Statewide 911 Program

Annual Report to the Legislature

December 2010

Prepared by
Minnesota Department of Public Safety
Emergency Communication Networks Division

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Statewide 911 Program 2010 Report

I. Executive Summary

Introduction

Minnesota's 911 emergency services telephone network is a vital component of the state's emergency response system. Dialing 911 provides rapid and effective access to public safety services. Citizens of Minnesota expect that dialing 911 will link them to the right public safety agency and that emergency personnel will have vital location information to help speed the responders to their calls for assistance. The commissioner of the Minnesota Department of Public Safety (DPS) is responsible for helping counties implement 911 service and for funding part of the costs of delivering 911 calls to the appropriate city, county or State Patrol public safety answering point (PSAP).

Reporting Requirement

Minnesota Statutes, Section 403.06, Subdivision 1a requires the commissioner of Public Safety to prepare an annual report to the Legislature. The annual report must include:

- Details of expenditures to maintaining the 911 system
- 911 fees collected
- Balance in the 911 Special Revenue Fund
- Administrative expenses of the 911 Program.

This report explains the 911 expense elements in Appendix A and provides:

- Required financial information as of December 31, 2010 (revenue projections based upon the December 31, 2010 revenue forecasts)
- Projections of the 911 program financial position through June 30, 2011
- Brief summary of the status of enhancements and improvements to the Minnesota 911 system
- Other considerations and risks related to the 911 Program.

FY2010 Financial Update

The 911 fee increased to 80 cents per access line on August 1, 2010. The fee generated $58,821,937 in total revenue during FY2010. The beginning balance in the 911 Special Revenue Fund was $22,905,537 making the total available funding for fiscal year $81,727,474. The total expenses for the year were $56,618,053 of which $633,438 were 911 Program administration expenses. The year-end balance in the 911 Special Revenue Fund was $25,109,421.

Financial Projections (through June 30, 2011)

Minnesota Statute 403.11 was amended in 2008 to increase the 911 fee cap in 2008, 2009 and 2010. This adjustment was made to accommodate the need to complete the construction of Minnesota's statewide public safety radio and communication system (ARMER or Allied Radio Matrix for Emergency Response). The fee cap was not raised on July 1, 2008; however it was raised to 75 cents on July 1, 2009 and raised to 80 cents on August 1, 2010. It will only be raised to 90 cents on July 1, 2011 if needed. The additional revenue will be used to fund the debt service on 911 revenue bonds used to complete the implementation of the ARMER system network infrastructure. The appropriation language of the 2007 Omnibus Public Safety Bill

provided for the costs of operating four phases of the ARMER backbone, detail design and advanced site development, and upgrades to the existing backbone in the Twin Cities metropolitan area.

Fiscal procedures implemented over the last few years have improved predictability and accountability in the 911 Special Revenue Fund but the program continues to be plagued by the basic premise that the state should pay the costs of maintaining 911 service for any and all providers that connect to the 911 network. The competitive nature of the telecommunications industry drives a continued expansion of competitive telecommunication businesses vying for the same customer base. As existing and new telecommunication companies expand their markets, 911 Program costs have a potential to rise with no appreciable increase in program revenues or enhancements to the service functionality.

Figure 1 shows 911 Program funding through FY2011. Revenue projections in FY2010 and 2011 provide for the assumed fee increase authorized by the 2007 Legislature. The number of access lines, upon which the 911 fee is collected, is not expected to increase substantially as we move into the future based on the fact that alternative services such as Voice over Internet Protocol (VoIP) and wireless services are essentially competing with traditional landline services for the same customer base. The implications of a transition of legacy telecommunication networks to broadband VoIP networks over the next decade will have a substantial impact on the costs of the 911 network. During the new network build-out, that transition will require the simultaneous operation of both the existing 911 network and a new broadband VoIP network as the telecommunications network continues to evolve.

The cost increases in Figure 1 from FY2008 through 2011 are based upon the appropriations made to complete the ARMER system backbone. In FY2008, the appropriated costs related to the ARMER system substantially exceeded 911 receipts resulting in a reduction in the fund balance. Similarly, the transition of the 911 network from a traditional Time Division Multiplexing (TDM) to VoIP network will require both networks to operate simultaneously. Therefore, it is of vital importance that the fund balance remains intact for the funding of Minnesota's transition to, and operation of, a Next Generation 911 (NG911) network.

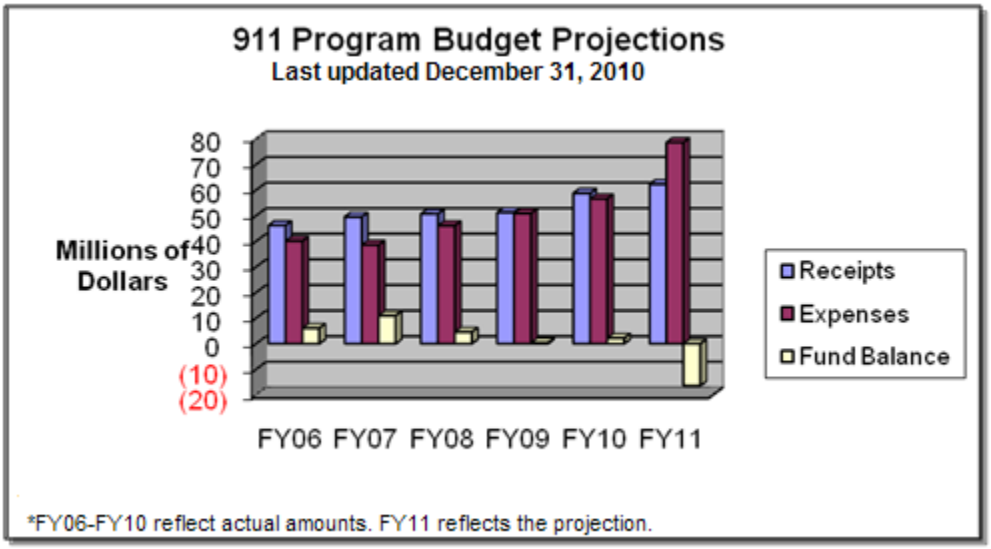


Figure 1: 911 Program Funding

Status of Enhancements and Improvements to the Minnesota 911 System

Maintaining, enhancing and expanding 911 services for both wireline and wireless technologies are provided for under Minnesota Statutes, Section 403.025, Subdivision 7. Significant further progress has been made to: integrate wireless 911 into the enhanced 911 systems; increase the interoperability of separate 911 systems; and position the state to be able to take advantage of enhanced 911 services for wireless and interconnected VoIP telecommunications services. More information about enhanced 911 is available on the Minnesota 911 Website at: *http://www.911.state.mn.us*.

The telecommunications industry is migrating from circuit-switched to packet-based digital communications over broadband connections. New standards are under development at this time for the Next Generation 911 (NG911) system to match the new technologies and to provide 911 functionality for all modes of communications, including traditional wireline and wireless voice, VoIP, VoIP over wireless broadband, and text and image devices. In 2008, the Minnesota 911 Program contracted with L. Robert Kimball and Associates to conduct a detailed assessment of the state's existing network, identify any major gaps in the existing network, and make recommendations on how to proceed to implement a NG911 network. A NG911 Advisory Group representing various 911 and public safety stakeholders was established to oversee the development of a strategy for migrating to NG911. A copy of this report can be found on the Minnesota 911 Website at *http://www.911.state.mn.us* under NG911.

The NG911 project began in 2010 and will be carried out in three phases. The first phase, completed in September 2010, established interoperability between the two existing providers and a new VoIP backbone. The second phase will be to establish IP (Internet protocol) connectivity to a select group of trial public safety answering points (PSAPs). The third phase will build redundant IP paths to every PSAP across the state. This new IP network will allow advanced feature functionality such as text messaging, instant messaging, video, automatic crash notification systems and medical information to traverse the 911 emergency communications

network. Once this Emergency Services IP Network (ESInet) is established in Minnesota, the long-term goal is to add the advanced feature functionality described above and establish connectivity with other state 911 networks to establish a nationwide Emergency Services IP Network (ESInet).

Conclusion

The success of the 911 Program is a product of extensive cooperation among legislators, regulators, state and local government administrators, and the telecommunications industry. Continued success will require further cooperation to maintain program effectiveness as new telecommunications technologies, services and service providers compete for market share and develop new technologies.

II. Background

The 911 emergency telecommunications system provides rapid access to emergency services. It is a simple, concise way to reach police, fire and emergency medical services, which saves time for the caller and reduces overall response time for emergency service providers. The enhanced 911 system allows caller location to be displayed to the 911 call taker so help can be sent even if the caller does not or cannot provide an address, or, as in wireless calls, may be at a location that has no address. Statewide 911 answering is provided by 87 county 911 systems, 10 city systems, 10 public safety answering points (PSAPs) operated by State Patrol, and three PSAPs operated by other government agencies.

The universal emergency 911 number is available throughout the state of Minnesota on wireline and wireless phone lines and VoIP services capable of dialing 911. For wireless telephones, Federal Communication Commission (FCC) rules (Title 47, CFR 20.18) require the wireless carriers to put all 911 calls through to a PSAP, even if the caller is a non-subscriber. During 2005, the FCC enacted rules to require access to 911 from interconnected VoIP services to include location and callback number including the use of the wireless enhanced 911 technology where available (Title 47, CFR, Part 9). Because Minnesota had deployment of wireless enhanced 911 throughout the state, Minnesota PSAPs were prepared for the initial implementation of enhanced 911 service for interconnected VoIP services.

The 911 Program at DPS provides technical assistance to the cities and counties implementing, maintaining, and improving 911 systems, and oversees system standards. It also pays from money collected through a monthly statewide fee, the state's share of wireline and wireless 911 costs authorized by Minnesota Statutes, Section 403.11 and contracted for with carriers, and administers payments to 911 agencies in accordance with Minnesota Statutes, Section 403.113.

The 911 fee is set by the Public Safety commissioner with the consent of the commissioner of Finance. The fee collections are deposited in the 911 Special Revenue Fund, and these funds are appropriated by the Legislature to the commissioners of Public Safety and Finance to cover the expenses authorized by statute.

III. Fiscal Year 2010 Expenditures

Fiscal Year 2010 expenditures were less than anticipated.

- M.S. 403.11: Network and database charges for 911 $ 9,985,792
  Reimbursements were made to local exchange carriers and 911 service providers (Qwest and Independent Emergency Services (IES)) for costs incurred connecting telephone central offices with 911 networks and for maintaining the network (selective routers, databases and connections to public safety answering points (PSAPs)).

- M.S. 403.113: Enhanced 911 grants (PSAP payments) $13,664,000
  PSAPs in 87 counties, three other governmental entities, and State Patrol communications centers receive grants from the state to help defray the costs related to providing enhanced 911 service.

- M.S. 403.11: Wireless 911 transfers $723,000
  A portion of the wireless customer 911 fee was directly transferred to the Minnesota State Patrol to offset the costs, including administrative and staffing costs, incurred in handling NG911 emergency calls made from cellular phones.

- M.S. 403.11: Enhanced wireless 911 implementation $2,380,688
  Wireless carriers sign agreements with the state to implement enhanced 911 wireless services. The implementation costs incurred by these carriers and by the 911 service providers were reimbursed by the state and after implementation, ongoing operations costs are reimbursed.

- M.S. 403.27 & 403.275 Public safety radio bond debt service $18,967,000
  2005 Laws of Minnesota, Chapter 136 consolidated debt service provisions related to the Statewide Public Safety Communication System. Those provisions related to 911 revenue bonds previously sold by the Metropolitan Council and new revenue bonds authorized as part of the 2005 legislation.

- M.S. 403.11: Administrative expenses including salaries $633,438
  Total cost is based upon administrative expense allocations, bargaining unit contracts, travel and other office expenses.

- Laws 2005 c 136 art 1 s 9 sub 7, Medical resource communications $683,000
  Specific appropriation for grants to the Minnesota Emergency Medical Services Regulatory Board for the Metro East and Metro West Medical Resource Communication Centers that were in operation before January 1, 2000.

- Laws 2005 c 136 art 1 s 9 sub 7, Statewide Radio Board $369,554
  Specific appropriation for the Statewide Radio Board for costs of design, construction, maintenance of, and improvements to those elements of the first, second, and third phases that support mutual aid communications and emergency medical services, and for

recurring charges for leased sites and equipment for those elements of the first, second, and third phases that support mutual aid and emergency medical communication services.

- Laws 2007 c 54 s 9 sub 7 911 Emergency Services/ARMER $333,014
  Specific appropriation for Allied Radio Matrix for Emergency Response (ARMER) to coordinate and plan for communication interoperability between public safety entities.

- Laws 2007 c 54 s 9 sub 7, ARMER state backbone operating costs $5,060,000
  Specific appropriation to the commissioner of the Department of Transportation for costs of maintaining and operating the first and third phases of the statewide radio system backbone.

- NG911 Phase 1 interoperability between 911 service providers $ 239,024
  Specific appropriation for NG911 Phase 1 project that allows PSAPs to transfer 911 calls with telephone number and location information to neighboring PSAPs on a different 911 service provider network.

IV. Financial Outlook through June 30, 2011

Current projections of subscriber volumes are based on an assumption that the number of wireline subscribers will continue to decline modestly as people abandon traditional phone service for wireless and VoIP services and switch modem lines to IP-based connections. Between 2008 and 2009 there was a 3.4 percent decrease in wireline subscribers. Since then the wireline subscriber rates have declined at 8 percent per year. This decline was offset by wireless and VoIP subscriber growth, but that growth is also declining. Total subscribers—wireline, wireless and VoIP—reached an all-time high in 2009 at 78.85 million. The total number of subscribers decreased by 1.08 percent in 2010 and is projected to decline an additional 3 percent for a total of 3.4 million in 2011. Customers continue to drop their traditional landline phone and adopt the wireless phone as their primary phone service. Many wireless carriers are migrating to Fixed-Mobile Convergence technology which combines voice, data, wireless and video over a single network, thus allowing a customer to buy one network connection and use a variety of services over that connection.

The June 29, 2005 FCC order requires interconnected VoIP service providers to integrate their services into the 911 systems.[1] That order also dealt with the matter of 911 fee collection from VoIP service providers[2] and has been interpreted in conjunction with Minnesota statute as requiring collection and submission of the 911 fee. The VoIP technology, however, allows companies to sign up customers, provide service and receive payments over the Internet, making the physical location of subscribers irrelevant to the business transaction. In order to meet the FCC 911 requirements, some VoIP services use self-reported subscriber information for Enhanced 911 location data and as the venue for fee collection. Increased effort will be required to identify VoIP providers serving Minnesota and to collect the correct 911 fees.

[1] 70 FR 37286, released June 29, 2005
[2] In the Matter of IP-Enabled Services, WC Docket No. 04-36 and E911 Requirements for IP Enabled Service Providers, WC Docket No. 05-196, Adopted: May 19, 2005, Released: June 3, 2005, FCC05-116 at page 30.

There is no cap on 911 system costs under Minn. Stat. Section 403.11, and current legislation allows carriers to request the 911 Program to compensate them for their connection to the 911 network. However, the spending authority is capped in session law by direct appropriations from the 911 Special Revenue Fund. Similarly, 911 revenues are capped at 80 cents a month on all wireless, wireline and VoIP customers. This continues to create some uncertainty in projecting 911 network costs. Preliminary costs for transition to an IP-based network have been identified. It will be necessary to maintain two 911 systems while transitioning, causing increased costs for the next three to four years while all three phases are completed.

Preserving the 911 fee for public safety use only is vital to providing support to public safety answering points, the 911 network that transports the 911 call, and the build-out of the ARMER system.

V. 911 Goals and Status

Goal: Control Costs and Predictability to the 911 Program

When the statewide 911 Program was originally established, the process of implementing 911 was reasonably clear. There was a finite number of incumbent local exchange carriers (ILEC) with telephone service discreetly associated with fixed sites in fixed service areas. Deregulation of the telecommunication industry, proliferation of competitive local exchange carriers (CLEC), and the wireless telephone industry has changed the situation dramatically. In 1994, the Legislature provided for reimbursement of the cost to implement and maintain enhanced 911 services for wireless carriers[3]. In 2002, the Legislature provided for the reimbursement of the recurring costs of CLECs as they implement service within Minnesota.[4] As a result of these changes, the statewide 911 network has become extremely complex. The process of administering changes and the costs of those changes have been a challenge.

Status: Ongoing. Legislative and procedural changes over the last three years[5] have given DPS a greater ability to deal with today's competitive telecommunications landscape. With those changes, the 911 Program has been able to eliminate the certification process, reduce the billing period to less than 90 days, and begin consolidating contracts and transactions with some vendors. Service-level changes require specific approval before they can be implemented and retroactive approval of service-level changes have been eliminated. DPS is also utilizing competitive bidding processes when services can be provided by more than one vendor. In 2010

[3] Minn. Stat. Section 403.11, Subdivision 1(f) provides that the state will reimburse wireless carriers for installation costs and for their recurring costs for integrating wireless calls into the enhanced 911 system. This provision was enacted by Minnesota Laws 1997, Chapter 202, Article 3, Section 21. In 1999, the FCC ruled that wireless carriers were required to integrate into the 911 system irrespective of whether a state reimbursement provision was in place; Second Memorandum and Order; FCC Docket No. 99-352 revising FCC Docket No. 94-102, released December 8, 1999.

[4] Reimbursement of competitive local exchange carrier recurring charges did not begin until July 1, 2001. This provision was enacted by Minnesota Laws 2002, Chapter 372, Section 14. Prior to July 1, 2001, competitive local exchange carriers were required to and did provide 911 service without reimbursement of their expenses by the state.

[5] Laws 2005 Chapter 136, Article 10 and Laws 2006, Chapter 260, Article 6.

the 911 Program cut $1,223,337 out of the 911 operating budget — even with the addition of NG911 Phase 1 implementation and recurring cost of $239,024.

Goal: Provide Enhanced 911 Benefits to Wireless 911 Callers

Although the present enhanced 911 systems routinely provide public safety responders an accurate location of each wireline emergency caller when 911 is dialed from traditional landline telephones, it is more difficult to determine caller location from wireless telephones. The increasing use of cellular telephones by the public means that cellular 911 calls are becoming as likely to be placed from dwellings, sidewalks, boats or snowmobiles, as from vehicles on roadways. In 1996, the FCC clarified the requirement for wireless carriers to provide specific and accuracy location information to the 911 network. This wireless enhanced 911 implementation has required network, database and PSAP equipment changes.

Status: Complete. Over the last few years, 19 of the original wireless carriers providing service in Minnesota have consolidated into six carriers: Alltel, AT&T, Sprint/Nextel, T-Mobile, U. S. Cellular and Verizon. All six wireless carriers provide Phase 2 location information (specific longitude and latitude location information) on 911 calls. More information on wireless 911 is available on the Minnesota 911 Website at *http://www.911.state.mn.us/*.

Goal: Integrate VoIP 911 Calls into the Enhanced 911 Networks

In the last few years, advances in Voice over Internet Protocol (VoIP) technology and wider use of high-speed Internet connections in homes and offices have made it possible to replace ordinary circuit-switched telephone service with VoIP service. VoIP service is difficult to integrate into the existing 911 systems because it can be provided with no knowledge of the customer's physical location, and that location can change quickly. For example, a Vonage customer living in Saint Paul can take the VoIP interface unit along when traveling to Orlando. By plugging the interface unit into an Internet connection in an Orlando hotel room, the customer could place and receive "local" phone calls just as at home. Also, a Minnesota customer could have a New York telephone number if desired. Nomadic usage and non-native telephone numbers are incompatible with our existing 911 systems that were built for traditional telephone service. In order to accommodate these potentially nomadic VoIP services, a technology model known as Interim i2 has been developed by the National Emergency Number Association (NENA). It uses a native routing number to get calls to the correct PSAP and a dynamically updated 911 database to provide the location of nomadic users that have updated their location profile. The dynamic update portion of the technology is similar to wireless enhanced 911. Because the 911 databases and PSAPs in Minnesota have already been modified for wireless enhanced 911, i2 can be readily implemented.

This is a transitional step in the evolution of the telecommunication industry. It is simply an adaptation to patch into the existing legacy 911 network. By all estimates, the telecommunication industry is in the midst of an industry-wide evolution to a broadband network and that evolutionary step will also be required for the state 911 networks.

With the implementation of the Interim i2 technology model, many CLECs in Minnesota have begun expanding their networks to provide VoIP-related 911 services in various counties in the state. 911 Program costs have escalated as these carriers expand into additional counties.

Status: Ongoing. As VoIP providers offer service within the state of Minnesota, they are required to provide enhanced 911 using the nationally sanctioned Interim i2 standard.

Goal: Improve the Interoperability Capabilities of Minnesota 911 Systems

Minnesota is in the forefront of enhanced 911 coverage. Delivering emergency calls to 911 PSAPs through selective routers allows calls to be sent to the correct PSAP regardless of caller location, and facilitates transfers to neighboring PSAPs. This generally holds true, however, only if the correct 911 PSAP is connected to the same 911 system as the caller's telephone exchange or cellular mobile switching center. The purpose of interoperability improvements is to allow 911 calls to be transferred and be selectively routed between different 911 systems. This applies both to different 911 service providers Qwest and Independent Emergency Services, LLC (IES) in Minnesota, and to state border issues, such as between the Minnesota counties of Goodhue and Washington served by Qwest 911 systems, and the Wisconsin counties of Pierce and Saint Croix served by the AT&T 911 system.

Status: Ongoing. DPS has entered into contract with Qwest Communications and Independent Emergency Services (IES) for interoperability between the two 911 service provider's networks. This allows 911 calls to be transferred and selectively routed between different 911 systems. Statewide Call Transfer with telephone number and location information went live in September 2010.

Goal: Implement the Next Generation of 911

In 2008, DPS developed a comprehensive report detailing Minnesota's strategic direction and necessary improvements needed to the 911 network due to the changing telecommunications environment. The final report aids in setting minimum standards for the 911 network throughout the state, in setting program priorities, in prioritizing funding decisions, in defining the steps necessary to improve the 911 network, and begin the planning process to migrate the existing 911 network to the NG911 network. The report received input from the Next Generation Advisory Group (NGAG), a group of public safety stakeholders, and then was released by the commissioner of Public Safety. This report is available on the 911 Website at: *http://www.911.state.mn.us/PDF/MN_E911_System_Assess_Exec_Summary.pdf* .

Status: Ongoing. In June 2009, a Request for Proposal (RFP) for a statewide NG911 System was released and evaluated by a group of eight made up of sheriffs, PSAP managers, deaf and hard-of-hearing community, Metropolitan Emergency Services Board, and DPS. The contract was signed with Qwest Communications August 2009 to build an IP backbone across the state to connect all PSAPs. The project will be completed in three phases. Phase 1 provides inter-operability between the existing 911 networks and complete 3Q10; Phase 2 consists of building a redundant IP network to designated trial PSAPs scheduled to be completed 3Q2011; and Phase 3 is to build out a redundant IP network to all PSAPs across the state scheduled to be completed in 2Q12.

Goal: Efficient Use and Consolidation of Resources

In 2003, the 911 Program was asked to study the issue of PSAP consolidation and PSAP standards. The study completed in early 2004 clearly indicated that any overt efforts to mandate

consolidation would be ill-advised. It did elevate the discussion and highlight some of the potential benefits of consolidating PSAP services.

In 2009, the governor signed an executive order creating a task force to develop a strategy for regionally based PSAPs. The deliverable, "A Guidebook for Consolidation Strategies," is intended to serve as a "primer" on the PSAP consolidation model. It is designed for the non-technical public policy-maker faced with answering the question, "Should my fellow public officials and I consider a shared-service model, such as consolidation of our 911 communications center, with neighboring counties?" A copy can be found on the 911 Program Website at: *http://www.dps.state.mn.us/Docs/PSAP_Guidebook.pdf*.

Status: Ongoing. The 2004 PSAP Consolidation and PSAP Standard Report suggested that funds be made available for agencies operating PSAPs to evaluate the issues related to consolidating services. The commissioner of Public Safety is seeking to create a consolidation-friendly environment for local jurisdictions interested in educating themselves on a shared-services model. The commissioner authorized grant dollars from the appropriated 911 funds for agencies seeking to study the elements of a multi-agency PSAP or for the implementation of a multi-agency or shared-services PSAP.

Thirty-nine PSAPs are currently taking advantage of this opportunity and studying consolidation feasibility. Many PSAPs are considering full consolidation (two or more combining to make one PSAP) or a hybrid form of consolidation, such as sharing technology resources and/or personnel. Big Stone, Kandiyohi and Swift counties have entered into a Shared Services Agreement that allows for consolidation of resources to handle PSAP responsibilities. Kandiyohi County will answer calls for Big Stone County allowing them to save substantial personnel costs. Over the last four years, three metropolitan area counties have moved toward consolidating their PSAPs. In 2006, Washington County consolidated two PSAPs into a single operation. In 2007, Dakota County consolidated the operation of six PSAPs into a single operation. Ramsey County consolidated three of the four PSAPs in the county into a single operation. Similar discussions are occurring in different regions within the state.

VI. Added Considerations/Risks

While good progress to-date has been made in the conversion to enhanced 911, the following challenges jeopardize the future effectiveness of the 911 Program:

Increasing Costs for Maintaining and Improving 911

As the telecommunications industry continues to change, the costs of adding new technologies to the existing 911 network continue to increase. The cost of adding trunked circuits from an expanding number of carrier switches to each of the 911 selective routers within the state is not efficient and fails to address the changing character of the industry. Although DPS has successfully kept the cost of operating the current 911 network (selective routing, ALI database charges and circuits to the PSAPs) relatively stable over the last few years, there is a clear understanding that resources will be needed to implement fundamental changes in the 911 network. The 911 Program continues to work with carriers to reduce unnecessary trunking and to provide optimum services through increasing efficiencies in the existing 911 network. Wireless

carrier consolidation has aided in stabilizing the costs of providing wireless access to the 911 network. Next Generation technology will also provide improved accessibility to the 911 network and a goal of reducing costs. Appendix A contains a table showing the different expense elements for 911.

Additional Expense Potential in Migration to New 911 System

The 911 Program will begin to build out a high-speed data network and address interoperability concerns between 911 providers during the 2010-2012 budget years. During the transition it will be necessary to maintain both the existing 911 network and the new NG911 network for a period of time until the new network is fully tested — causing increased costs to maintain the 911 systems. This transition will take place in multiple phases.

The state of Minnesota has maintained a national leadership role in the deployment of enhanced 911 services. To ensure the integrity of the 911 system, the following objectives are important for the state:

1) It is important that policymakers at all levels commit to the development and deployment of the interoperable statewide Emergency Services network as a fundamental 911 and emergency communications policy objective.

2) 911 and emergency services authorities need to review existing legislation and regulations to ensure there are no barriers to, and sufficient authority for, the establishment of a statewide Emergency Services network. Statutes and regulations to enable a NG911 system statewide must be actively supported.

3) State, regional, local 911 and emergency services authorities should work cooperatively toward establishing a statewide interoperable NG911 system.

4) 911 funding should be safeguarded for the sole purpose of supporting the Emergency Services network which includes the ARMER radio build-out.

5) Further efforts to integrate the radio network with the secure Next Gen IP network and the existing state infrastructure that supports emergency applications to the counties should be supported.

Cost of Subsidizing Competitiveness in the Telecom Industry

As previously noted, the 911 Program has operated under a premise that the state collects a 911 fee and then pays all costs of maintaining the 911 network. With the continued expansion of Competitive Local Exchange Carriers (CLECs), we have noted a diminished effort by CLECs to structure 911 connectivity to the 911 network in an efficient and cost-effective manner. Similarly, the 911 Program now finds itself subsidizing the operating costs for CLECs that are literally marketing their services to VoIP telecommunication carriers based upon their access to the 911 network. These CLECs submit few 911 fees relative to the costs associated with connecting them to the 911 network and provide little assistance in assuring compliance with the 911 fee provisions.

Based upon the changing nature of telecommunications and the 911 network, it may be appropriate to examine the underlying reimbursement scheme. That scheme was developed in the highly regulated telecommunications environment of the 1960s and '70s when there was no obligation to outswitch 911 calls or to connect those calls to the 911 network. In 1996, the FCC held that wireless carriers were required to connect to the state's 911 network regardless of whether the state reimbursed those costs. That decision also established the selective router as the common access point where the state's network begins. Similarly, in its 2006 IP-enabled services decision requiring VoIP telecommunication providers to connect to the 911 network, the FCC articulates a presumption that the cost of providing access to these new providers would be negligible based upon the assumption that the state's network begins at this common access point. Many states provide no reimbursement to CLECs for outswitching 911 calls or for the cost of connecting those calls to the 911 selective router. One might argue that the idea of reimbursing carriers for the cost of outswitching 911 calls and connecting those 911 calls to the state's 911 network is a vestige of the past and contrary to the competitive nature of the telecommunications market.

Stability of 911 Revenues

Revenue projections in this report are based on continued modest growth in wireless subscribers and a steady decline in wireline subscribers paying the 911 fee. These revenue projections also reflect the fee increase in years 2010-2011. The increase is offset by the costs associated with the ARMER radio build-out. The fund balance represented is a result of initiatives by the 911 Program to stabilize and reduce costs for unnecessary circuits and other network elements. This fund balance is necessary for NG911 network improvements slated for 2010-2012.

VII. Conclusion

The Department of Public Safety 911 Program has identified a strategy and plan for the migration to a Next Generation 911 (NG911) network. In the Public Safety Act of 2007, Congress directed the U. S. Department of Transportation to create a plan to move the nation from the current 911 system to an interoperable IP-based emergency response network that can handle voice, video and data. Substantial changes have been made in some states, and many others are currently considering strategies to migrate from the existing legacy 911 network to the NG911 network of the future.

Even if access line counts remain stable, the continued proliferation of competitive telecommunication service providers has the potential to continue to drive up the costs of implementing and maintaining carriers' access to the state's 911 network. Similarly, if customer counts decline as voice services transition to wireless and unregulated data services over a broadband network, there is a potential for additional strain on the budget.

The success of the 911 Program is a product of extensive cooperation among legislators, regulators, state and local government administrators, and the telecommunications industry. Continued cooperation among these stakeholders is essential for ongoing success.

Appendix A: 911 Revenue/Expenses Required by Statute

	FY 2006 Actual	FY 2007 Actual	FY 2008 Actual	FY 2009 Actual	FY 2010 Actual	FY 2011 PROJECTED
Revenue						
Actual	$46,229,523	$49,527,236	$50,750,955	$51,269,514	$58,821,937	
Projected						$62,289,398
Appropriated/Est. Expenses	$44,368,000	$44,635,000	$55,681,000	$50,385,000	$56,618,053	$78,644,976
Difference	$1,861,523	$4,892,236	$(4,930,045)	$884,514	$2,203,884	($16,355,578)
Program Expenses						
Unspecified Appropriations						
911 Network	$10,270,084	$10,410,729	$10,707,348	$10,143,105	$9,985,792	$11,290,000
Wireless Transfers-MSP	$675,000	$722,898	$722,898	$723,000	$723,000	$723,000
Wireless 911 Network	$3,728,216	$3,610,312	$3,588,124	$3,700,411	$2,380,668	$5,264,000
Multi-Agency PSAP Shared Serv.				$170,591	$703,913	$300,000
Administrative Expense	$526,071	$544,242	$579,247	$618,743	$633,438	$665,000
Specified Appropriations						
PSAP Grants	$13,640,000	$13,664,000	$13,664,000	$13,664,000	$13,664,000	$13,664,000
Medical Resource Center Grants	$682,000	$683,000	$683,000	$683,000	$683,000	$683,000
Prior Year Obligations	$2,647,680					
Debt Service- 911 Revenue Bonds	$7,543,000	$7,559,000	$7,460,163	$13,263,000	$18,967,000	$24,671,000
Statewide Radio Board	$421,361	$1,358,190	$10,000	$1,986,899	$369,554	$1,000,000
Next Generation 911					$239,024	$9,681,976
Grants to Local Units of Gov.						$5,000,000
ARMER Interoperability Planning			$223,487	$368,687	$333,014	$643,000
ARMER Backbone Operating Costs			$3,110,000	$3,110,000	$5,060,000	$5,060,000
ARMER Planning/Zone Controller			$5,401,520	$2,486,005	2,854,052	
Total Current Expenses	$40,133,412	$38,552,371	$46,149,787	$50,917,441	$56,618,053	$78,644,976
Fund Balance						
Revenue Over Expenses	$6,096,111	$10,974,865	$4,601,168	$352,073	2,203,884	($16,355,578)

Appendix A (continued): Fiscal Years 2006-2011 Notes

This 911 Funding Matrix shows projections of the different expense elements for 911 expenses in each fiscal year from 2006 through 2010 (actual) through 2011 (projected).

Assumed annual fee collection from one cent based on projections of the average number of telecommunication customers in each fiscal year (FY):					
FY2006 Actual	FY2007 Actual	FY2008 Actual	FY2009 Actual	FY2010 PROJECTED	FY2011 PROJECTED
$711,223	$761,957	$780,784	$788,762	$784,292	$782,694

Specific appropriations were passed in 2007 (Minnesota Laws 2007, Chapter 54, article 1, Section 4, Subdivision 7) beginning in FY2008 for:

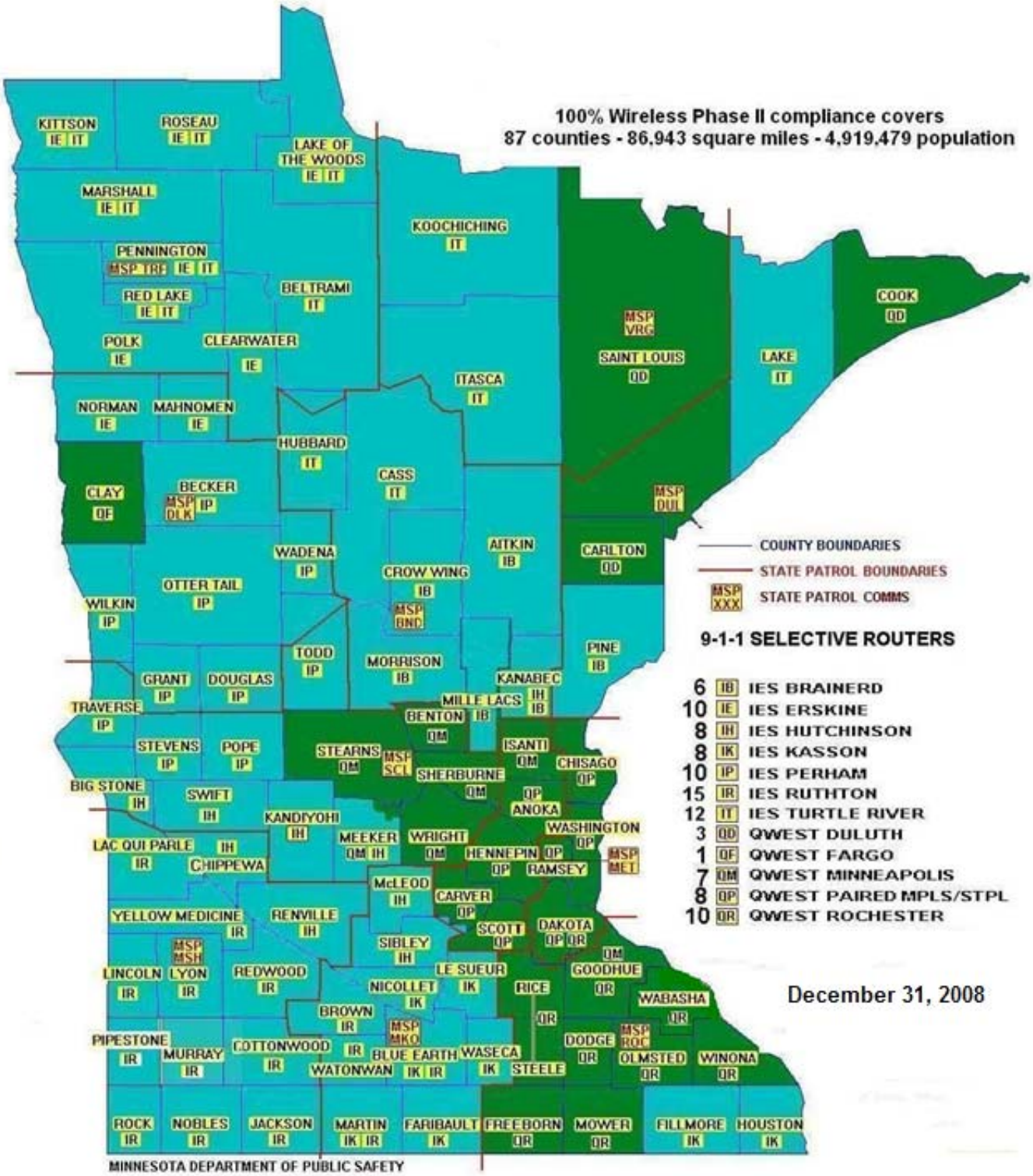
- Bonding costs for continuing implementation of the statewide shared public safety radio system in the remainder of the state.
- Funding of backbone operating costs in Phase 1 and 3 of the statewide shared public safety radio system.
- Upgrading the Phase 1 backbone in statewide shared public safety radio system to provide the highest level of interoperability throughout the state.
- Funding the detail design work and advanced site development for the statewide shared public safety radio system in the remainder of the state.

Statutory changes in 2007 (Minnesota Laws 2007, Chapter 54, Article 8, Section 4) provided for procedural changes in the 911 programs revenue compliance processes:

- Allows the commissioner of Public Safety to dispute fee submission and requires telecommunications providers to submit sworn statements attesting to the accuracy of their fee submissions.
- Allows the commissioner of Public Safety to estimate amounts due and refer them to the Department of Revenue for collection when a provider fails to submit a sworn statement attesting the accuracy of fee submissions.
- Allows the commissioner of Public Safety to conduct an examination of fees in accordance with “attestation audit standards” to verify any sworn statement attesting to the accuracy of fee submissions.

Appendix B: Wireline and Wireless 911 Status in Minnesota

Green-shaded counties indicate Qwest as the Enhanced 911 service provider for wireline and wireless. Aqua-shaded counties indicate Independent Emergency Services, LLC, as the E911 service provider for wireline and wireless 911. All wireless carriers are providing Phase 2 wireless enhanced 911 providing the latitude and longitude of the 911 caller. With few exceptions, all of these carriers are providing the location service in each of the 87 counties.



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