commissioner Miller provided the Board with a summary of the recent omnibus tax bill released by Senate Tax Chair Rod Skoe. Commissioner Miller stated that the bill includes assorted provisions to County Program Aid, increasing PILT payments, assisting counties with

out-of-home child placements costs and providing incentives for workforce housing shortages in Greater Minnesota.

Commissioner Committee Reports

Commissioner Falk reported on the following committee(s): Roseau River Watershed Lake Bottom meeting, 4/16/15; Northwest Community Action, 4/16/15; Social Services Board, 4/21/15; Highway Committee, 4/21/15.

Commissioner Miller reported on the following committee(s): Social Services Board, 4/21/15; Highway Committee, 4/21/15; City of Warroad/County Shop meeting, 4/22/15.

Commissioner Phillippe reported on the following committee(s): Lake Township Board, 4/15/15; Social Services Board, 4/21/15; Highway Committee, 4/21/15; City of Warroad/County Shop meeting, 4/22/15; Warroad City Council, 4/27/15.

Commissioner Swanson reported on the following committee(s): NACo's Center for Engineering Workforce Development Steering Committee, 4/15/15; Social Services Board, 4/21/15; Highway Committee, 4/21/15; Roseau School Board, 4/24/15.

Upon motion carried, the Board adjourned the Regular Meeting at 10:50 a.m. The next Regular Meeting of the Board is scheduled for May 12, 2015 at 9:00 a.m.

Attest:

Date: \_\_\_\_\_

\_\_\_\_\_  
Jeff Pelowski, County Coordinator  
Roseau County, Minnesota

\_\_\_\_\_  
Jack Swanson, Board Chair  
Board of County Commissioners  
Roseau County, Minnesota



# SNOWMOBILE TRAILS ASSISTANCE PROGRAM MAINTENANCE AND GROOMING

## Certification of Trail Closure/Application Submission

4<sup>th</sup> Benchmark – Due By May 15<sup>th</sup>

Trail Name:     Roseau County Trailblazers/BISF 1    

Club/Organization Name:     Roseau County Trailblazers, Inc    

Trail Administrator Signature: *Nyles Zogman* Date:     4/27/2015    

By signing this form, the Sponsor certifies that the above snowmobile trail has been satisfactorily closed as defined within the Minnesota Snowmobile Trails Assistance Program Manual, an application for the coming grant round is completed and on file by May 15<sup>th</sup> and that a backup grooming plan is in place and is on file in the event the groomer or the operator are not able to maintain the trails.

Is there any reason why the Department of Natural Resources should withhold any part of this payment?  
YES  NO

If YES, please elaborate: \_\_\_\_\_

Sponsor Name (Local Unit of Government): \_\_\_\_\_

Signature: \_\_\_\_\_ Date \_\_\_\_\_

Title: \_\_\_\_\_

**Amount requested \$6,101.27** \_\_\_\_\_ **(Up to 5% of the original contract.)**

### DEPARTMENT USE ONLY

#### THIS INVOICE APPROVED FOR PAYMENT BY:

Parks and Trails Area Supervisor – OK TO PAY	Date	FY	Amount
			\$
SWIFT PO:	RECEIPT #		
VENDOR #:0000197344	LINE #		
SERVICE BEGIN DATE: <b>April 1, 2015</b> __	SERVICE END DATE:		
INVOICE #:  <b>BM4</b>	Vendor Name and Address: <b>Roseau County</b> <b>606 5th Ave SW, Room 131 Roseau, MN 56751</b>		

## MINNESOTA SNOWMOBILE TRAILS ASSISTANCE PROGRAM MAINTENANCE AND GROOMING APPLICATION

Trail/Area Name /Type of Trail (PRINT or TYPE) <i>Roseau County Trail System BIST Section 1</i>		Date <i>4/27/2015</i>	
Trail Administrator (PRINT or TYPE) <i>Myles Hogenson</i>		Trail Administrator Signature <i>Myles Hogenson</i>	
Address (No. & Street, RFD, Box No., City, State, Zip Code) <i>68224 Co Rd #140, Roseau, MN 56673</i>		Home Phone Number <i>218-689-6889</i>	Work Phone Number <i>218-689-6889</i>

GPS Verified Miles of Trail:  <i>340.7 miles</i>	Date of Meeting Attended:  <i>4/23/2015</i>
--	---

Department Use Only			
Verified Miles:	Mileage Rate:	Amount:	Recommended:  \$ _____

### SPONSOR APPROVAL

Unit of Government	Telephone Number (Include Area Code):
Authorized Signature of Sponsor  <i>[Signature]</i>	Date
	

### CERTIFICATION BY DEPARTMENT OF NATURAL RESOURCES

Authorized Signature For DNR	Area Trails Supervisor	Date
Authorized Signature For DNR	Regional Parks and Trails Manager	Date

### Checklist/Mandatory Attachments:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Certification of Trail Closure/4 <sup>th</sup> Benchmark | <input checked="" type="checkbox"/> Proof of Club Non-Profit Status |
| <input checked="" type="checkbox"/> Grooming Logs from the Previous Year                     | <input checked="" type="checkbox"/> Trail Contact Information       |
| <input type="checkbox"/> Sponsor Resolution  | <input type="checkbox"/> Sign Order (if applicable Form)            |
| <input checked="" type="checkbox"/> Update of Current Trail Alignments                       |   |
| <input checked="" type="checkbox"/> Backup Grooming Plan                                     |   |





2015-05-01

**WHEREAS**, counties routinely provide treatment services to the estimated 2 million people with serious mental illnesses booked into jail each year; and

**WHEREAS**, prevalence rates of serious mental illnesses in jails are three to six times higher than for the general public; and

**WHEREAS**, almost three-quarters of adults with serious mental illnesses in jails have co-occurring substance use disorders; and

**WHEREAS**, adults with mental illnesses tend to stay longer in jail and upon release are at a higher risk of recidivism than people without these disorders; and

**WHEREAS**, county jails spend two to three times more on adults with mental illnesses that require interventions compared to those without these treatment needs; and

**WHEREAS**, without the appropriate treatment and services, people with mental illnesses continue to cycle through the criminal justice system, often resulting in tragic outcomes for these individuals and their families; and

**WHEREAS**, Roseau County and all counties take pride in their responsibility to protect and enhance the health, welfare and safety of its residents in efficient and cost-effective ways; and

**WHEREAS**, through the *Stepping Up Initiative*, the National Association of Counties, the Council of State Governments Justice Center and the American Psychiatric Foundation, are encouraging public, private and nonprofit partners to reduce the number of people with mental illnesses in jails;

**NOW, THEREFORE, LET IT BE RESOLVED, THAT I**, Jack Swanson, Roseau County Board Chair, do hereby sign on to the Call to Action to reduce the number of people with mental illnesses in our county jail, commit to sharing lessons learned with other counties in my state and across the country to support a national initiative and encourage all county officials, employees and residents to participate in *Stepping Up*. We resolve to utilize the comprehensive resources available through *Stepping Up* to:

- Encourage the State of Minnesota to provide needed mental health crisis beds.
- Convene or draw on a diverse team of leaders and decision makers from multiple agencies committed to safely reducing the number of people with mental illnesses in jails.
- Collect and review prevalence numbers and assess individuals' needs to better identify adults entering jails with mental illnesses and their recidivism risk, and use that baseline information to guide decision making at the system, program and case levels.
- Examine treatment and service capacity to determine which programs and services are available in the county for people with mental illnesses and co-occurring substance use disorders, and identify state and local policy and funding barriers to minimizing contact with the justice system and providing treatment and supports in the community.
- Develop a plan with measurable outcomes that draws on the jail assessment and prevalence data and the examination of available treatment and service capacity, while considering identified barriers.
- Implement research-based approaches that advance the plan.





**Roseau County Board**

**May 2015**

**Glenda A. Phillippe**

**District One**

**May 5 – Operations – Roseau**

**May 5 – Committee of the Whole – Roseau**

**May 6 – Land of the Dancing Sky Agency on Aging – TRF**

**May 11 – Warroad City Council**

**May 11 – Warroad School Board – Warroad**

**May 12 – Warroad School Board – Warroad**

## JACK SWANSON COMMITTEE REPORTS

APRIL 29, 2015 - ROSEAU ECONOMIC DEVELOPMENT AUTHORITY

APRIL 30, 2015 - NACO WEBINAR/ STEPPING UP INITIATIVE; the National Association of Counties is asking individual counties to pass a resolution in favor of reducing the number of mentally ill people in county jails

MAY 4, 2015 - ROSEAU CITY COUNCIL

MAY 4, 2015 - MINNESOTA POWER OPEN HOUSE; scoping, EIS for Great Northern Transmission line

MAY 5, 2015 - OPERATIONS COMMITTEE

MAY 5, 2015 - COMMITTEE OF THE WHOLE

MAY 6, 2015 - COMMUNITY JUSTICE COORDINATING COMMITTEE; drug court; stepping up initiative; victim services grant

MAY 6, 2015 - LAW LIBRARY COMMITTEE; part-time pro se attorney to assist residents with forms

MAY 8, 2015 - ASSOCIATION OF MINNESOTA COUNTIES ANNUAL CONFERENCE PLANNING COMMITTEE/ ST CLOUD