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REPORT  
To  
Governor Pawlenty  
And  
The Minnesota Legislature

March 2005

Minnesota Department of Public Safety,  
Statewide Radio Board

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## Background

The Statewide Radio Board was created by the 2004 legislature.<sup>1</sup> It is the successor to the ARMER<sup>2</sup> and Communication Planning Committee (herein after “Planning Committee”) which was formulated following the Department of Transportation’s 2001 report to the legislature, 800 MHz Executive Team Report to the 2001 Minnesota Legislature, 800 MHz Statewide Shared Public Safety Radio System. The Planning Committee was originally charged with refining the statewide public safety radio and communication radio plan (herein after “the Plan”) and to begin overseeing the implementation of an interoperable shared public safety radio and communication system throughout the state of Minnesota. The Plan calls for a phased expansion of the basic communication and interoperability infrastructure throughout the state with provision for local and regional enhancements to provide interoperable public safety communication at all levels throughout the state. The Public Safety Statewide Radio Project, Project Plan and Scope Statement which was submitted to the legislature in December 2002 provides additional information on the project plan and scope.

The Plan built upon the development of a regional shared public safety radio system built in the Minneapolis/St. Paul metropolitan area. That initial implementation was accomplished by the Metropolitan Radio Board, which was created in 1995 as a special purpose political subdivision of the State of Minnesota. The Metropolitan Radio Board’s charge was to “supervise the implementation of the regionwide public safety radio system communication plan” and to “ensure that the system is built, owned and operated, and maintained in accordance with the plan.”<sup>3</sup> In developing a regional public safety radio system the Minnesota Department of Transportation was designated to “own, operate, and maintain those elements identified ... as the first phase.”<sup>4</sup> The fundamental plan also provided the opportunity for local and regional enhancements to create a shared interoperable public safety radio communication. In June of 2002 the basic communication and interoperability infrastructure became operational.

In this first phase of development, the Metropolitan Radio Board served a joint role of implementing the basic communication and interoperability infrastructure and in encouraging and coordinating the participation of local and regional public safety agencies. The 2004 legislation creating the Statewide Radio Board also provided for a transition of the Metropolitan Radio Board to a regional radio board with continuing authority to coordinate local enhancements to the basic communication and interoperability infrastructure. With that transition the Statewide Radio Board was charged with the authority to establish and enforce technical and operational standards over the basic communication and interoperability infrastructure throughout the state, including infrastructure previously under the control of the Metropolitan Radio Board.<sup>5</sup>

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<sup>1</sup> Minnesota Laws 2004, Chapter 201.

<sup>2</sup> ARMER is defined in Minnesota Statutes, § 403.38, subdivision 1 as Allied Radio Matrix for Emergency Response.

<sup>3</sup> Minnesota Statutes § 403.23, subdivision 4.

<sup>4</sup> Minnesota Statutes § 403.23, subdivision 13.

<sup>5</sup> Minnesota Statutes § 403.38.

## Report Requirement

This report is required under Minn. Stat. § 403.36, subd. 4, which provides as follows:

“In conjunction with each biennial budget process, the Statewide Radio Board must submit a status report to the governor and to the chairs and ranking minority members of the house and senate committees with jurisdiction over capital investment and criminal justice funding and policy. The report must include a substantive assessment and evaluation of each significant part of the implementation of the statewide public safety radio plan with (1) to the extent possible, an update on risks and mitigation strategies; and (2) quantitative information on the status, progress, costs, benefits, and effects of those efforts.”

This report requirement provides for a periodic report to the Governor and to the Legislature upon the following topics:

- A description of the status of the plan implementation, including
  - Progress
  - Costs
  - Benefits
  - Effects
- An assessment of risks and mitigation strategies

### Status of Plan Implementation

#### Phase One

As previously indicated, Phase One of the Plan was cooperatively implemented by the Metropolitan Radio Board and the Minnesota Department of Transportation. The basic communication and interoperability infrastructure became operational in June of 2002. Carver County, Hennepin County and the City of Minneapolis were part of the initial implementation adding infrastructure as necessary to provide additional coverage and capacity for local needs. The initial infrastructure was funded with \$36 million from the following sources:

\$ (Millions)	Source
7.5	State General Obligation Bonding
7.5	State Trunk Highway Funds
13.3	Revenue Bonds backed by 4-cent per month 911 surcharge
3.0	Metro Council General Obligation Bonds on behalf of Metro Transit
4.7	Combination of Interest Earned and Cash from 9-1-1 surcharge
\$36.0	

**Table 1- Radio System Infrastructure Sources of Funding**

In addition to the appropriations for the system infrastructure, the legislature appropriated \$ 9.4 million of operating funds to Mn/DOT. \$ 1.4 million was a permanent biennial base adjustment to cover Mn/DOT's operational and maintenance costs of the system. The remainder was a one-time appropriation available until expended for Mn/DOT and State Patrol ancillary equipment (mobile radios, portable radios, dispatch console equipment, etc.).

A breakdown of what was acquired with the \$ 36 million dollars is as follows:

Acquisition	\$ (Millions)	Percentage
Site Development / Civil Construction	5.9	16.4%
Equipment (800 MHz, Microwave, Interoperability)	22.8	63.3 %
Vendor Installation	2.9	8.1%
Vendor Program Management	3.2	8.9 %
Performance Bond / System Staging / Freight	1.2	3.3 %
Total	\$36.0	100.0%

**Table 2- Radio System Infrastructure Acquisition**

Local Enhancements/First Phase- The following local enhancements were completed as part of the First Phase implementation:

***Hennepin County***

Population: 1,116,200 (including Minneapolis). Hennepin county constructed a sub-system for coverage throughout Hennepin County. All county users and all communities dependent upon Hennepin County Sheriff's Office for dispatch services and the City of Richfield transitioned to the regional system at that time.

Cost: \$19,000,000

### **Carver County**

Population: 70,205 Carver County enhanced the basic infrastructure added channels (improve capacity) and added a tower (improve coverage) to provide for county and local users.

Cost: \$2,400,000

### **Minneapolis**

The City of Minneapolis constructed a sub-system for coverage throughout Minneapolis.

Cost: \$5,800,000

North Memorial also completed its dispatch connection at a cost of \$250,000 and the Metropolitan Council reportedly invested an additional \$2.4 million to increase capacity as part of the First Phase. The \$32.85 million in funding for local enhancements was from local sources. At the time, there was no funding assistance available to local users.

## **Phase Two- Local Enhancements to Phase One**

The second phase of development contemplates the completion and integration of local users with the regional system throughout the metropolitan area. The Metropolitan Radio Board and its successor regional radio board will continue to provide coordination of regional and local enhancements within the metropolitan area. The following local enhancements are underway or anticipated within the metropolitan area::

### **Anoka County**

- Anoka County (Population: 298,084)  
Implementation: Fall 2004  
Subscriber Unit Count: 1,115

Anoka County began its implementation of a transition to the ARMER system in the fall of 2004. The overall cost of implementation was \$8,315,012. Of that amount, \$2,078,753 was funding with 2004 Homeland Security Funds.

### **Hennepin County**

- Hennepin County (Population: 1,116,200)  
Original Implementation: June 2002  
Additional Implementation: On going  
Current Subscriber Count: 4,085  
Additional Subscribers (est.): 300

Although Hennepin County transitioned to the regional system for some users as part of the First Phase, a number of local communities did not transition at that time. 2003 HSEM funds were allocated to a number of these communities for police and fire portable radios and, as a result, all remaining communities in Hennepin County, except, Eden Prairie, anticipate transitioning to the regional radio system during the later half of 2004 or first quarter of 2005. The principal

cost of infrastructure for this transition is increased capacity to Hennepin's sub-system, the addition of a base radio site in the City of Bloomington and dispatch center connectivity. The cost of that additional infrastructure is \$7,674,770, of which \$4,463,873 of 2004 Homeland Security funds were allocated to Hennepin County for these improvements.

The original legislation creating the Metropolitan Radio Board did not include Chisago and Isanti Counties. As part of the Phase One development, the basic communication and interoperability infrastructure was implemented in Chisago and Isanti Counties by the Department of Transportation to provide continuity of communications for the metro districts of the Minnesota State Patrol. Those counties were subsequently added to the Phase Two planning and implementation by the 2004 legislature.

### ***Chisago County***

- Chisago County (Population: 41,101)  
Basic Implementation: None  
Current Subscriber Count: Unknown

2003 Homeland Security funds were allocated to Chisago County to add additional capacity to the basic infrastructure. Those funds were also used to acquire a number of subscriber units to provide basic communication capability with adjoining communities. Preliminary estimates of the capital costs to transition to the regional radio system for Chisago County are very speculative and would incorporate Chisago County into the Washington County simulcast group for system efficiency purposes. Those costs are estimated to be \$8,067,455.

### ***Isanti County***

- Isanti County (Population: 31,287)  
Basic Implementation: none  
Est. Subscriber Count: Unk

2003 Homeland Security funds were allocated to Isanti County to add additional capacity to the basic infrastructure. Those funds were also used to acquire a number of subscriber units to provide basic communication capability with adjoining communities. Preliminary estimates of the capital costs to transition to the regional radio system for Isanti County are very speculative and would incorporate Chisago County into the Anoka County simulcast group for system efficiency purposes. Those costs are estimated to be \$8,254,485.

### ***Ramsey and Dakota County Planning***

Significant planning activity is underway in Ramsey and Dakota County as follows:

- Ramsey County (population: 511,035)  
Basic Implementation: 2005  
Est. Subscriber Count: 2,400

Ramsey County is actively planning their transition to the ARMER system. Their local plan has been approved by the Metropolitan Radio Board and they have executed contracts with vendors. Ramsey County has taken a countywide approach, including both the county and local users in their transition process. The estimated cost of local infrastructure improvements for coverage and capacity are \$11,676,529. 2004 Homeland Security funds were allocated to Ramsey County in the amount of \$4,290,866. \$3,416,235 in 2003 Homeland Security funds were allocated to Ramsey County for public safety subscriber units.

- Dakota County (population: 355,904)  
     Basic Implementation: Possibly 2006  
     Est. Subscriber Count: 1,900

Dakota County is actively planning their transition to the ARMER system. The estimated cost of local enhancements to provide coverage and capacity is \$7,995,819 (towers and site equipment) and \$3,999,840 (dispatch connections and equipment). \$4,480,000 in 2005 Homeland Security funds have been allocated to Dakota County for infrastructure improvements. \$123,200 was allocated to Dakota County from 2003 Homeland Security funds for subscriber units.

### ***Scott and Washington County Initial Planning***

Initial planning activities have begun in Scott and Washington County. There is a need for further refinement to these plans, but each county has initiated active discussion of their potential integration to the ARMER system.

- Scott County (population: 89,498)  
     Basic Implementation: No date specified  
     Subscriber units: None

The Scott County Board has initiated preliminary discussions concerning its potential transition to the ARMER system. The county is currently involved in constructing a new public safety facility and does plan upon integrating its dispatch center into the ARMER system, providing added interoperability and connectivity to the system. Very preliminary estimates of the cost to integrate Scott County into the ARMER system were made by the Metropolitan Radio Board. The cost was estimated at \$3,949,144. Scott County has not received any Homeland Security funds for communication infrastructure.

- Washington County (population: 201,130)  
     Basic Implementation: Planned 2009  
     Subscriber Count: Unknown

The Washington County Board is currently considering its transition plan to the ARMER system. That transition has been factored into the county's capital improvement budget in 2009. Preliminary estimates of the cost to integrate

Washington County into the ARMER system were made by the Metropolitan Radio Board at \$4,765,419. 2003 Homeland Security funds were allocated to Washington County in the amount of \$603,400 for public safety subscriber units. Similar to Chisago and Isanti Counties, Washington County funded basic capacity improvements to the backbone within the county and has distributed a number of subscriber units to public safety entities within the county to provide communication interoperability.

### ***Phase Two- Progress***

Within the Minneapolis/St. Paul metropolitan area the initial implementation of the shared trunked radio system in Carver County, portions of Hennepin County and Minneapolis have served to demonstrate the benefits of a shared trunked radio system. It provides substantial additional capacity for communications individually and collectively based upon users and organizational needs. Additional capacity needs in the metropolitan area have been pressing for a number of years. Anoka County's transition planning began shortly after the implementation of the basic system.

Additional planning in the metropolitan area was spurred by the allocation of Homeland Security funds to ARMER. 2003 Homeland Security funds were allocated to local communities to partially fund subscriber units for public safety use. Funding of local enhancements through 911 revenue bonds authorized by the 2002 legislature did not occur, but, 2004 Homeland Security funds were used to provide partial funding of local enhancements. With this funding, most dependent communities in Hennepin County began to plan their transition and Ramsey County and Dakota County expedited their transition plans to the system. Without that additional funding, the transition of those counties and local communities would probably have occurred at a much slower pace.

It should be noted that funding of infrastructure is but one part of the equation. With Phase One and the implementation of local enhancements the actual cost of operating a shared communication system has become prominent. Everyone's question is "how much will it cost us to operate the system?" The Metropolitan Radio Board's articulated position has been to eliminate operating costs by using 911 fees to pay regional operating costs. The question of potential users fees and costs associated with allocation of resources continue to be poised as local users consider participation in the system. The continued allocation of 911 fees to answer resource allocation or cost allocation issues is not a sustainable policy without legislative adoption. This is not to say 911 fees should not be used to offset portions of those costs, but instead to say that formulating and articulating a fair and rational long term strategy for cost allocation should be a priority.

### **Phase Three**

Phase Three of the ARMER Plan provided for the construction of the basic communication and interoperability infrastructure within the central and southeastern districts of the Minnesota State Patrol. (Appendix A). Partial funding of the estimated \$44 million required to construct Phase Three infrastructure was provided for by the 2003 legislature. \$27 million in 911

revenue bonds were authorized after July 1, 2004. Funding issues resulting from significant unanticipated liability for prior year 911 costs and increased 911 program costs prevented the commitment of 911 funds to the Phase Three revenue bonds. As a result, the extension of the basic communication infrastructure beyond the nine-county metropolitan area has not been possible.

### ***Local Improvements in Phase Three***

Following the authorization of 911 revenue bonds to partially fund the Phase Three infrastructure, 2003 Homeland Security funds were awarded to the following local communities in the Phase Three region to provide for local enhancement:

City of St. Cloud	\$2,985,000
Rochester/Olmsted County	\$2,200,000

The local enhancements provided for with these Homeland Security funds would be integrated into the basic communication infrastructure provided as part of the Phase Three development.

Prior to July 1, 2004, it became clear that 911 revenue bonds were not viable. St. Cloud and Rochester proceeded with their local plans to build radio systems interoperable with the Phase Three infrastructure. That planned development would have provided basic communication within the St. Cloud and Rochester metropolitan areas but no further. The 911 funding issues were not resolved during the 2004 legislative session and the funds that were to be used for the additional 911 revenue bonds were required to pay ongoing costs to operate the 911 emergency telephone system. Additional 2004 Homeland Security funds were directed to Olmsted County and Stearns County to allow for expansion of the Rochester and St. Cloud systems to provide countywide coverage. Homeland Security funds allocated to that purpose were as follows:

#### Infrastructure

Stearns County	1,837,254
Olmsted County	1,954,854

As of this report, the following systems have been implemented or planned in the Phase Three planning area:

- City of St. Cloud (Population: 60,269)  
Basic Implementation: January 2005  
Subscriber Units: 650

The City of St. Cloud transitioned to an analog trunked radio system in the late 1980's. That system was incompatible with the ARMER plan. In 2003, \$2,985,000 was allocated to St. Cloud from 2003 Homeland Security funds to

replace their communication system with one that would integrate into the ARMER system. That system is being placed in service as of January 2005.

### ***Stearns County***

- Stearns County (Population: 133,166)  
Basic Implementation: late 2005  
Subscriber Units: Unknown

When Phase Three implementation could not be funded, Stearns County sought funding to expand upon the basic communication infrastructure implement in the City of St. Cloud to provide continuity in communication throughout the county. 2004 Homeland Security funds were allocated to Stearns County in the amount of \$1,837,254 for infrastructure and \$1,828,400 for public safety subscriber units. Stearns County is currently working with the Department of Transportation to plan and implement development of a communication infrastructure throughout Stearns County.

### ***Olmsted County***

- Olmsted County (Population: 124,277)  
Basic Implementation: mid year 2005  
Subscriber Units: Undetermined

The City of Rochester and Olmsted County were in need of a significant communication up-grade. Their planning had anticipated integrating into the ARMER system as Phase Three was developed. In 2003, \$2,200,000 was allocated to Olmsted County from 2003 Homeland Security funds to fund local improvements within the City of Rochester that would integrate into the ARMER system. When Phase Three implementation could not be funded, Olmsted County sought funding to expand upon the basic communication infrastructure implemented in the City of Rochester to provide continuity in communication throughout the county. 2004 Homeland Security funds were allocated to Olmsted County in the amount of \$1,954,854 for infrastructure and \$840,000 for public safety subscriber units. Olmsted County is currently working with the Department of Transportation to plan and implement development of a communication infrastructure throughout Olmsted County. That system is anticipated to be placed in service in mid 2005.

### ***Phase Three- Progress***

Without funding there has been very little progress in the Phase Three region. More problematic, however, is the reality that the factors cited in the 800 MHz Executive Team Report to the 2001 Minnesota Legislature, 800 MHz Statewide Shared Public Safety Radio System driving renewal of public safety communication infrastructure throughout the state of Minnesota have become more critical. Systems acquired in the early 1970's are now thirty-five years old. The FCC has set a cutoff date for narrow banding of VHF systems at 2013. In reports to Congress, the Federal Communications Commission and National Telecommunications and Information Administration (controlling frequencies allocated to the federal government) concluded that there is no additional

spectrum to be allocated to public safety in the VHF frequencies as the demand for wireless spectrum continues to increase; Alternative Frequencies for Use by Public Safety Systems, Response to Title XVII, Section 1705 of the National Defense Authorization act of FY2001, Federal Communication Commission; Spectrum Reallocation Report, Response to Title III of the Balanced Budget Act of 1997, National Telecommunications and Information Administration, Pub. 98-36, February 1998.

The events of September 11, 2001 have only served to increase the importance of interoperable public safety communication as a state and national priority. That priority is reflected in Minnesota's 2004 Homeland Security Strategy and Assessment, Goal 7, as follows:

“Implement a statewide system of interoperable communication for local and state resources to be more effective and efficient in ensuring the safety of the citizens and emergency responders in Minnesota.”

The objectives under this statewide goal provide for the planning and development of a statewide interoperable trunked radio system to replace the existing diverse and antiquated analog communication systems that exist across the state. The net result is that more and more local communities are confronted with aging and antiquated wireless communication systems that must be replaced. The ARMER system provides a plan for the coordinated renewal of the wireless communication infrastructure throughout the state of Minnesota. By necessity, the plan it builds upon a basic communication infrastructure to which local and regional coverage and capacity enhancements might be added. Without that basic communication infrastructure, local communities and counties are left with no option but to proceed with local systems to address their immediate needs.

The allocation of Homeland Security funds to the ARMER system is as follows:

2003 Homeland Security Funds	Appendix B
2004 Homeland Security Funds	Appendix C
2005 Homeland Security Funds	Appendix D

## **Assessment of Risk Mitigation Strategies**

In the December 2002 Public Safety Statewide Radio Project, Project Plan and Scope Statement report to the legislature, the following risk assessment and mitigation strategies were presented:

1. Project discipline through traditional project management approach is essential for success in a project of this complexity and breadth. It is necessary to install a project manager at the program level, with oversight for all aspects of the project including the technology, communication and marketing plans, budget responsibility, integration with the metro project, legislative interface, and scope and change control.

Mitigation Strategy: Assign a dedicated project manager with full funding, span of control, and executive support to construct a project team of appropriately skilled resources to carry out completion of the multi-year project.

Current Status: On January 2, 2004 a program manager was hired by the Department of Public Safety to provide project management and to coordinate with the Department of Transportation. The program manager has oversight of all aspects of the project and reports directly to an Assistant Commissioner of Public Safety.

2. Risk associated with a build-out of this infrastructure because it will span a number of years.

- a) Vendor/contractor sustainability
- b) Dedicated project staff resources
- c) Project staff continuation

Mitigation Strategy: Evaluate and select standard tools and technologies to position the system within the mainstream industry and vendor offering. In addition, a reliable funding stream must be established now for the future, and dedicated to support the project resources and activities until the year 2012.

Current Status: The ARMER plan and technical and operational standards are clearly the domain of the Statewide Radio Board. The program manager and the Department of Transportation must assure that the Statewide Radio Board is kept abreast of the tools and technologies necessary to position the system within the mainstream. The Department of Transportation's Office of Electronic Communication has an extensive history of owning and operating substantial communication assets with a staff of degreed and non-degreed engineers who follow the industry. In addition, the Statewide Radio Board maintains an Operations and Technical Committee to provide recommendations upon technical issues related to the plan and operational standards.

With respect to the long term funding issue, see comments following this section.

3. The costs associated with the build-out are substantial.

- a) Project expenses are significant for this phase.
- b) Future funding for subsequent phases is unreliable but essential for full infrastructure benefits

Mitigation Strategy: Where possible and prudent, vendor and technology pricing should be acquired on a fixed bid basis to anticipate future funding needs. In addition, a strategy for leverage, integration, and re-use must be well established and required by the project leadership and system builders.

Current Status: Absent project funding, there has not been an opportunity to re-bid the project. The Department of Transportation has been actively involved with the Department of Administration in discussing unbundled bids and pricing. The Department of Transportation has continued to work with local communities in Phase

Two development and Phase Three design strategies to assure reasonable and specific bidding processes with identifiable costs.

4. The technology could become stagnant or obsolete over the multi-year life of the project and against architectural requirements.

- a) Dangerous and costly missteps in design and implementation may occur
- b) Even if proved necessary, shifts in direction are difficult, costly, and time consuming

Mitigation Strategy: The technology builder (Mn/DOT) must commit to an “ever-greening” process whereby it is validated repeatedly over time against architectural and functional requirements.

Current Status: See answer to item #2. The Department of Public Safety has allocated 2005 Homeland Security funds to up-date the plan, including a validation of the current technology including architectural and functional requirements. It is also anticipated that a more detailed risk assessment and mitigation plan will be developed as part of that plan up-date to fulfill the requirements of Minn. Stat. § 16E.04, subd.3.

5. Collaborative methods can be time-consuming and difficult, though the potential for an extraordinary result is much greater- the value of purposeful and energized partnering efforts cannot be shortchanged.

Mitigation Strategy: Diligent management oversight by the cross-functional representation of the Planning Committee will assure collaboration and integration between agencies and stakeholders that is critical to project success.

Current Status: The Operations and Technical Committee of the Statewide Radio Board will be actively involved in approving all local or regional plans. To date, the Department of Transportation, as owner of the system, is involved in all technical planning. Planning in Phase Three is limited, but the Department of Transportation has been very effective at building collaboration among stakeholders and assuring integration between agencies.

6. The state must take the lead in conveying to rural jurisdictions that this build-out is a benefit to them, and encourage them to partner with the state to leverage their purchasing choices and spending and the power of aggregate demand.

Mitigation Strategy: Diligent management oversight by the cross-functional representation of the Planning Committee will assure collaboration and integration between system architects and builders with local jurisdiction agencies and stakeholders that is critical to project success.

Current Status: Interest in the ARMER system was raised significantly when the 2002 legislature authorized partial funding of Phase Three. The allocation of substantial amounts of Homeland Security funds also raised interest throughout the state. The current uncertain status of project funding, however, has created serious

problems in encouraging long term planning and has led communities in need of current radio up-grades to proceed with those plans.

7. Local jurisdictions and stakeholders may not have either faith in the recommendations of the infrastructure project or the capability to implement the recommended solution.

Mitigation Strategy: The State must be available and supportive, as well as stand behind (post-implementation) the choices it is guiding others to make relative to standards in tools and technologies.

Current Status: See status to item #6.

## **Funding**

### **911 Fees**

Revenue from the 911 Emergency Telephone Service fee assessed under Minn. Stat. § 403.11, played a large part in funding capital costs and recurring operational costs of Phase One. Four cents was originally allocated for debt service from the 911 emergency telephone fee. With the explosive growth of telephone lines in the late 1990's the revenue generated by the 911 fee grew significantly. The increased fee revenue has been used to pay regional operating costs and additional capital costs.

In the 2003 legislative session, the 911 fee was increased by 7 cents from 33 cents per month to 40 cents per month. The portion of the fee committed to the public safety radio system was increased by 9 cents from 4 to 13 cents per month to fund \$18 million in new 911 revenue bonds for partial reimbursement of local enhancements and \$27 million in 911 revenue bonds for basic infrastructure in Phase Three. Following the enactment of these provisions, it was discovered that there were millions of dollars in unpaid 911 service costs from previous years (prior year expenses) and that current 911 costs (network costs and wireless implementation) had increased by \$6 million annually. The result was that the 9 cent increase could not be allocated to the ARMER system and even if it could have been, 911 revenue bonds were not considered marketable with the substantial outstanding prior year debt that existed in the 911 emergency telephone service program.

This issue was not resolved in the 2004 legislative session. As a result, there were no bonds sold. Phase Two enhancements of local infrastructure were funded with Homeland Security funds and Phase Three was placed on hold.

Unfortunately, the issues of the 911 special revenue account are not unique. Across the country there are serious problems funding 911 costs. The most pressing of which is the significant technology shift that is occurring in the telecommunication industry. Commonly referred to as VoIP (Voice over Internet Protocol), the difficulties have been exacerbated by the recent FCC

decision taking jurisdiction over all broadband-based telecommunication systems. The effect of this ruling was to prohibit state regulation and taxation of all VoIP-based telecommunication. In assessing the impact, it is important to note that the FCC took jurisdiction over more than just "internet" telephone service, it took jurisdiction over broadband telephone service. Although this decision has been appealed, there is substantial uncertainty over the current status of 911 fee revenue.

In making 2005 revenue forecasts for the 911 Program, wire line 911 revenues are predicted to continue declining. Wireless 911 line revenues are still increasing, but in combination the trend lines indicate that 911 revenues will begin to fall off over the next few years. Additionally, it was determined that some of the competitive local exchange carriers (CLECs) currently paying 911 fees in Minnesota are broadband-based telephone service providers who may be able to escape the regulatory process and fees under the FCC's ruling. Within the telecommunication industry there is a discussion that over the next three to five years there will be a significant transition to VoIP technology within the industry, driven largely by competitive forces. The ultimate impact of these discussions is the fact that there is likely to be considerable uncertainty over the 911 revenue stream in the next few years. There is a growing discussion indicating that a re-write of the 1996 Telecommunications Act is likely but there is also no particular clarity as to which direction Congress may go on the topic.

## **National Status and Funding of Interoperable Communications**

Faced with these prospects, a review of the status and funding of interoperable communications was conducted. The results are demonstrated in the charts and table attached as Attachment D. Those tables reflect that interoperable communication is a major issue across most of the country with at least 22 states planning new systems or significant upgrades to existing systems. 14 additional states are engaged in a planning process that may lead them to recommend new systems or upgrade existing systems. With respect to the 22 states referenced above the most common way of financing those costs has been through general fund appropriations. Two states (Utah and South Dakota) have relied upon grant funds, but in both instances there were special circumstances that are not practically portable to other states. Motor vehicle or boat fee assessments were relied upon in Florida and Indiana, and Illinois is pursuing a vendor lease arrangement (participation appears to be limited at this time). Minnesota's reliance upon 911 fees appears fairly unique. Planners in New York indicated their belief that Wireless 911 fees were going to be used to finance the state interoperable radio system but additional details are not available. Nebraska's most recent effort to fund their interoperable radio system was to impose a fee upon electric utility customers. Those efforts were not successful.

## **Conclusion**

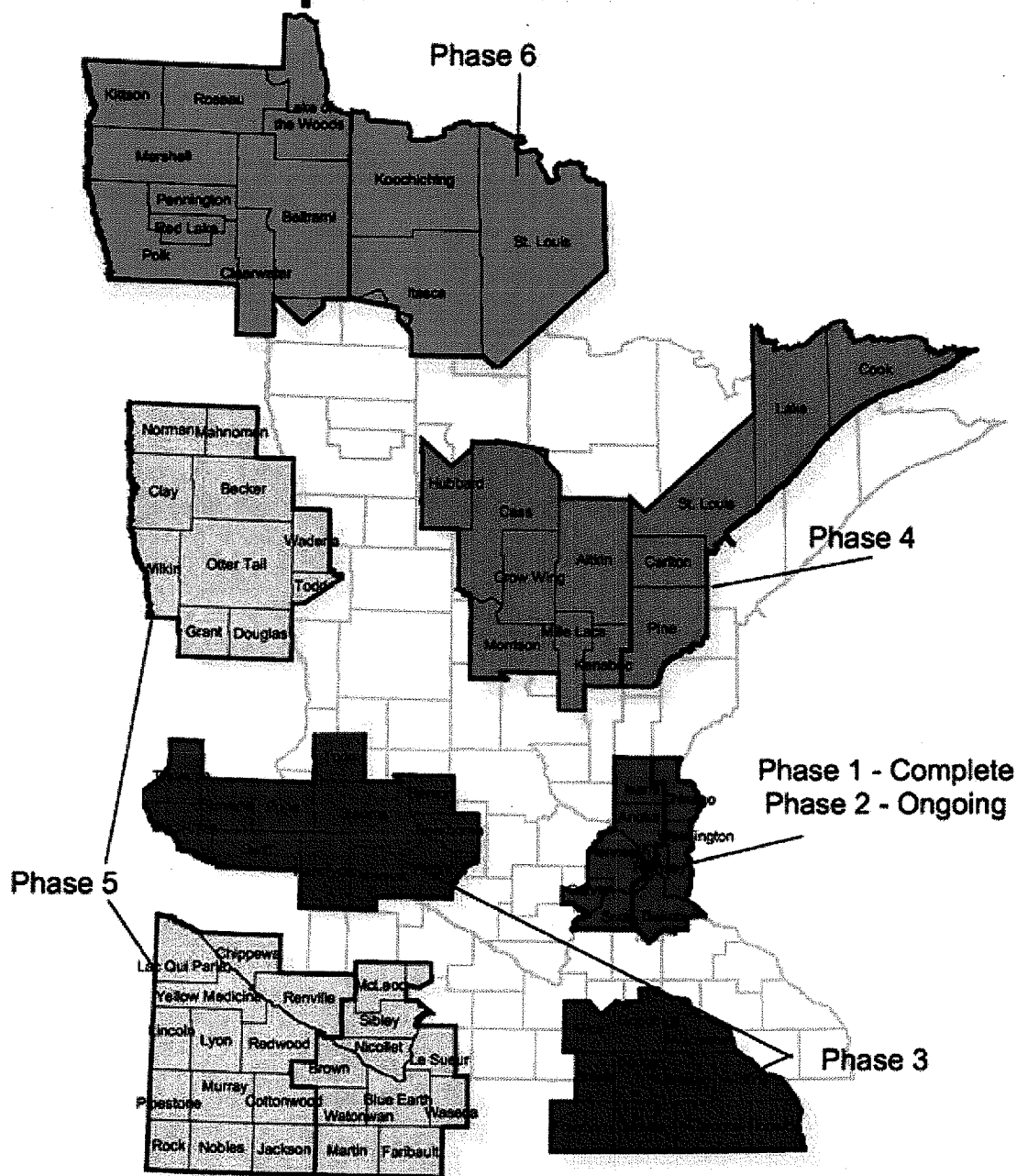
As previously indicated, the present uncertainty over 911 revenues, increased costs, changing technology and regulatory issues make reliance upon 911 revenue for long term bonding very difficult. The delay occasioned by these

difficulties has made it extremely difficult for local communities outside the metropolitan area to coordinate anything with a statewide build out. There is a window of opportunity upon which to renew the wireless communication infrastructure throughout the state and to do so in a way that allows state, regional and local entities to leverage infrastructure efficiently.

In addition to the basic communication infrastructure provided by the ARMER system, it provides an infrastructure of tower and a microwave sub-system that might be used to provide connectivity to a broad range of modern communication needs, including the 911 system, emergency phone systems and data links for record systems such as AFIS, CJRS and CrimNet. Wireless voice communications is becoming just another data system (VoIP) transported over a common wireless communication link. In public safety, basic voice communication will always be the one mission critical infrastructure piece we must be able to maintain under all contingencies. But with that wireless voice infrastructure in place there is a platform upon which to build all public safety and government communication throughout the next century.

## Appendix A

## Statewide Plan Implementation Areas



## Appendix B

### HOME LAND SECURITY FUNDS Regional/Statewide Radio System

#### 2003 Homeland Security Funds

#### Metropolitan Area

##### Allocated to local communities for public safety portables & mobiles

##### Hennepin County

Hennepin County	385,000
Bloomington	505,000
Brooklyn Center	159,600
Edina	285,600
Hopkins	169,400
Minnetonka	190,400
Richfield	88,200
St. Louis Park/Golden Valley	327,600

Ramsey County	3,416,235
Metropolitan Airports Commission	380,800
Anoka County	461,765
Dakota County	123,200
Washington County	603,400
Isanti/Chisago County	297,433

##### Allocated to infrastructure

Hennepin County one channel system expansion	295,800
Isanti/Chicago- North Branch channel expansion	387,000
Sub Total Metro Area	\$8,076,433

#### Phase Three

##### Infrastructure

Stearns County (St. Cloud)	2,985,000
Olmsted County (Rochester)	2,200,000

##### Subscriber equipment (radio control stations)

Benton County	10,000
Fillmore County	10,000

Goodhue County	10,000
Meeker County	10,000
Mower County	10,000
Rice County	10,000
Sherburne County	10,000
Wabasha County	10,000
Winona County	10,000
Steele County	10,000
City of Hanover- Fire Department	23,292

Sub Total Phase Three	\$6,208,292
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<b>Total</b>	<b>\$14,284,725</b>
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Note: The individual county allocations of \$10,000 were for radio control stations at each county dispatch center within the Phase Three areas. The \$23,292 grant to the City of Hanover Fire Department was a grant for a public safety agency in Wright County (Phase Three) with mutual aid agreements requiring them to respond into Hennepin County (Phase One).

## Appendix C

### HOME LAND SECURITY FUNDS Regional/Statewide Radio System

#### 2004 Homeland Security Funds

#### **Metropolitan Area**

##### Allocated to infrastructure

##### Hennepin County

Hennepin County (5 channel expansion)	1,472,597
Hennepin County (Base Radio Site- MOA)	1,593,292
Bloomington	89,208
Brooklyn Center	218,241
Hopkins	157,441
Minnetonka	209,000
St. Louis Park/Golden Valley	218,241
Metropolitan Airports Commission	439,139
University of Minnesota	155,921

Ramsey County	4,290,866
Anoka County	2,078,753

Sub Total Metro Area	\$10,922,699
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#### **Phase Three**

##### Infrastructure

Stearns County	1,837,254
Olmsted County	1,954,854

##### Portables and Mobiles

Stearns County	
1,828,400	
Olmsted County	840,000

##### Regional Planning

Stearns County	75,000
Olmsted County	75,000

Sub Total Phase Three	\$6,610,508
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**Total 2004 Homeland Security Funds**

**\$17,533,207**

## Appendix D

### HOME LAND SECURITY FUNDS Regional/Statewide Radio System

#### 2005 Homeland Security Funds

##### Phase Two

###### Allocated to infrastructure

Dakota County	\$4,480,00
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Portion of local planning funds  
(Chisago, Isanti, Scott and Washington)

Sub Total Metro Area	\$4,480,000
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##### Phase Three

###### Infrastructure

Stearns County	\$982,000
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Olmstead County	\$600,000
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Portion of local planning funds  
(Phase III, IV, V or VI)

Sub Total Greater Minnesota	\$1,582,000
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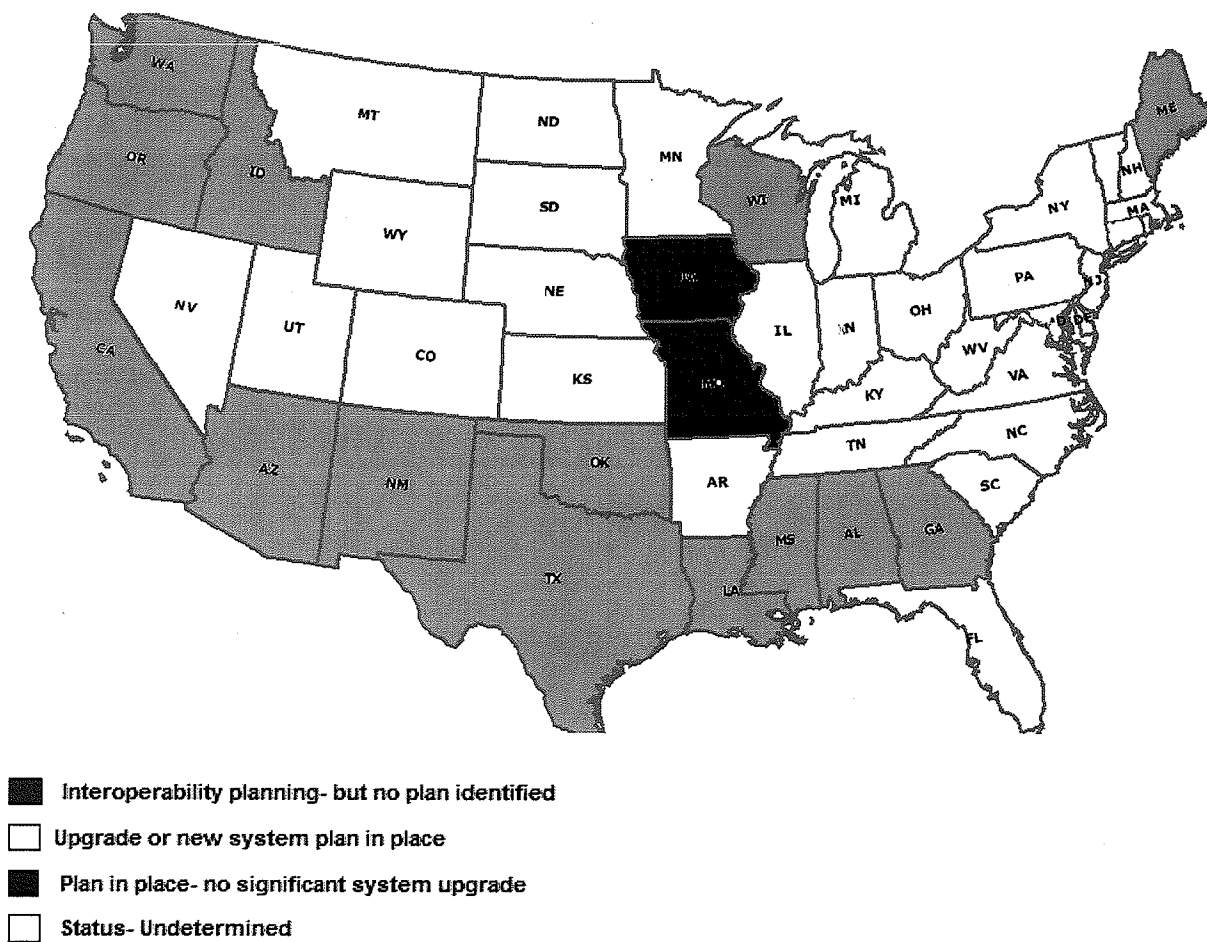
##### Planning Funds

Total allocated to local & regional planning	<u>\$238,000</u>
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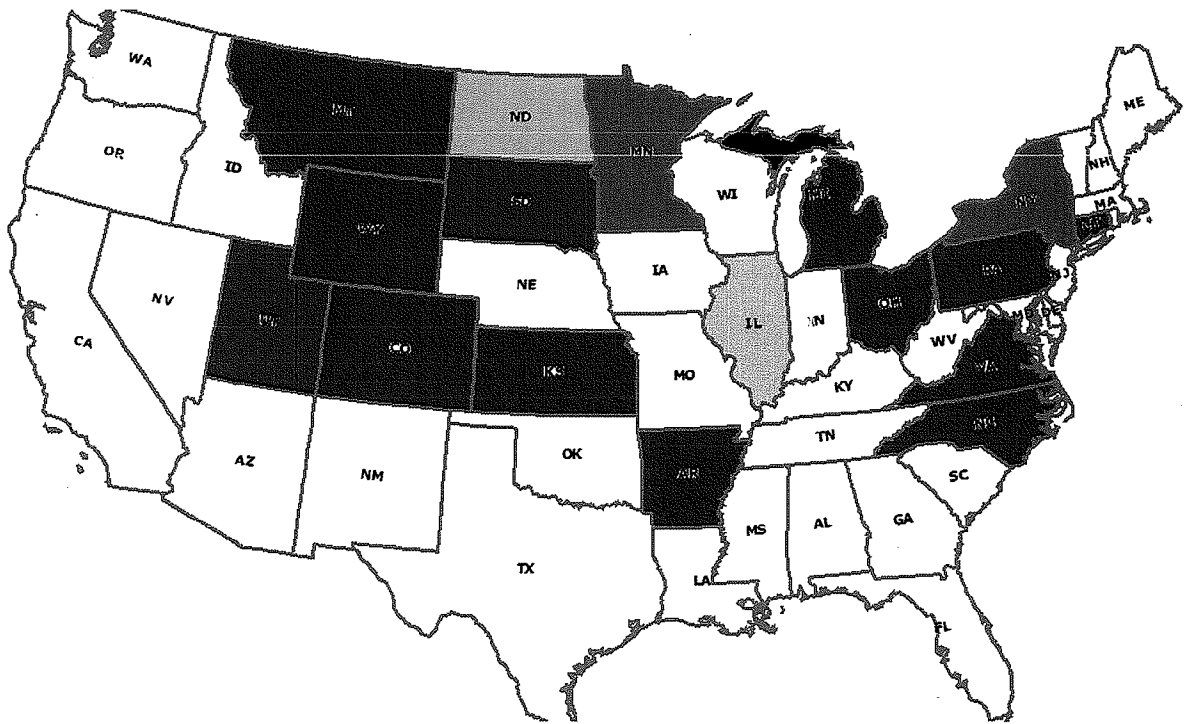
TOTAL 2005 Homeland Security Funds	\$6,300,000
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## Appendix E

### STATUS OF PLANNING



## FUNDING OF IMPLEMENTATION PLANS



- General funds or general obligation bonds
- Grant funds and earmarked funds
- 911 Fee based financing
- Motor vehicle or boat licensing fees
- Vendor owned- user fee based
- Vendor Lease/Purchase

State	Status	Funding
Alabama	Planning process only	No funding identified
Alaska	Planning process only	No funding identified
Arizona	Planning process	
Arkansas	Consolidation of 12 separate state systems	General Fund appropriation to State Patrol
California	Planning but no specific plan- multi-banded approach anticipated	No funding identified
Colorado	800 MHz trunked system- 2/3 completed	Initial appropriation to trust fund (\$50 million)- annual appropriations to fund from general fund
Connecticut	800 MHz trunked system	
Delaware		
Florida	800 MHz trunked system	\$1.00 fee on MV and boat licenses (\$16 million)
Georgia	Planning but no funding- 800/700 MHz system	None specified
Hawaii		
Idaho	SIEC Planning process- planning only	None specified
Illinois	Implementing 800 MHz trunked system	Leased system from Motorola
Indiana	1/3 completed- 800 MHz trunked system	\$1.25 fee on MV filings; shared with BCA
Iowa	Enhanced interoperability, no system wide upgrade	None
Kansas	Up-grading existing 800 MHz trunked system	State general fund appropriation
Kentucky	Statewide UHF system for State Patrol enhancements	Grant funds to expand interoperability
Louisiana	Planning only	
Maine	Planning a statewide VHF system	No funding defined

Maryland	Intermediate plan- V-TAC,U-TAC and I-TAC plan	Grant funds
Massachusetts		
Michigan	800 MHz trunked radio system	State capital bonds
Mississippi	Planning process only at this time	
Missouri	No statewide plan- little state coordination	
Montana	Current RFP for VHF voice & data	Grants and appropriated general funding
Nebraska	Plan for 800 MHz trunked system	No funding
Nevada		
New Hampshire		
New Jersey		
New Mexico	Planning only at this time	
New York	Planning 800 MHz trunked system	Partial funding from Wireless 911 fee
North Carolina	Expanding existing Motorola 800 MHz trunked system	State & county funds, earmarks and FEMA funds, HSEM grants
North Dakota	Upgrade current VHF conventional system	HSEM funding- down payment and yr 1 lease
Ohio	800 MHz trunked system	\$271.9 million state capital bonds
Oklahoma	Planning process only- plan 800/700 trunked system	None identified
Oregon	Planning process only- no specific plans yet	None identified
Pennsylvania	800 MHz trunked system	State capital bonds
Rhode Island		
South Carolina	800 MHz trunked system	
South Dakota	VHF trunked system	HSEM grants and earmarks

Tennessee		
Texas	No statewide plan, but regional plans	HSEM funds and local funding
Utah	800 MHz trunked system 12 county area- No plan to expand	Federal grants, Olympic funding- user fees generate \$30 million per year (22.50 per radio)
Vermont		
Virginia	VHF trunked system	State G.O. Bonds
Washington	Preparing plan- due March 2003	None identified yet
West Virginia	No specific plan	
Wisconsin	Plan with alternatives prepared	None identified
Wyoming	New Statewide VHF Radio system	General Fund- G.F. surplus from royalties

Item noted of significance:

- Nebraska- Attempted to fund a statewide 800 MHz system with a 50¢ monthly fee on each electric utility customer. It was defeated and is considered dead issue.
- Indiana- Partially funded their statewide 800 MHz system with a \$1.25 motor vehicle registration fee. Revenue was split between the radio system and crime lab modernization. It has not produced enough revenue.
- Maryland- Has developed a short term (10 year) interoperability plan with a long term plan of spending \$5 million per year from the general fund to acquire land and towers for an 800/700 MHz trunked system to be implemented 10 years out.
- Missouri, Iowa, and Kentucky- Plans call for interoperability through cross band repeaters and interoperability channels but have no significant plans to upgrade a statewide system with any shared resources. Wisconsin may be going in a similar direction.
- North Dakota- Upgraded their existing VHF radio system (\$5.1 million) under an 8 year lease purchase agreement with Motorola, the down payment and 1<sup>st</sup> year lease payment will be made with HSEM funds; funding for succeeding years is not yet determined.
- Utah and South Dakota- System financed with grant funds, Utah received extensive grants in connection with the Winter Olympics. South Dakota was the benefactor of significant grants and earmarks when Senator Daschle was Minority Leader.
- Illinois- Reportedly is doing a vendor owned system with Motorola leasing usage. Cost is reportedly \$50-60/month (need more clarification here as the person reporting was not a fan of Illinois proposal).

Other sources of funding mentioned but not implemented anywhere are as follows:

- Traffic citation surcharge for certain offenses.
- Automobile insurance fee assessment- similar to that used for the Auto Theft Prevention program.