

**2013 HOUSE POLITICAL SUBDIVISIONS**

**HB 1049**

# 2013 HOUSE STANDING COMMITTEE MINUTES

## House Political Subdivisions Committee Prairie Room, State Capitol

HB 1049  
January 17, 2013  
Job # 17331

Conference Committee

Committee Clerk Signature



### Explanation or reason for introduction of bill/resolution:

Relating to standards and guidelines for public safety answering points.

### Minutes:

Testimony #1

**Chairman N. Johnson:** Opened the hearing on HB 1049.

**Mike Lynk, Director of the Division of State Radio and Vice Chair of Emergency Services Comm. Coordinating Committee:** (Testimony #1).

**Chairman N. Johnson:** You said you had some public hearings. Was there much public participation at those hearings?

**Mike Lynk:** None in opposition. We had some of the PCAPS and ESC3 committee did submit the changes. Everyone was expecting these changes to happen; they were just delayed because the technology wasn't there or in progress of the mapping so there was no opposition to those changes.

**Rep. L. Meier:** Do you feel 2015 will give you sufficient time to implement what you need to implement?

**Mike Lynk:** 2015 is our target date. We are expected to have the map done; which is one of these provisions and we feel at this time it is a target we may or may not hit for next generation. That technology is coming. It is a funding issue locally to get the next generation equipment there. We are hoping we will hit that date, but that date could be changed by next session.

**Rep. Kretschmar:** In this past election several counties in my area voted to increase their 911 fee on their phone bill. My county was one that it went down in flames. Will that make some difference or do counties have to come up with more money for this stuff?

**Mike Lynk:** Depends on where your 911 answering point is. If your 911 answering point is state radio we will be moving along to next generation 911. If you have an independent PCAP some of that technology may delay because they possible will have to buy new

equipment to meet Next Generation. So some of that may be prohibited due to lack of funding.

**Rep. J. Kelsh:** Is there are about 27 counties that use state radio? The only expense they will have it what Rep. Kretschmar was talking about. They will have to pay higher fees to the state. Are more and more of them going to their own answering services?

**Mike Lynk:** State radios counties raise from 22 to 24. Dunn County was combined with Stark County. Stark County got too busy so Dunn County went to state radio now. McKenzie County had a hard time finding dispatchers so they went to state radio. State radio sets up a fee structure every two years. We look at what it costs to support the counties and there is a pretty aggressive formula we use and that determines the rate we use. We obligate the counties to still have a 911 coordinator and manage their addressing locally. There are still functions those have to do and it costs them money.

**Rep. J. Kelsh:** Does part of that go to some group that works with 911 with cell phones?

**Mike Lynk:** The counties do contract with the Association of Counties to do some cellular so it does go to certain 911 or PCAP centers so the counties are in agreement with the Association of Counties to do that work for them.

**Rep. Koppelman:** You are saying those dates might be tough to meet It makes me nervous to put dates in law that we just keep changing the next session. What is your thinking on this?

**Mike Lynk:** I agree to you to one point, but if you don't set an aggressive goal and it is five years out; then they wait until year four. The national standards for the technology were just established last year. How could we develop our 911 system when the federal standards weren't there?

**Rep. Koppelman:** I am concerned on how meaningful those dates become after a while.

**Mike Lynk:** Funding will be the holdup on the Next Generation and there is some local funding that is going to have to be obligated. There are some local jurisdictions that may not have that funding. I do not see the holdup necessarily on the state side.

**Rep. Koppelman:** Is it an all or nothing. If there are pockets that aren't up to speed does that mean nothing moves forward?

**Mike Lynk:** You can do it with some holes. State radio with the C project the legislature authorized last time it will go active at the end of the month; that is Next Generation capable. It is an IP based system so it will be other IP based systems when they join that will be IP. Fargo and Grand Forks has partnered with the system and they are very lose to Next Generation; however when they bought their equipment the next generation standards weren't out so they need do some improvement but they should be close. If some of the smaller PCAPs are concerned that they may not have the funding; the legislature awarded us \$1 million. To some of those smaller jurisdictions that is a lot of money to improve their capability at their office.

**Rep. Kathy Hogan:** I think Section 0 about having to have a separate location identified is a huge barrier for some of the PCAPs. How many PCAPs currently have that separate location available?

**Mike Lynk:** Where we are at right now is everybody has something identified; however we are in the process right now of implementing not just in name, but also in detail what they need. Most of the PCAPs have state radio as their backup and the phone company under Condition 3 can move all the 911 calls within minutes to state radio.

**Rep. Kathy Hogan:** What is the backup for state radio if you happen to go down?

**Mike Lynk:** Our new system; we will deploy lap tops into the field. Our backup has been Bismarck Central in Bismarck. With the new technology since it is IPD based all we need to do is plug into the IPD system. That is the benefit of the next generation system that it is all IP based.

**Rep. L. Meier:** Last session we had the appropriation for \$1 Million. Are you asking for any additional funding to continue the project?

**Mike Lynk:** As far as state radio goes we are going to be under budget or on budget so we will not need any additional funding to take care of state radio.

**Rep. J. Kelsh:** When we were talking about the holes when I am driving across the state is there some other way to communicate? Are you doing everything possible for the lack of holes?

**Mike Lynk:** We do not handle the vendors for the cell phones. It seems to be driven by subscribers. ITD has been doing some testing where the holes are and we are trying to work with the cell phone companies to fill those gaps.

**Rep. Toman:** I don't understand why there wouldn't be a fiscal note attached to the bill for the additional costs?

**Mike Lynk:** The costs are local costs and not state costs and that is why we have not attached a fiscal note. The local PCAPs know that this cost and these process in deployment so they know they will have a cost; but it is a local cost.

**Rep. Koppelman:** Why is there not estimate since there is a cost to cities, counties and townships. Why is there no estimate or fiscal note?

**Mike Lynk:** We had not looked at that. If this committee desires that we can put together a cost estimate for those PCAPs.

**Rep. Koppelman:** I think it would be helpful since you say the reasons to move the dates are cost so I think it would be beneficial to have an estimate at least.

**Mike Lynk:** We will take that back.

Opposition: None

Neutral: None

Hearing closed.

# 2013 HOUSE STANDING COMMITTEE MINUTES

House Political Subdivisions Committee  
Prairie Room, State Capitol

HB 1049  
January 24, 2013  
Job # 17685

Conference Committee

Committee Clerk Signature



## Minutes:

**Chairman N. Johnson** reopened the hearing on HB 1049. This bill was on the PCAP public safety answering points. The question came up about wanting a fiscal note on that. I visited with Mike Lynk from State Radio and he said if we request a fiscal note on that bill through the Legislative Council it will end up being part of the record. He said the bill had nothing to do with this fiscal note; it just had to do with moving the dates. They had already authorized the money in previous legislation. Rep. Koppelman said that was fine with him even though he isn't here.

**Do Pass Motion Made by Rep. Kathy Hogan: Seconded by Rep. J. Kelsh:**

**Vote: 12 Yes 0 No 3 Absent Carrier: Rep. Kathy Hogan:**

Closed.

Date: 1-24-13  
Roll Call Vote #: 1

2013 HOUSE STANDING COMMITTEE  
ROLL CALL VOTES  
BILL/RESOLUTION NO. 1049

House Political Subdivisions Committee

Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken:  Do Pass  Do Not Pass  Amended  Adopt Amendment  
 Rerefer to Appropriations  Reconsider

Motion Made By \_\_\_\_\_ Seconded By \_\_\_\_\_

Representatives	Yes	No	Representatives	Yes	No
Chairman Nancy Johnson	✓		Rep. Ben Hanson	✓	
Vice Chairman Patrick Hatlestad	—		Rep. Kathy Hogan	✓	
Rep. Thomas Beadle	✓		Rep. Jerry Kelsh	✓	
Rep. Matthew Klein	✓		Rep. Naomi Muscha	✓	
Rep. Lawrence Klemin	✓				
Rep Kim Koppelman	—				
Rep. William Kretschmar	✓				
Rep. Alex Loosten	—				
Rep. Andrew Maragos	✓				
Rep. Lisa Meier	✓				
Rep. Nathan Toman	✓				

Total (Yes) 12 No 0

Absent 3

Floor Assignment Rep. Hogan

If the vote is on an amendment, briefly indicate intent:

**REPORT OF STANDING COMMITTEE**

**HB 1049: Political Subdivisions Committee (Rep. N. Johnson, Chairman)** recommends **DO PASS** (12 YEAS, 0 NAYS, 3 ABSENT AND NOT VOTING). HB 1049 was placed on the Eleventh order on the calendar.

**2013 SENATE POLITICAL SUBDIVISIONS**

**HB 1049**

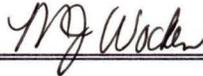
# 2013 SENATE STANDING COMMITTEE MINUTES

## Senate Political Subdivisions Committee Red River Room, State Capitol

HB 1049  
February 21, 2013  
19305

Conference Committee

Committee Clerk Signature



### Explanation or reason for introduction of bill/resolution:

Relating to standards and guidelines for public safety answering points.

### Minutes:

You may make reference to "attached testimony."

**Chairman Andrist** opened the hearing for HB 1049. All senators were present, except for Senator Grabinger who was absent.

**Terry Traynor** Assistant Executive Director of the North Dakota Association of Counties. See written testimony #1. We recommend setting the date for two years from now. That is the reason for the bill, we saw no other changes to it. This bill is obviously just three sub-sections of the very lengthy standards and guidelines. We saw no need to change any of the other ones, just these three at this time and that is what our recommendation was and we made it to the interim Transportation Committee which had the responsibility of receiving our biannual report. They recommended passage, the House passed it, and it comes to this committee as it was introduced.

**Chairman Andrist** Terry, so all we're doing is eliminating the first date and setting back the second date. Would you like to explain this map on your testimony?

**Terry Traynor** replied because of some of the questions that came up on the House side, I thought it was helpful to add a map. The stars are our public safety answering points as they exist today. What I did was I put some links on the map to show you some of the things that are going on. The ESC3 with some federal grant money recommended a pilot project in the Grand Forks and Cass County or Red River Regional dispatch have basically funded a broad band link between those two for testing the fail over possibility and really to accomplish what the second guideline in the bill that is guideline 'O' is really getting at to where one PSAP can basically take over calls for another one. Now, we can do that in all cases to some degree, we have what's called Condition 3. If a PSAP should go down, if there is a bomb threat or something like that, and you working with the phone company, we can transfer where those calls go. But they lose the enhanced 911 ability to have location and call back information and stuff like that. They just get the call. Our goal is to have a seamless system where if someone has to shut down their PSAP, it's just automatic. A flip of the switch, and the other jurisdictions taking the calls as if they were native to them. That is what we were able to accomplish in Grand Forks and Cass. Very recently Stutsman and

Richland Counties have worked at accomplishing the same thing in a different manner, there basically sharing equipment but as long as the equipment is operational they can do whatever they can do, from either location. There have been some discussions about rolling Barnes into that combination there as well. Then up in the north central area we have 4 PSAPS that actually have been for some time, operating off of one set of equipment. It is virtually one PSAP with four locations. So they have the capability of what we're talking about in the standard O, and they can back each other up. The difference there is they just have one set of equipment. If that equipment would be faulty they would be in trouble. Hopefully in the next two years were going to see, really lines all over the map tying everyone together and we'll be able to ultimately re-reduce the number of sets of equipment that we have out there but maintain the redundancy and make sure the system works no matter what happens.

**Chairman Andrist** In all the counties Terry without the stars they are all directly connected to Bismarck, is that it?

**Terry Traynor** replied the blue counties are all dispatched through State Radio. 24 counties are dispatched through State Radio; the green ones those 5 are dispatched out of Devils Lake, and the three sets of orange there are 2 county combinations where their using one PSAP. I always like to point out Cass County; Red River Regional Dispatch is unique in the country. They dispatch for Fargo, West Fargo, Cass County, as well as Morehead, and Clay County. They are a very unique situation and its working very, very well. That will figure in our long term plan for a backbone because obviously, there is a lot of cross traffic especially with cell phones across the Red River and we have to be able to move calls back and forth; depending upon the correct jurisdiction. They are a great pilot project because Minnesota is also in the process of developing a broad band backbone for their calls.

**Senator Judy Lee** Just curious, because I am very familiar with the Red River dispatch and the bill that we had a couple of weeks ago that talked about state radio. Will there be any impact on the two state nature of what is already happening there when this larger and really fine plan is implemented?

**Terry Traynor** replied there will be an impact but I think it will be a positive one because essentially from a network standpoint, what Cass and Clay have done will become North Dakota and Minnesota as well, as well as North Dakota and South Dakota. The vision from the federal government is really a network of networks. What we have here is going to be a seamless connection across the country ultimately. So emergency communications is the same everywhere and everyone has access to it.

Chairman Andrist Closed the hearing for HB 1049.  
Vice Chairman Ron Sorvaag moved do pass  
2<sup>nd</sup> Senator Howard Anderson  
6 Yea 0 No, 0 Absent  
Carrier: Vice Chairman Ron Sorvaag

Date: 2-21-13  
Roll Call Vote #: 1

2013 SENATE STANDING COMMITTEE  
ROLL CALL VOTES  
BILL/RESOLUTION NO. 1049

Senate Political Subdivisions Committee

Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken:  Do Pass  Do Not Pass  Amended  Adopt  
Amendment

Rerefer to Appropriations  Reconsider

Motion Made By Sen. Ron Sorvaag Seconded By Sen. Howard Anderson

Senators	Yes	No	Senator	Yes	No
Chairman John Andrist	✓		Senator Jim Dotzenrod	✓	
Vice Chairman Ronald Sorvaag	✓		Senator John Grabinger	✓	
Senator Judy Lee	✓				
Senator Howard Anderson, Jr.	✓				

Total (Yes) 6 No 0

Absent 0

Floor Assignment Sen. Sorvaag

If the vote is on an amendment, briefly indicate intent:

**REPORT OF STANDING COMMITTEE**

**HB 1049: Political Subdivisions Committee (Sen. Andrist, Chairman) recommends DO PASS (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1049 was placed on the Fourteenth order on the calendar.**

**2013 TESTIMONY**

**HB 1049**

#1

Testimony to the  
**House Political Subdivisions Committee**

By the Emergency Services Communications Coordinating Committee  
January 17, 2013

**RE: HB1049 – Standards and Guidelines**

Mr. Chairman and members of the committee, I am Mike Lynk, Director of the Division of State Radio, but today I am before you as a member of, and Vice - Chair to, your Emergency Services Communications Coordinating Committee (often called the ESC3).

The ESC3 is a statutory body composed of two state, and two local, government representatives with specific responsibilities regarding the statewide emergency services communications system.

A very important element of these responsibilities is the delivery of recommendations to the Legislature regarding the statutory standards and guidelines for operating an emergency services communications system.

Originally the standards and guidelines were managed as administrative rules by a Governor's Committee, but they became codified as state law in 2001 after the Governor's Committee in charge of them was eliminated by repeal. Until 2011, the standards remained mostly unchanged. The ESC3 completed, in 2010, a rather extensive review and series of public hearings on proposed changes and updates to those standards. The resulting recommendations were largely adopted by the Legislature last Session.

This past summer, the ESC3 again reviewed the recently adopted standards. We specifically focused on the Legislative changes to the previous ESC3 recommendations and the three standards that were given delayed effective dates.

Only minor changes, delaying two of the three effective dates by two years, were proposed as possible amendments. As was done previously, notice of these proposed amendments was distributed to the 911 jurisdictions and interested parties and a public hearing was held. Following that, the ESC3 took formal action to urge the Interim Transportation Committee to review and consider recommending the changes to the Sixty-third Legislative Assembly. These changes were accepted by the Transportation Committee and the Legislative Council, becoming HB1049.

The first change is simply to remove a date that will no longer be needed by the time this bill is effective – should it be passed.

The additional two changes are to delay the implementation of these specific standards as they relate to our statewide digital mapping effort and what is termed Next Generation 911 technologies, still under development.

The ESC3 was aware when these dates were first established that they were rather aggressive, but great progress is being made and we believe some of that is due to the pressure of these deadlines.

Mr. Chairman and committee members, your ESC3 urges a Do Pass recommendation on HB1049.

North Dakota Century Code  
57-40.6-10, subdivision o:

Emergency Services  
Communications Backup  
Scenarios and Status

## 911 Communications

From the 911 communications perspective, there is more than one way to fulfill the statutory requirements of 57-40.6-10, subdivision o, of the North Dakota Century Code.

### 911 Backup Options

	Selective Router Conditional Routing	PSAP CPE Equipment Sharing	Next Generation 911
<b>Overview</b>	<p>The PSAP manager needs to call CenturyLink and request that their calls be re-routed to an alternate PSAP.</p> <p>This is commonly referred to as "Condition 3".</p>	<p>Modern PSAP <b>Call Processing Equipment (CPE)</b> has enabled automatic failover between two or more PSAPs that have agreed to share and interconnect their PSAP equipment using <b>Internet Protocol technology (IP)</b>. Calls are still delivered to these systems using traditional 911 trunks, but can re-routed to alternate locations, over the IP links, through automated or manual rules set up by each PSAP. This functionality does not remove the ability to use Selective Router Conditional Routing.</p>	<p>The NENA i3 standards for Next Generation 911 create a new methodology for routing 911 calls based on PSAP policies. These standards are intended to replace the current Selective Router functionality. Failover and call re-routing policies are integrated into these standards and are intended to provide the highest degree of flexibility, accuracy, and reliability.</p>
<b>Today's Status</b>	<p>This method is commonplace in many state PSAPs today, typically redirecting calls to the State Radio PSAP.</p> <p>All but three PSAPs within the state are capable of this. The PSAPs not capable of this are:</p> <ul style="list-style-type: none"> <li>- Minot</li> <li>- Lake Region</li> <li>- Mountrail</li> </ul> <p>There are also several PSAPs whose database is not accessible outside of their PSAP.</p>	<p>Four PSAPs within the state are capable of this level of failover. In each case, two PSAPs have agreed to purchase and interconnect their systems using the State Network, STAGEnet. Each pair of PSAPs is using a different equipment vendor and thus cannot achieve the same benefits between the four PSAPs. The following are PSAPs that support this level of failover:</p> <ul style="list-style-type: none"> <li>- Cass and Grand Forks</li> <li>- Stutsman and Richland</li> </ul>	<p>North Dakota does not support Next Generation 911 in any manner at this time.</p> <p>This transition is expected to take 2-4 years upon commencement. Incremental improvements will be realized over the course of this timeframe.</p>

**It is the committee's belief that Selective Router Conditional Routing satisfies the technical requirements of 57-40.6-10, subdivision o. However, we do not believe this is an optimal method for supporting continuity of Public Safety Communications. Efforts are underway to encourage PSAP equipment sharing, and the pursuit of NG 911 implementation is the committee's ultimate goal.**

## 911 Cost Scenarios

### Convert PSAPs not compatible with Selective Router Conditional Routing

While it is possible to migrate PSAPs onto the current Selective Routers and to upgrade their databases to support access outside of their local PSAP, the committee feels that this exercise is not appropriate at this time.

Through the Statewide Basemap project, much of the data needed to convert these counties databases will be developed and prepared for the Next Generation 911 databases.

The Committee will evaluate the progress of the Basemap project and work with the PSAPs who are not in compliance to achieve better integration.

### PSAP CPE Equipment Sharing

Sharing PSAP equipment provides the benefits of automated failover, as well as enhances the ability to transfer caller information between centers along with calls that are transferred.

There are three general scenarios that can take place when deploying CPE to the PSAPs. The following scenarios contain a few basic assumptions for the sake of simplicity and clearer comparisons:

- Statewide, there are 21 PSAPs with a total of 80 dispatch workstations.
- It is assumed that every PSAP will require the upgrade identified. In reality four PSAPs have already upgraded.
- These scenarios illustrate an analysis of the incremental cost to a PSAP when upgrading their CPE, it does not address the recurring costs for 911 call delivery, nor does any scenario assume a difference in call delivery method.
- It is assumed that the cost for an individual PSAP to upgrade their current CPE will be nominally less compared to the cost of a new CPE. Most of the cost of modern CPE is contained in the dispatcher workstation, software costs, implementation services, and training. All of which would be required with an upgrade.
- CPE, Workstation, and Maintenance cost estimates were informally obtained from one CPE vendor, who has competitively won the most recent CPE purchase in ND.
- IP systems are using the STAGNet connection that is already present in each PSAP, and adding one additional IP connection for redundancy. Utilizing the existing link reduces the ongoing system operational costs and is enhanced with the additional reliability of a second, dedicated link. Smaller PSAPs may elect to forgo the cost of the redundant link if the quality of failover is acceptable.
- IP Network costs are estimated using STAGNet figures that have been deployed in the two existing 911 systems and the State Radio Dispatch System.

	Individual Systems (1:1)		Shared Neighbor Systems (2:1)		Shared Statewide System (22:1)				
Core Equipment	21	\$100,000.00	\$2,100,000.00	11	\$100,000.00	\$1,100,000.00	1	\$300,000.00	\$300,000.00
Workstations	80	\$30,658.00	\$2,452,640.00	80	\$28,929.00	\$2,314,320.00	80	\$25,610.00	\$2,048,800.00
Maintenance (Annual)	80	\$4,065.00	\$325,200.00	80	\$3,959.00	\$316,720.00	80	\$3,740.00	\$299,200.00
IP Circuits (Annual)	0	\$-	\$-	22	\$12,000.00	\$264,000.00	22	\$12,000.00	\$264,000.00
<b>Total</b>			<b>\$4,877,840.00</b>			<b>\$3,995,040.00</b>			<b>\$2,912,000.00</b>

**It is clear that the more equipment is shared, the less cost will be incurred statewide. Current trends indicate we will see many neighbors implement 2:1 shared systems in the next several years.**

## Next Generation 911

The costs associated with implementing Next Generation 911 statewide are complex to model. There are several key components required for this system to be implemented and several parties involved. The following are key components, listed with rough cost estimates when available. These figures are rough estimates developed from several sources. Because of the recent development of standards, mature solutions are just beginning to become available, and thus further analysis is required to provide more accurate estimates and ultimately an RFP will best identify the full project costs.

### **Call Processing Equipment**

**\$2.9-5M**

Call processing equipment will need to be upgraded to support the functionality of Next Generation 911. The CPE estimates from the previous section are for systems that are capable of supporting NG 911. PSAPs could also defer the cost of upgrading their equipment by purchasing an NG 911 gateway device for roughly \$15k. This would allow them to utilize their existing equipment if it still has a significant useful life. It is expected that the majority of PSAPs within the state will be required to upgrade their CPE within the next five years.

This effort is being funded by the local jurisdictions. 4/21 have completed this task.

### **NG 911 Core Equipment**

**\$200k-2M**

This is the equipment that will replace and exceed the functionality of today's Selective Router. This is where call routing and processing decisions are made. Proposals from three vendors have demonstrated a wide variation in pricing, largely due to differences in a subscription model vs. an ownership model.

There is currently not a project plan to implement this component. Further research and estimates are required before a plan can be developed. Funding for this component could come from the existing wireless 911 fund of \$1.4m, and additional revenues received.

### **Statewide Addressing**

**\$3.8M**

To begin routing calls using NG 911 systems, all addresses and building locations within the state must be correlated to a latitude, longitude (X,Y) coordinate system. This system is being developed so that all counties and cities will be able to administer their data independently through a common user interface.

This project is currently partially funded and expected to receive full funding this legislative session HB1016 (Statewide Basemap). The project is underway through the Department of Emergency Services and expected to be completed in 2015.

### **IP Network Connectivity**

**No Capex**

Next Generation 911 standards mandate the use of IP technology for the delivery of calls within the 911 system. At this point, the committee has reviewed vendor proposals that include a vendor provided network solution, as well as proposals that assume use of the state STAGEnet IP network. The level of detail required to properly evaluate the merits and costs of these scenarios is not yet available.

There is currently not a project plan to implement this component. It is expected that once the NG Core equipment and database projects are formalized, this project will commence. Funding for this component could come from the existing wireless 911 fund of \$1.4m, and additional revenues received in the next year.

### **Telephone Company Conversion**

**Indirect**

Each telephone company will be required to transmit their calls into the system via IP technology. Many of the state's independent companies are already using or migrating their standard voice calls to this technology.

It is unclear what the incremental cost to each provider will be to extend this functionality to their 911 calls and if these costs will be felt in the PSAP or Wireless 911 budgets. There is currently a pilot project in planning phases for BEK Telephone to transmit calls via IP technology, this should help improve the understanding of these costs.

**Total Projected Costs**

**\$6.9M-10.8**

It should be noted that the total projected costs are a very rough estimate at this point. NG 911 core equipment and database conversions are just emerging into deployable offerings.

It should also be noted that this total projected cost is being funded from a variety of sources: City/County budgets, City/County 911 fee collections, the Wireless 911 JPA, The E911 Federal Grant, and State appropriation for the Basemap project.

Through extensive interaction with the vendor community, local telephone providers, and State and County resources, the costs of implementing and operating a Next Generation 911 system are becoming rapidly clearer. Unfortunately, the committee is still unable to provide a comprehensive cost estimate and proposal to implement this system..

If SB 2261 passes, the committee would recommend these revenues be used to fund the NG 911 program. Similar legislation has lead to roughly \$1M in annual revenues in South Dakota.

## PSAP to Responder Communications (Dispatch)

From the Radio and Dispatch communications perspective, there is more than one way to fulfill the statutory requirements of 57-40.6-10, subdivision o, of the North Dakota Century Code.

### Dispatch Backup Options

	Telephone Contact Lists	Single Radio Channel Sharing	Multi-Core Radio Systems	Shared CAD
<b>Overview</b>	<p>This is the most rudimentary form of backup dispatching. By keeping records of key contact telephone numbers, a remote facility can remain in contact with local resources that have access to more advanced dispatching capabilities.</p> <p>While this is far from optimal, it is a method that is capable of achieving dispatch of local resources in many scenarios.</p>	<p>Radio systems that support IP based communications introduce new flexibility to aggregate radio channels from several remote areas in a very cost effective manner.</p> <p>With the implementation of State Radio's new IP system, it is now possible for each county and/or city backup to use in another PSAP primary radio channel.</p>	<p>A Multi-Core radio system connects two or more IP capable radio systems so that radio channels can selectively be used or monitored by any participating agency. This type of system requires significant investment by all participating agencies.</p>	<p>Computer Aided Dispatch is a tool used in the larger PSAPs to augment radio based dispatch systems. This sends additional information to a computer in the responder's vehicle.</p> <p>CAD systems are also capable of being shared over IP based networks to allow remote use.</p>
<b>Today's Status</b>	<p>Telephone contact lists are currently maintained at most PSAPs for their neighboring PSAP territories.</p> <p>Sometimes PSAPs maintain a dedicated cellular telephone for these purposes.</p> <p>If other forms of dispatching are not feasible, telephone contact is used to aid in remote dispatching or caller information sharing.</p>	<p>This configuration will be available after April 2013, when State Radio completes their system migration.</p> <p>A pilot project is in planning stages to connect one channel from a remote county to evaluate the technical and operational validity of this approach.</p> <p>Expectations are that this will be feasible with minimal technical effort.</p>	<p>Currently, there are no active Multi-Core radio systems within the state.</p> <p>State Radio's Zetron system is fully capable of interconnecting with other Zetron radio cores.</p> <p>Motorola Gold Elite systems have limited abilities to be interconnected.</p> <p>Vendor propriety remains a large challenge in this area.</p>	<p>Many of the CAD products can be shared with other jurisdictions (ex. The CAD State Radio deployed can be shared by other PSAPs as using a spoke and hub connection.)</p> <p>Currently a CAD mobile application is used by law enforcement for license plate lookups statewide.</p> <p>No other PSAPs currently share CAD systems, though all of the state's major cities use their own CAD system.</p> <p>Vendor propriety is also a challenge with this technology.</p>

**It is the committee's belief that Telephone Contact Lists may come close to the technical requirements of 57-40.6-10, subdivision o, but may not meet the original intent of the legislation. We believe that a single radio channel sharing agreement is a base-level method for achieving satisfactory remote dispatching capabilities. Upon successful completion of a pilot project, this arrangement could be deployed within one year, if political cooperation is achieved. Multi-Core radio systems would require large scale, or ideally, statewide cooperation to be realized. Shared CAD would require similar cooperation, but likely less capital.**

## Dispatch Cost Scenarios

### Single Radio Channel Sharing

The technology aspects of this scenario are relatively simple. With the capabilities of the new Radio Dispatch system being deployed by State Radio, each County and/or City could elect to have a single or multiple radio channels made available remotely to State Radio, to match their current Selective Router Conditional 911 call routing procedures. Currently many of the PSAPs use State Radio as their backup PSAP. The PSAPs that use another backup can deploy similar technology to control dispatch notifications. This would complete the basic statutory requirements for all PSAPs who are currently able to utilize the selective router. However, a single channel may not be adequate for sustaining dispatch during an emergency. Sharing of multiple channels is possible by expanding the cost table in a linear model, or other solutions may provide better scalability.

There is one important point to note in the cost estimates. Because of the existing STAGEnet IP network connections present in every City and County government facility, this could be accomplished without any additional recurring charges to these entities.

1 Radio Channel Dispatch to State Radio			
Radio to IP Gateway	52	\$ 7,500.00	\$ 390,000.00
<b>Total</b>			<b>\$ 390,000.00</b>

### Multi-Core Radio System

Estimates for this level of integration have not yet been analyzed. This is very complex due to the vast number of radio channels that are present in each county and city, as well as their individual preference for a specific radio console vendor. Currently, it is very difficult to integrate radio systems from different vendors, as there are only standards developed for the over the air (handset to base station) side of the radio system (P25).

The closest reference point is the system that State Radio purchased is currently configured to support 111 channels with 37 Radio to IP gateways, but is capable of supporting in excess of 250 radio channels using additional gateways and software licensing. This system was procured for a total of \$708,032. A formal analysis of each counties radio channel allocations would be required to begin attempting to model system costs for migrating those to Multi-core capable systems, though it is expected that the state's largest jurisdictions would be able to utilize a system of similar size.

### Shared CAD

Currently, State Radio is sharing their CAD system with responders in multiple counties. This system is available to any county that they provide 911 and dispatch services for, provided the county or city cover the incremental cost of licensing. This CAD system allows the 911 call takers to quickly transmit all relevant caller and incident information to the appropriate responder agency.

State Radio Shared CAD (Yr 1)			
Computer	1	\$ 3,000.00	\$ 3,000.00
CAD Software	1	\$ 1,120.00	\$ 1,120.00
CAD Maintenance (Annual)	1	\$ 260.00	\$ 260.00
Mobile Data & VPN (Annual)	1	\$ 1,200.00	\$ 1,200.00
<b>Total</b>			<b>\$ 5,580.00</b>

The cost to deploy a shared system for other jurisdictions would require a significant upfront investment for the core software and hardware, but incremental costs would likely parallel the State Radio pricing. The CAD system in place at State Radio was procured for \$1.1M. **The committee recommends that PSAPs start to jointly purchase CAD systems as they start to integrate their call processing and radio systems.**

Testimony to the

**Senate Political Subdivisions Committee**

By the Emergency Services Communications Coordinating Committee

February 21, 2013

**RE: HB1049 – Standards and Guidelines**

Mr. Chairman and members of the committee, I am Terry Traynor, assistant executive director of the North Dakota Association of Counties, but today I am before you as a member of, and Secretary to, your Emergency Services Communications Coordinating Committee (often called the ESC3).

The ESC3 is a statutory body composed of two state, and two local, government representatives with specific responsibilities regarding the statewide emergency services communications system.

A very important element of these responsibilities is the delivery of recommendations to the Legislature regarding the statutory standards and guidelines for operating an emergency services communications system.

Originally the standards and guidelines were managed as administrative rules by a Governor’s Committee, but they became codified as state law in 2001 after the Governor’s Committee in charge of them was eliminated by repeal. Until 2011, the standards remained mostly unchanged. The ESC3 completed, in 2010, a rather extensive review and series of public hearings on proposed changes and updates to those standards. The resulting recommendations were largely adopted by the Legislature last Session.

This past summer, the ESC3 again reviewed the recently adopted standards. We specifically focused on the Legislative changes to the previous ESC3 recommendations and the three standards that were given delayed effective dates.

