Emergency Services Communication in North Dakota

A Biennial Status Report 2018

Prepared by the Emergency Services Communications Coordinating Committee

Pursuant to: NDCC 57-40.6-12

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Purpose

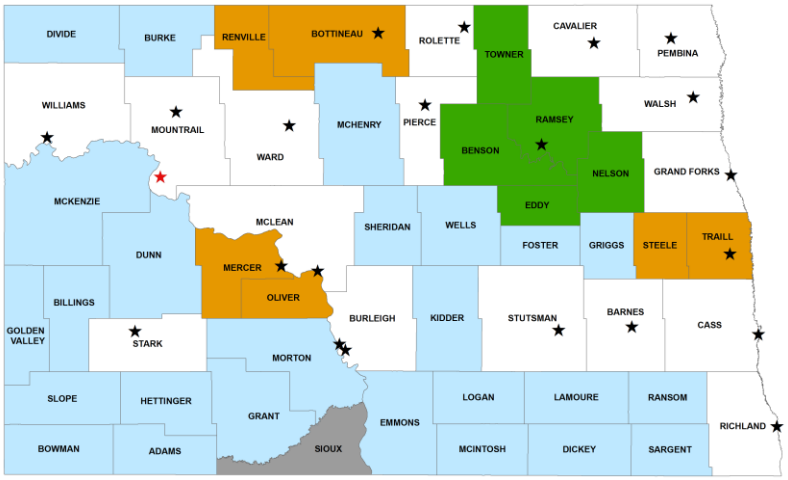
North Dakota Century Code (57-40.6-12) establishes an "*emergency services communications coordinating committee*" (ESC3) and creates a reporting requirement of the compiled "*income, expenditures, and status*" information from the individual jurisdictions of the State which levy an emergency services communication systems (ESCS) fee. Appendix A contains the statute and composition of the committee. This report constitutes the committee's 2018 report and has been prepared for submittal as requested by the Legislative Council to the Interim Information Technology Committee.

Three of the four members of the ESC3 are full-time employees of the agencies they represent, one represents the ND911 Association and all receive no compensation for their Committee activities. The Committee has no budget, no appropriation, and no staff. Activities of the committee are carried out by the voluntary dedication of the committee members' time and the staff support from the North Dakota Association of Counties supported by the local 911 jurisdictions.

Background

Emergency services communication is a complex and multi-faceted system of telecommunication technologies, databases, computers, and radios that connects every citizen of the State to the nearly 700 law enforcement, fire, ambulance and other responders through 21 primary public safety answering points (PSAPs) in North Dakota and 1 in South Dakota. While from one perspective this network can be viewed as 22 separate systems it is, in reality, a single system with 22 points of contact.

Emergency services communication has existed in this State since the development of telephone and radio; however it became more accessible, reliable, and consistent with the advent of Enhanced 911 (E-911) in the early 1990's and the adoption of phase 1 and phase 2 wireless service in the 2000's.



Throughout the 2010's, PSAPs throughout North Dakota continued to improve upon the 9-1-1 system by committing to a 9-1-1 modernization effort known as Next Generation 9-1-1 (NG9-1-1). Much like the E-911 system served the needs of North Dakota for the past 25 years; NG9-1-1 is intended to serve its needs for the next 25 years and beyond.

The nexus of these systems, and the policies, procedures, and technologies associated with them, has been partially funded through an ESCS fee levied on telecommunication service in the State. The State's 53 counties and 1 city have imposed such fees.

The adoption of NG9-1-1 along with the implementation of modern IP-based technology is also helping to ease the ability for PSAPs to share technology. This, in turn, helps them share information and ultimately improve efficiency in emergency response.

While there are 54 governing bodies imposing fees throughout the state there are only 21 primary PSAPs in North Dakota and 1 secondary PSAP. This difference is an indicator that many of our governing bodies are cooperating to provide 9-1-1 services in their respective communities. Notably, 25 of the counties are served by the PSAP operated by State Radio, five are jointly dispatched by the Lake Region Law Enforcement Center, and three other two-county PSAPs exist. North Dakota also has possibly the only true multi-state PSAP in the country – the Red River Regional Dispatch Center in Fargo serving the separate jurisdictions of Fargo, West Fargo, Cass County as well as Moorhead and Clay County, Minnesota. A complete listing of primary PSAPs and the approximate population served by each is attached to this report as Appendix B.

It is often of interest to compare North Dakota to neighboring states in the area of emergency services communications. The table contrasts the number of PSAPs operated in surrounding states. North Dakota has, by far, the fewest number of PSAPs of any State in the region, and

State	Number of PSAPs
North Dakota	21
South Dakota	32
Idaho	48
Wyoming	53
Montana	57
Minnesota	99
Iowa	115
Kansas	149

services nearly 4,600 more people per PSAP then the regional average.

North Dakota law (NDCC 57-40.6) had, for many years, allowed city and county governing bodies to impose a "*fee that does not exceed one dollar per month per telephone access line and per wireless access line*" for the support of "*an emergency services communications system"*. In 2009, the Legislature allowed jurisdictions involved in "*an intrastate multi-county PSAP*" to raise their fee to a maximum of $1.50 per access line per month and the 2011 Legislature expanded this authority to all PSAP's contingent (as with all such fees) on an affirmative vote of the jurisdiction's electorate. Of the fifty-four governing bodies imposing a fee, thirty-three were levying a local $1.00 ESCS fee as of July 1, 2018. Voters have approved increasing their local ESCS fee to $1.50 in 21 counties, an increase of four from the previous biennium.

In 2016 the State Legislature, in an effort to provide funding for a Statewide Integrated Radio Network (SIRN), required all jurisdictions levying an ESCS fee to extend their own fee by an additional 50 cents. The additional 50 cent fee on each "assessed communications service" is not available for local use but rather remitted to the state treasurer monthly to support SIRN funding. The 50 cent fee sunsets on July 31st of 2023.

Another factor that has impacted ESCS revenue is an increasing number of the population using pre-paid wireless services as a replacement to post-paid wireless service contracts. Until January 1, 2014 ESCS fees had not been universally collected on pre-paid wireless services. However, through legislation enacted by the State Legislature in 2015, these fees began accumulating at a rate of 2% of the gross receipts at the point of sale. Prepaid fees were increased by the State Legislature in 2017 to 2.5% to create parity with the additional 50 cent 911 fee additions to support SIRN. The additional 0.5% fee also has a sunset of July 31st of 2023.

It is important to note, as this report will show, Emergency Services Communications is much broader than simply E-911 or NG9-1-1 services. While dialing 911 most often initiates the emergency response, the day-by-day, hour-by-hour communications between dispatchers and responders, the ongoing contact during an emergency, location information, pre-arrival

medical instructions, mapping software, computer-aided dispatch, and numerous other components make it possible for local emergency services to arrive and deliver effective services in the shortest time possible.

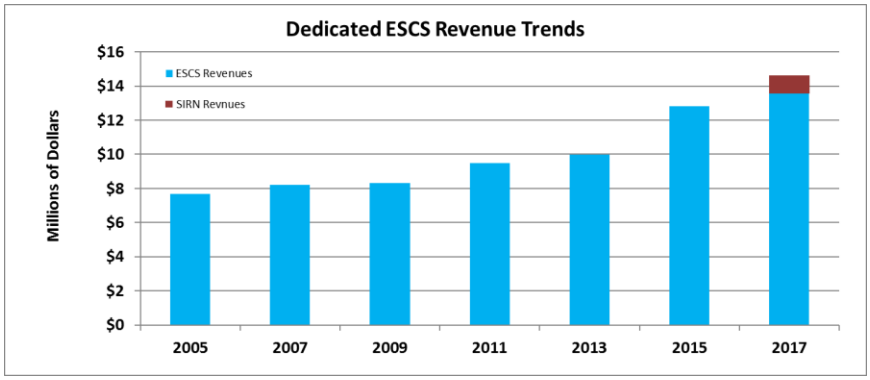
Methodology

To facilitate the statutorily required reporting and ultimately develop this report, each jurisdiction collecting the emergency services communications system (ESCS) fee was asked to complete both a financial survey and a survey relating to their PSAP operations.

The first survey focused on the revenues and expenditures of the 54 entities that have imposed an ESCS fee. This was compiled in a manner that attempted to preclude counting revenue twice in situations where a county contracts with another entity for emergency communication services. Calendar year 2017 revenue and expenditure data was requested from all jurisdictions. The results from the entities are attached to this report as Appendix C (fiscal) and Appendix D (operational). The comments that were attached to the fiscal data (Appendix F) are important as a number of entities qualified their revenue data regarding grant awards, general fund deposits, and miscellaneous refunds that, in addition to fee revenue, were used to meet 2017 ESCS costs; as well as notes regarding unusual expenditures made in 2017 or anticipated for the future.

Status - Financial

The overall financial data indicates the continuation of revenue growth with a 14% increase from 2015 to 2017. This significant increase in growth is largely attributable to additional revenues realized from the 50 cent increases to all ESCS fees beginning July 1 of 2017.

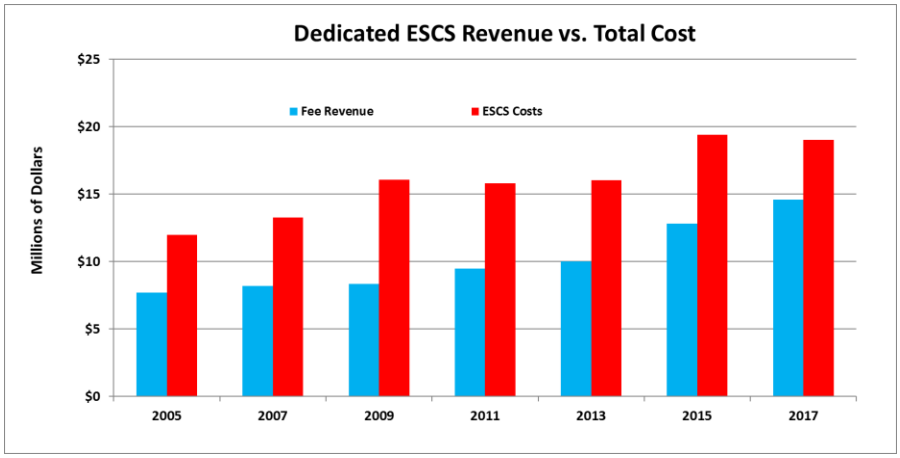


While the increase of 14% over a two-year period would seem to suggest an influx of new revenue into 911, it is worth noting that 100% of the 50 cent SIRN revenue is remitted by the

taxing authorities to the state to support the SIRN initiative and until SIRN moves into an implementation phase, PSAPs will not see a benefit from this additional 50 cent retainage.

When analyzing the revenues and expenditures associated with emergency services communications, consistency of the data has increased significantly. 2007 Legislation directed the development of expenditure guidelines for costs considered appropriate for ESCS fee revenue support. Throughout the years the ESCCC has continued to revise the expenditure guidelines (most recently in 2018) to meet the needs of 911 in the context of new and emerging technologies.

While the largest portion of ESCS expenditures are paid from the special fund created by the statutory and home rule fees, many jurisdiction reports indicate that there are significant system costs borne by other funds, but that these costs are often not reflected in the special fund transactions. Salaries and (particularly) benefits for dispatchers are often funded through local city or county property tax sources.



The chart above provides a brief snapshot of the overall trends, contrasting total fee revenue with costs. Total statewide costs have dropped slightly from two years ago with revenue increasing as expected from the temporary statewide SIRN fee increases. Appendix C contains the actual data gathered from the individual jurisdictional reports while the following table provides a statewide picture of the revenues and expenditures.

	State Radio Dispatched Jurisdictions	Non-State Radio Dispatched Jurisdictions
2017 ESCS Fee Revenue	$1,745,505	$12,000,461
Other Funds / Previous Reserves	$1,060,136	$3,928,656
2017 Prepaid Fee Revenues	$926,387	
2017 ESCS Expenditures	$2,643,500	$15,861,372

ESCS – Emergency Services Communications Systems (NDCC 57-40.6)

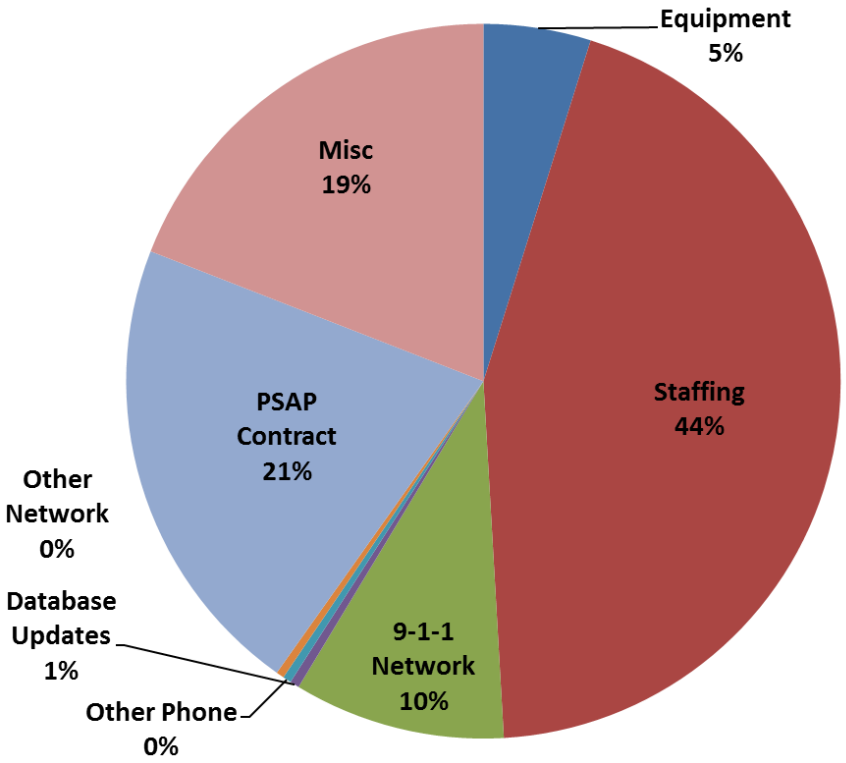
Many of the jurisdictions also included notes (Appendix F) regarding significant investments anticipated. As an example, a number of counties indicated that they expect to incur considerable equipment costs to support next generation 9-1-1 (NG9-1-1) call answering equipment; while others continue to address a lack of road signage. Jurisdictions are even preparing for new radio system investments to complement the infrastructure established through the SIRN initiative.

The ESC3 concludes that the data demonstrates the prudent planning for strategic expenditures that was envisioned by the Legislature when this special revenue source was created.

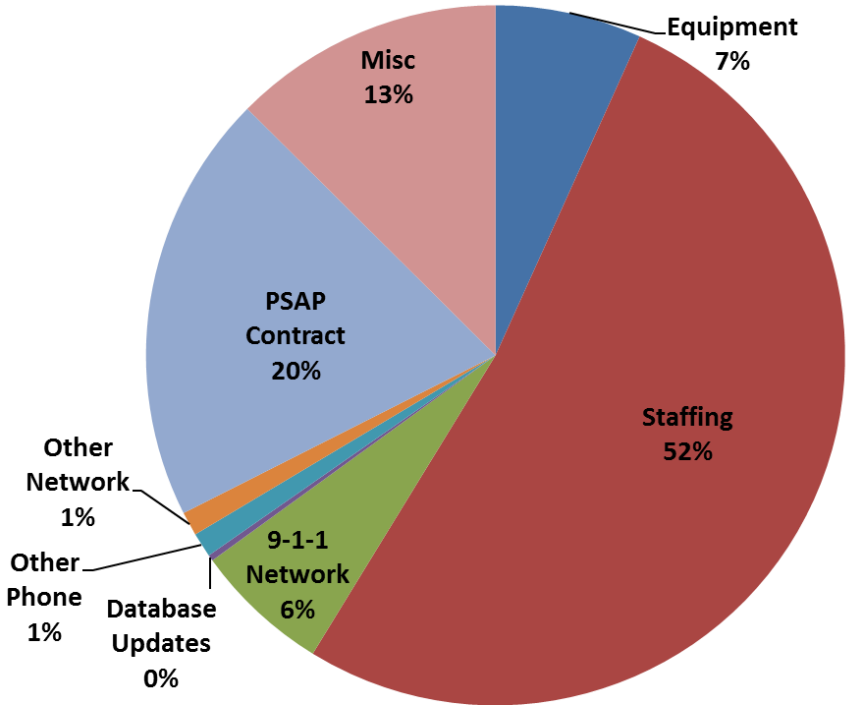
The compiled CY2017 expenditures are illustrated on the following page in two pie charts. The category "Staffing" includes direct salaries and benefits paid to staff. The "Equipment" category includes both the purchase of towers, dispatch consoles, computers, base stations, etc. as well as the ongoing maintenance of this equipment. The "PSAP Contract" category includes payments made by counties or municipalities for dispatch services. The category "9-1-1 Network" includes all of the services required to provide for delivery of 9-1-1 calls from the public to a PSAP. The remaining categories of "Misc.", "Other Network", "Other Phone" and "Database Updates" consist of other authorized expenditures associated with maintaining the emergency services communication system

The analysis of the data reported to the Emergency Services Communications Coordinating Committee indicates that all of the local jurisdictions have expended their ESCS fee revenue in a manner consistent with State Statute and the Expenditure Guidelines established by the ESC3 in January 1, 2008, amended June 19, 2009 and again April 9, 2018.

State Radio Dispatched Counties



Non-State Radio Dispatched Counties



Status – Operational

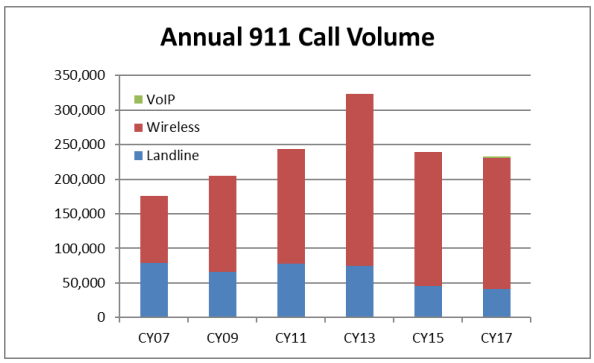
The financial information is best understood when the emergency communication activities and responsibilities supported by this revenue are profiled. The table below provides a picture of what the PSAP Surveys have indicated.

	Statewide Total	Largest PSAP	Smallest PSAP
Dedicated 911 Lines	102	14	2
Administrative Phone Lines	419	15	2
911 Calls per Month	19,460	5,197	54
911 Calls per Year	233,416	62,364	648
Wireless as % of 911 Calls	81%	82%	57%
Active Dispatch Stations	70	8	1
Dispatcher On Duty - Busiest	64	7	1
Dispatcher On Duty - Quietest	43	6	1
Law Agencies	114	76	1
EMS Agencies	131	92	3
Fire Agencies	316	172	9
Quick/First/Rescue Response Units	55	15	2
Total Agencies Dispatched	616	355	15

For individual jurisdiction data see Appendix D

During the 2017 calendar year the PSAPs of North Dakota handled roughly 230,000 emergency calls, (a 2% reduction from 2015) – 81% of these calls were placed from cellular phones (a slight uptick from 80% in 2015).

The busiest PSAP averages a 911 call every 8 minutes while the state, collectively, receives a 911 call every 2 minutes – 24 hours a day, 7 days a week, 52 weeks a year.



The total 911 call volume from 2015 to 2017 dropped slightly and is substantially off the highs of 2013 when there was a period of heightened economic activity across western North Dakota. Call volumes are now more in-line with the historical trends occurring before the peak of the oil boom in 2012.

During busiest times, 64 dispatchers provide call taking and dispatching services across the state. These front-line individuals are supported by numerous computer/radio technicians, GIS specialists, trainers, supervisors and administrative staff, many of which serve as dispatchers as the need arises.

The state's PSAPs coordinate and manage the activities of 616 local first responder agencies while coordinating with other public and private entities providing after-incident services. On average, each PSAP must manage 32 first responder agencies, and oftentimes several of them are dispatched simultaneously. These same PSAPs also respond to FBI (NCIC/NLETS) requests, log and confirm warrants, activate emergency sirens, manage emergency cable interrupts, dispatch public works agencies during emergencies, and perform other emergency communications functions. To dispatch these services, the individual PSAPs manage between 4 and 29 local radio frequencies, in addition to those of State Radio.

Operational detail, to the PSAP level, is contained in the tables comprising Appendices D & E. Increases in compliance with the standards are evident when compared to previous biennial status reports.

Issue 1 – Next Generation 9-1-1 Progress

Next Generation 9-1-1 (NG9-1-1) is a nation-wide initiative with the purpose of improving access to, and interoperability of, 911 service between the public and the nation's public safety answering points (PSAPs). North Dakota's efforts in pursuit of NG9-1-1 began in 2014 with the installation of an Emergency Services IP network (ESInet). The ESInet is an entirely new, secure, IP network with more available bandwidth for PSAPs to receive new media types (pictures, video, data, etc.) that will eventually be delivered from the public to the PSAP.

With the state's ESInet in place, the 911 system is positioned to accept new forms of communication from the public as they become available. The first of these new communication types was the short message service (SMS), otherwise known as "text messaging". This service was activated statewide in October of 2016 making North Dakota the 6th state in the country to provide statewide "text-to-911" service.

Text-to-911 service has fulfilled an obligation to the deaf and hearing-impaired community to make access to emergency services as accessible as it is to the rest of the public. Reports from PSAPs receiving text-to-911 calls indicates a significant percentage of text-to-911 calls resulting from domestic violence incidents.

North Dakota is one of a handful of states in the country leading in the deployment of NG9-1-1 and has already realized some of the benefits associated with a migration to IP-based communications like text-to-911. That said, there remains a significant amount of work to complete over the next few years such as the migration of the local exchange carrier, wireless and VoIP 911 circuits from analog to digital, development of a statewide GIS database and ultimately a full transition to an end-state NG9-1-1 architecture.

Issue 2 -Technology Consolidation

Beginning in 2015, shortly after the introduction of the ESInet, the traditional architecture of the state's 9-1-1 call taking systems took a significant turn towards a design that is more in-line with modern technologies.

Prior to 2015, most 9-1-1 calls were delivered to the premise of the PSAP by the state's 9-1-1 service provider and connected directly to equipment the PSAP owned and operated. This type of direct connectivity began to change in 2015 when the Information Technology Department (ITD) deployed a call taking system into Dakota Carrier Network (DCN) owned co-location facilities in Bismarck and Fargo. In this design 9-1-1 calls are no longer delivered to the PSAP by the 9-1-1 service provider, they are delivered to co-location facilities. To connect DCN's co-location facilities to the PSAP's premise, ITD leveraged StageNet and implemented a logically separate network via existing connectivity, ethernet virtual circuits and backup circuits provided by other locally available internet service providers (ISPs). The primary objective of this design was to provide an environment where PSAPs could collectively invest in a common call taking system, lowering the total overall cost of the system while increasing operational efficiency.

This system has been successful in that it has given PSAPs the ability to "technologically consolidate" some of the most expensive equipment they were previously required to purchase individually. Operational and maintenance efficiencies have been realized in this endeavor while allowing the state's PSAPs to move away from the previous capital expenditure model to a model where they have a relatively consistent year to year service fee.

The migration to this newer architecture has not been without its share of challenges however. Service tickets indicate that, despite the promise of a more reliable architecture, the frequency of 9-1-1 service disruptions has been on the rise at PSAPs connected to this shared call taking system. While it is the hope that more PSAPs can move towards collaborations like this on future technologies, more work will need to be done to determine the cause of these disruptions and bring the architecture into compliance with the expectations of the public safety community.

Issue 3 – The Intersection of Land Mobile Radio, Public Safety Mobile Broadband and NG9-1-1

With NG9-1-1 progress continuing to press forward, public safety mobile broadband networks (PSMB) now available to the public safety community and the statewide interoperable radio network (SIRN) preparing to get underway; these are promising times for North Dakota's public safety community. Relatively soon the requisite networks will be in place to enhance the connectivity of the public, PSAPs and first responders, enabling new opportunities to further reduce response times and improve the safety of the public.

According to their website, FirstNet is "an independent authority within the U.S. Department of Commerce whose mission is to develop, build and operate the nationwide, broadband network that equips first responders to save lives and protect U.S. communities." Although FirstNet has received much of the attention from the public safety community as the de-facto PSMB network, other providers of similar services do exist. These various networks are similar in many ways, but the coverage areas of the networks can be very different. Because of these variations in coverage areas, the choice public safety agencies have in the selection of their PSMB will oftentimes be based on which provider serves the community best.

While PSBNs are presently intended for data-driven applications, standards are in development to support mission critical communications in the future. That said it will take time for device manufacturers to develop and implement mission critical communication standards. Additionally, the geographic coverage area of the individual PSBN networks are substantially less than the coverage area of the state's existing land mobile radio (LMR) systems, so using a singular provider of PSMB, like FirstNet, for mission critical voice is impractical in many areas of the state. It is primarily for these reasons that the state was wise to invest in its LMR systems by supporting the initiative known as SIRN.

SIRN is an LMR initiative borne out of legislative declaration (NDCC 37-17.3-02.1) established during the 64th Assembly and further supported by a funding mechanism (NDCC 57-40.6-02) during the 65th Assembly. The objective of SIRN is to leverage the state's collective public safety frequencies to improve radio system interoperability. Such interoperability will satisfy the technical requirements for PSAPs and first responders to collaborate and work together more effectively.

While these various networks may seem complicated and duplicative it is important to understand that each of these

networks play an important role in the continuum of emergency response. NG9-1-1's role is to improve the public's access to a PSAP, SIRN's role is to improve PSAP and first responder radio communications and PSMB's role is to provide a clear path for the transmission of data between PSAPs and mobile first responders.

Issue 4 – Recommended Statute Changes

On February 16th of this year the President signed H.R. 582 into law. The law, known as "Kari's Law", ensures that the public has direct access to 911 through direct dialing of the digits "9-1-1". While most devices do this already, some multi-line telephone systems (MLTS) deployed across the state require a leading digit to be dialed before 9-1-1. These types of phone systems are quite common in larger organizations and, without proper configuration, can ultimately lead to a delay in an individual's ability to reach emergency services.

While Kari's Law settled the problem of inconsistent access to 9-1-1, it did not address another important consideration, location. Like the configuration necessary to enable direct access to emergency services through the dialed digits of "9-1-1", configuration is also required to ensure that a location is provided along with each call. While many MLTSs are providing location, the public safety community has experienced an increasing number of calls where location is not provided. Such lack of location can lead to a delay in emergency services being provided to the caller.

According to the National Association of State 911 Administrators fifteen (15) states have indicated they have specific MLTS language to address the public's access to 911 and/or ensure location is provided on an MLTS call. In addition, the North Dakota 911 Association's Legislative Committee recently passed a motion to "support the adoption of new multi-line telephone system (MLTS) legislation to ensure location information is provided on all MLTS 9-1-1 calls.

The ESCCC agrees that sensible legislation may be required to ensure location is provided regardless of the type of phone system used and therefore would support any such legislation to that effect if prepared and sponsored during the 66th Assembly. The ESCCC also recognizes that change is most likely to be successful if legislation is coupled with an educational campaign.

Issue 5 – Training Guidelines

During the 62nd Assembly the Legislature struck language relating to dispatcher training requirements. It was struck primarily because the language was specific to a particular training provider while a number of other providers of similar training services do exist. Once this language was struck, the responsibility for defining the required training fell back upon the ESCCC.

Since the language was struck there has been a considerable amount of work done, at a national level, to create a set of minimum training guidelines for telecommunicators (i.e. dispatchers and call takers). Public safety organizations, training providers, and professionals from across the country came together to produce a nationally-recognized set of guidelines known as the "Recommended Minimum Training Guidelines for the 9-1-1 Telecommunicator". It is this set of baseline guidelines that the ESCCC recognized, and approved, at its September 4, 2018 meeting.

The "Recommended Minimum Training Guidelines for the 9-1-1 Telecommunicator" are a collection of topics covering such issues as quality assurance, roles and responsibilities and technology that are now recommended of any training curriculum provided to our state's telecommunicators.

APPENDIX A

Authorizing Statute

The following section of North Dakota Century Code was enacted by the 54th Legislative Assembly, and took effect August 1, 2001, with changes in 2005, 2007 and 2009.

57-40.6-12. Emergency services communications coordinating committee -- Membership -- Duties.

1. The governing body of a city or county, which adopted a fee on assessed communications services under this chapter, shall make an annual report of the income, expenditures, and status of its emergency services communication system. The annual report must be submitted to the emergency services communications coordinating committee. The committee is composed of four members, one appointed by the North Dakota 911 association, one appointed by the North Dakota association of counties, one appointed by the chief information officer of the state, and one appointed by the adjutant general to represent the division of state radio.
2. The committee shall:
   a. Recommend to the legislative management changes to the operating standards for emergency services communications, including training or certification standards for dispatchers;
   b. Develop guidelines regarding the allowable uses of the fee revenue collected under this chapter;
   c. Request, receive, and compile reports from each governing body on the use of the proceeds of the fee imposed under this chapter, analyze the reports with respect to the guidelines, file its report with the legislative council by November first of each even-numbered year regarding the use of the fee revenue, and recommend to the legislative assembly the appropriate maximum fee allowed by section 57-40.6-02;
   d. Periodically evaluate chapter 57-40.6 and recommend changes to the legislative management; and
   e. Serve as the governmental body to coordinate plans for implementing emergency 911 services and internet protocol enabled emergency applications for 911.
3. The committee may initiate and administer statewide agreements among the governing bodies of the local governmental units with jurisdiction over an emergency 911 telephone system to coordinate the procurement of equipment and services, fund the research, administration, and activities of the committee, and contract for the necessary staff support for committee activities.

Committee Composition

Jerry Bergquist, Chairman – Stutsman County 911 Coordinator
Appointed by the North Dakota 911 Association

Mike Lynk, Vice Chairman – Director of State Radio
Appointed by the Adjutant General to represent the State Radio Division

Terry Traynor, Secretary – NDACo Director
Appointed by the North Dakota Association of Counties

Duane Schell – Chief Technology Officer, ITD
Appointed by the Chief Information Officer of the State

APPENDIX B

Primary Public Safety Answering Points in North Dakota

PSAP Location	Counties Served	Service Area Notes	2010 Census
Fargo	Cass, Clay MN	Multi-State PSAP (Population Served is Total)	208,777
Bismarck	Burleigh	Includes City of Mandan and portion of McLean Co.	99,733
State Radio Bismarck	Adams, Billings, Bowman, Burke, Dickey, Divide, Dunn, Emmons, Foster, Golden Valley, Grant, Griggs, Hettinger, Kidder, LaMoure, Logan, McHenry, McIntosh, McKenzie, Morton, Ransom, Sargent, Sheridan, Slope, & Wells		88,612
Grand Forks	Grand Forks		66,861
Minot	Ward		61,675
Devils Lake	Ramsey, Eddy, Towner, Benson & Nelson		25,868
Dickinson	Stark		24,199
Williston	Williams		22,398
Jamestown	Stutsman		21,100
Bottineau	Bottineau, Renville		8,899
Langdon	Cavalier		3,993
Rolla	Rolette		13,937
Rugby	Pierce		4,357
Wahpeton	Richland	Portions of Sargent & Ransom Co. ND and Wilken & Roberts Co. SD	16,321
Grafton	Walsh		11,119
Valley City	Barnes		11,066
Stanton	Mercer, Oliver		10,270
Hillsboro	Traill, Steele		10,096
Washburn	McLean		8,962
Stanley	Mountrail		7,673
Cavalier	Pembina		7,413
Mobridge, SD	Sioux	North Central South Dakota 911 Center	28,203

APPENDIX C

ESCS Fiscal Survey Results

Based on CY 2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

Ref. No. for Notes		Fund Balance 1/1/2017	911 Revenue	Property Tax Reserves/Other Expenditures	CY2017 ESCS Expenditures	Fund Balance 12/31/2017
	State Radio Dispatched Counties					
1	Adams County	65,703	36,789	4,330	40,115	62,377
2	Billings County	27,793	15,587	0	15,900	27,481
3	Bowman County	123,652	79,429	0	103,309	99,773
4	Burke County	13,941	20,269	0	25,515	8,696
5	Dickey County	42,511	113,658	5,031	100,448	55,721
6	Divide County	67,121	35,033	0	33,926	68,228
7	Dunn County	34,281	64,747	0	63,109	35,919
8	Emmons County	27,447	54,560	0	49,296	32,711
9	Foster County	342,766	51,226	7,236	59,128	356,824
10	Golden Valley County	473	28,952	12,000	48,798	-10,494
11	Grant County	70,752	37,420	0	36,216	52,588
12	Griggs County	112,899	56,298	0	43,903	125,294
13	Hettinger County	901	38,922	0	35,201	-4,622
14	Kidder County	71,256	35,566	7,312	30,294	76,528
15	LaMoure county	65,465	60,197	0	59,620	66,041
16	Logan County	56,243	32,662	0	23,887	65,018
17	McHenry County	406,466	90,962	225	76,659	420,769
18	McIntosh County	26,672	45,167	0	42,601	29,238
19	McKenzie County	262,632	161,842	961,987	110,795	313,678
20	Morton County	42,401	397,243	59,803	382,036	57,602
21	Ransom County	334,854	113,226	0	54,694	393,385
22	Sargent County	52,627	88,395	0	64,112	76,910
23	Sheridan County	-1,814	18,027	0	14,349	-1,864
24	Slope County	11,404	14,779	0	17,155	9,027
25	Wells County	69,910	54,551	2,211	52,299	72,163
	State Radio County Total	**2,328,355**	**1,745,505**	**1,060,136**	**1,583,364**	**2,488,990**
	Other Single & Multi-Jurisdictional PSAPs					
a	Barnes/Valley City	0	134,378	0	134,378	0
b	Bismarck/Burleigh	1,177,431	1,293,172	0	1,186,413	1,284,190
c	Bottineau/Renville	104,899	245,369	13,229	199,474	150,784
d	Cavalier County	332,375	70,566	36,886	86,549	316,392
e	Grand Forks County	574,423	1,273,295	1,232,630	887,789	959,929
f	Lake Region E-911 (5 Counties)	284,225	512,469	244,178	453,602	343,092
g	McLean County	-87,525	146,563	0	91,737	-32,699
h	Mercer/Oliver	46,722	196,695	45,555	155,906	87,511
i	Mountrail County	246,966	188,486	0	322,216	113,266
j	Pembina County	169,741	173,254	249,377	150,105	192,890
k	Pierce County	53,506	52,604	703	67,022	39,088
l	Red River Regional Dispatch	0	3,335,740	0	3,693,912	490
m	Richland County	1,083	330,743	515,082	331,656	169
n	Rolette County	-124,697	193,990	0	134,818	-65,525
o	Sioux County/NCSD PSAP	20,228	21,408	0	22,086	19,549
p	Stark	280,541	387,603	3,590	376,386	291,759
q	Steele/Traill	196,387	171,574	141,290	153,993	213,967
r	Stutsman County	244,775	234,484	510,857	242,605	236,654
s	Walsh County	266,524	142,503	365,051	156,666	252,361
t	Ward County	506,795	1,548,394	429,968	1,670,321	384,867
u	Williams/Williston	320,739	1,347,173	140,260	1,415,084	252,828
	Other PSAPs Total	**4,615,136**	**12,000,461**	**3,928,656**	**11,932,717**	**5,041,562**
	Grand Total	**6,943,491**	**13,745,966**	**4,988,792**	**13,516,081**	**7,530,552**

Emergency Services Communicatons System (9-1-1) Detailed Expenditures

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

Ref. No. for Notes		CY2017 Expend	Communications Equipment *purchase, lease, maintenance, support, etc.*	Staffing *salaries, benefits, payroll taxes, etc.*	911 Network Costs: *NDACo NG9-1-1 JPA*	Other Local 911 Trunk Charges	Local Phone Database Updates	Other Phone Charges *administrative lines, etc.*	Other Network Charges *ITD, etc.*	PSAP Contract *state radio, lake region, etc.*	Other Operational Expenses *as per ESC3 guidelines*
	State Radio Dispatched Counties										
1	Adams	44,445	4,330	5,133	3,413	180	2,270	-	-	14,661	10,127
2	Billings	15,900	5,661	-	3,213	694	10	-	-	6,050	271
3	Bowman	103,309	39,389	19,337	2,600	-	692	1,011	-	22,771	17,508
4	Burke	25,515	-	3,135	9,068	16,504	-	-	-	15,990	-
5	Dickey	105,479	302	37,517	5,735	2,792	76	207	-	31,962	26,889
6	Divide	33,926	-	9,178	1,703	5,918	-	-	-	17,451	-
7	Dunn	63,109	1,789	-	5,684	960	840	-	-	26,138	19,164
8	Emmons	49,296	-	11,799	4,645	900	561	1,026	-	20,921	9,444
9	Foster	66,364	18,694	3,865	3,064	-	-	-	-	24,035	9,469
10	Golden Valley	60,798	-	6,000	13,702	1,320	-	600	6,000	-	-
11	Grant	36,216	-	10,289	3,837	14,731	-	-	-	-	7,359
12	Griggs	43,903	1,000	8,981	5,197	6,251	-	5,197	-	15,313	7,160
13	Hettinger	35,201	-	8,217	3,539	748	-	-	-	15,360	1,435
14	Kidder	37,606	-	5,898	3,885	3,600	768	-	-	15,982	7,472
15	LaMoure	59,620	15,039	7,274	6,085	2,772	154	-	-	26,643	1,652
16	Logan	23,887	1,032	2,550	2,498	-	1,093	1,093	-	12,469	3,345
17	McHenry	76,884	6,645	5,844	10,431	6,339	-	-	-	34,069	-
18	McIntosh	42,601	1,650	7,006	3,824	900	3,737	546	-	6,914	18,024
19	McKenzie	1,072,782	21,141	930,799	9,623	3,222	26	-	-	83,833	17,777
20	Morton	441,838	-	-	33,500	-	-	-	-	49,728	296,657
21	Ransom	54,694	309	6,480	4,883	10,818	-	-	-	35,143	10,007
22	Sargent	64,112	92	22,275	5,546	-	132	-	3,216	25,778	265
23	Sheridan	14,349	407	7,816	2,028	3,655	-	-	-	8,544	1,622
24	Slope	17,155	-	-	1,015	480	64	-	-	4,031	11,566
25	Wells	54,510	-	12,974	3,548	7,757	407	-	-	27,810	3,352
	SR County Total	**2,643,500**	**117,480**	**1,132,368**	**152,267**	**90,541**	**10,830**	**9,680**	**9,216**	**541,595**	**480,565**
	Other Single & Multi-Jurisdictional PSAPs										
a	Barnes/Valley City	134,378	-	23,846	12,394	2,772	7,013	1,667	-	-	-
b	Bismarck/Burleigh	1,186,413	67,098	1,872,836	93,588	3,600	2,088	36,354	79,303	-	600,830
c	Bottineau/Renville	212,702	5,654	34,599	8,895	5,117	353	1,313	1,989	25,900	9,494
d	Cavalier County	123,435	44,526	40,384	6,095	8,542	5,850	-	-	-	8,633
e	Grand Forks Authority	2,120,419	75,852	1,429,972	66,455	-	-	8,257	2,000	-	537,883
f	Lake Region 6-Co.	697,780	1,510	554,683	35,737	28,069	-	39	-	-	77,743
g	McLean	91,737	17,054	14,915	36,396	20,892	-	-	-	-	2,480
h	Mercer/Oliver	201,461	15,500	70,165	40,070	5,280	667	1,056	-	62,846	5,874
i	Mountrail	322,216	255,617	6,835	21,599	12,827	-	3,589	5,751	-	15,999
j	Pembina	399,482	39,114	268,097	9,833	8,672	-	743	-	51,962	-
k	Pierce	67,724	44,156	8,152	5,466	2,887	5,748	-	613	-	-
l	Red River Regional	3,693,912	-	-	199,444	3,315	-	-	-	3,000,738	16,500
m	Richland	846,739	112,243	662,640	14,406	12,621	-	1,446	-	-	42,300
n	Rolette	134,818	12,386	58,133	13,800	38,234	-	1,324	-	-	10,943
o	Sioux	22,086	-	3,910	-	-	-	-	-	-	-
p	Stark	379,976	46,122	226,730	28,929	-	3,590	58,829	-	-	19,113
q	Steele/Traill	295,284	7,552	218,496	9,172	8,806	-	-	-	34,267	5,182
r	Stutsman	753,462	22,176	621,000	35,564	3,324	2,548	8,784	-	-	108,531
s	Walsh	521,716	7,395	375,286	12,564	7,920	-	1,146	-	-	98,334
t	Ward	2,100,289	31,419	1,159,898	104,088	2,820	-	52,612	56,994	-	127,767
u	Williams/Williston	1,555,344	284,114	722,830	75,780	4,800	17,325	5,750	31,878	25,150	336,278
	Other PSAPs Total	**15,861,372**	**1,089,488**	**8,373,407**	**830,276**	**180,495**	**45,181**	**182,909**	**178,527**	**3,200,863**	**2,023,884**
	Grand Total	**18,504,873**	**1,206,968**	**9,505,776**	**982,543**	**271,036**	**56,011**	**192,589**	**187,743**	**3,742,459**	**2,504,448**

APPENDIX D

ESCS Operational Survey Results

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

	On-Duty - Busiest Shift		On-Duty - Quietist Shift		Operational Workstations			
PSAP	Call Taker / Dispatcher	Shift Supervisor	Call Taker / Dispatcher	Shift Supervisor	911 calls and dispatch	911 calls but not dispatch	Dispatch but not answer 911 calls	Capacity to add workstations
Barnes County Dispatch	2	1	2	0	2	0	0	1
Central Dakota Comunications Center	6	1	3	1	8	0	0	0
Grand Forks County 911 Center	5	1	2	1	4	2	0	4
Lake Region 911 Center	2	1	2	0	3	0	0	0
McLean County	2	1	1	1	2	0	1	2
Mercer-Oliver 911	2	1	2	1	2	0	0	1
Cavalier County	2	1	1	0	2	0	0	0
Rolette County	3	1	0	2	2	0	0	2
Bottineau/Renville E911 Network	1	0	1	0	2	0	0	0
Pierce County	3	0	3	1	1	2	1	0
Minot Central Dispatch	4	1	2	0	5	0	0	1
Mountrail County Sheriff's Department	2	1	2	0	2	0	0	0
Pembina County 911	3	1	3	1	2	0	0	0
Red River Regional Dispatch Center	7	1	4	1	8	0	0	0
Richland County Communications / 911	2	0	2	0	3	0	0	1
Stark/Dickinson Dispatch	2	1	2	0	4	0	0	2
State Radio	6	2	6	2	10	3	0	2
Stutsman County Communications Center	3	1	2	1	3	0	0	1
Traill Co.	1	1	1	0	2	0	0	0
Walsh County Communications	2	0	1	0	2	0	0	1
Williston / Williams 911	4	1	1	1	3	0	0	0
Cummulative Total	64	18	43	13	72	7	2	18

	Agencies Dispatched				
PSAP	Sheriff / Police	Fire	Quick / First Response	Ambulance (BLS/ALS)	Other
Barnes County Dispatch	2	13	6	1	1
Central Dakota Comunications Center	5	7	1	7	6
Grand Forks County 911 Center	6	16	16	5	0
Lake Region 911 Center	7	23	4	13	1
McLean County	1	9	0	6	0
Mercer-Oliver 911	4	8	1	2	0
Cavalier County	1	9	2	3	1
Rolette County	2	6	1	3	1
Bottineau/Renville E911 Network	5	17	0	11	0
Pierce County	2	2	0	1	0
Minot Central Dispatch	6	18	5	8	9
Mountrail County Sheriff's Department	3	11	0	9	1
Pembina County 911	4	10	4	4	6
Red River Regional Dispatch Center	9	3	28	15	1
Richland County Communications / 911	4	16	10	5	2
Stark/Dickinson Dispatch	4	7	0	3	0
State Radio	76	172	15	92	55
Stutsman County Communications Center	3	14	3	4	4
Traill Co.	2	11	6	4	0
Walsh County Communications	2	10	7	2	4
Williston / Williams 911	4	10	1	4	3
Cummulative Total	148	382	109	198	92
Actual Number of Agencies	110	314	120	135	

ESCS Operational Survey Results

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

PSAP	Trunks (NG911)	Direct Local Trunks	Local Telephone Provider	Landline ALI Database Provider[d]	Location Database (If No Landline ALI)
Barnes County Dispatch	4		CenturyLink	West (aka Intrado)	
Central Dakota Comunications Center	10		CenturyLink	West (aka Intrado)	
Grand Forks County 911 Center	12		CenturyLink	West (aka Intrado)	
Lake Region 911 Center	2	3	North Dakota Telephone	None	Zuercher
McLean County	2		West River Telecom.	None	Seatol
Mercer-Oliver 911	2		West River Telecom.	None	Seatol
Cavalier County	3		United Telephone	West (aka Intrado)	
Rolette County	2		United Telephone	West (aka Intrado)	
Bottineau/Renville E911 Network	2		United Telephone/SRT	West (aka Intrado)	
Pierce County	2		North Dakota Telephone	West (aka Intrado)	
Minot Central Dispatch	6		SRT	West (aka Intrado)	
Mountrail County Sheriff's Department	8		Midstate Telephone	West (aka Intrado)	
Pembina County 911	4		Polar Communications	West (aka Intrado)	
Red River Regional Dispatch Center	10		CenturyLink	West (aka Intrado)	
Richland County Communications / 911	3		CenturyLink	West (aka Intrado)	
Stark/Dickinson Dispatch	5		CenturyLink	West (aka Intrado)	
State Radio	14		CenturyLink	West (aka Intrado)/Zuercher	
Stutsman County Communications Center	4		CenturyLink	West (aka Intrado)	
Traill Co.	2		CenturyLink	None	Seatol
Walsh County Communications	3		CenturyLink	West (aka Intrado)	
Williston / Williams 911	3		Nemont Telephone	West (aka Intrado)	
Cummulative Total	103	3			

	Call Taking System		
PSAP	Manufacturer/Model	Install Date	Estimated End of Life
Barnes County Dispatch	Motorola/VESTA	2018	2023
Central Dakota Comunications Center	Motorola/VESTA	2015	2020
Grand Forks County 911 Center	West/Viper	2011	2021
Lake Region 911 Center	Zetron	1995	N/A
McLean County	Zetron	1996	2025
Mercer-Oliver 911	Zetron	2009	2019
Cavalier County	Motorola/VESTA	2016	2021
Rolette County	Motorola/VESTA	2016	2021
Bottineau/Renville E911 Network	Motorola/VESTA	2016	2021
Pierce County	Motorola/VESTA	2016	2021
Minot Central Dispatch	Motorola/VESTA	2016	2025
Mountrail County Sheriff's Department	Motorola/VESTA	2017	2025
Pembina County 911	Motorola/VESTA	2018	2025
Red River Regional Dispatch Center	West/Viper	2012	2024
Richland County Communications / 911	Airbus/Patriot	2012	2030
Stark/Dickinson Dispatch	Motorola/VESTA	2016	2021
State Radio	Motorola/VESTA	2017	2020
Stutsman County Communications Center	Airbus/Patriot	2012	2017
Traill Co.	Zetron	2003	2018
Walsh County Communications	West/Viper	2014	2019
Williston / Williams 911	West/Viper	2014	2024

APPENDIX E

Emergency Services Communicatons System (9-1-1) PSAP Evaluation

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

	Yes	No
PSAP Operation		
Is the PSAP operational 24 hours a day, seven days a week or capable of transferring emergency calls to another PSAP meeting standard and guideline requirements during the times of nonoperation?	21	0
Does a written agreement exist between your PSAP and your backup PSAP?	14	7
During times of operation is the PSAP staffed continuously with at least one public safety telecommunicator who is on duty at all times of operation and who has primary responsibility for handling the communication of the public safety answering point.	21	0
When the PSAP's primary emergency services communication system equipment is inoperable, does an alternative method of answering inbound emergency calls for the PSAP exist?	20	1
Does the PSAP have written policies establishing procedures for recording and documenting relevant information of every request for service, including:		
Date and time of request for service?	21	0
Name and address of requestor, if available?	21	0
Type of incident reported?	21	0
Location of incident reported?	21	0
Description of resources assigned, if any?	21	0
Time of dispatch?	21	0
Time of resource arrival?	21	0
Time of incident conclusion?	21	0
Does the PSAP have written policies establishing dispatch procedures and provide periodic training of public safety telecommunicators on those procedures, including procedures for:		
Standardized call taking and dispatch procedures?	21	0
Prompt handling and appropriate routing of misdirected emergency calls?	21	0
Handling of hang-up emergency calls?	21	0
Handling of calls from non-English speaking callers?	19	2
Handling of calls from callers with hearing or speech impairments?	21	0

Meets Expectations Work Remains

Emergency Services Communicatons System (9-1-1) PSAP Evaluation (Cont.)

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

	Yes	No
Communication / Dispatch Capability		
Does the PSAP have the capability to dispatch law enforcement, fire, and medical responders to calls for service within the PSAP's service area?	21	0
Is the PSAP capable of two-way communication with all law enforcement, fire, and medical responder units and operational incident or unified commands within the PSAP's service area?	21	0
Which of the following additional services is the PSAP able to access and dispatch / request assistance from:		
Poison Control	21	0
Suicide Prevention	20	2
Emergency Management	21	0
Other public or private services	21	0
Does the PSAP accept one-way private call-in alarms or devices as 911 calls?	3	18
Is the PSAP capable of dispatching the emergency medical service that has been determined to be the quickest to arrive to the scene of a medical emergency regardless of city, county, or district boundaries?	21	0
Is the PSAP capable of providing emergency medical dispatch prearrival instructions on all emergency medical calls?	21	0
Are the emergency medical dispatch prearrival instructions provided by public safety telecommunicators who have completed an emergency medical dispatch course approved by the division of emergency health services?	21	0
Does a mechanism exist to differentiate emergency calls from other calls (i.e. 911 calls vs. administrative calls)?	21	0
PSAP Facility		
Does the PSAP have security measures in place to prevent direct physical public access to on-duty public safety telecommunicators?	21	0
Does the PSAP have security measures in place to prevent direct physical public access to PSAP equipment and systems?	21	0
Does the PSAP have an alternative to commercial power that it uses in the event of a power failure?	21	0
Does the PSAP have equipment to protect critical equipment and systems from irregular power conditions, such as power spikes, lightning, and brownouts?	21	0

Meets Expectations Work Remains

Emergency Services Communicatons System (9-1-1) PSAP Evaluation (Cont.)

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

	Yes	No
Personnel and Human Resources		
Does the PSAP perform a criminal background check (state and federal) and secure two sets of fingerprints for all public safety telecommunicators?	21	0
Does the PSAP have policies to ensure that all public safety telecommunicators:		
Do not have felony convictions?	21	0
Complete pre-employment screening for illegal substance use and hearing?	20	1
Complete training through an association of public safety communications official's course or equivalent course?	19	2
Can prioritize appropriately all calls for service?	21	0
Can determine the appropriate resources to be used in response to all calls for public safety services?	21	0
Miscellaneous		
Does the PSAP maintain a written policy for computer system security and preservation of data?	18	3
Does the PSAP have the capability of recording and immediate playback of recorded emergency calls and radio traffic?	21	0
Does the PSAP provide assistance for investigating false or prank calls?	21	0
Does the PSAP employ necessary telecommunications network and electronic equipment consistent with the minimum technical standards recommended by the national emergency number association to securely receive and respond to emergency communications?	21	0

Meets Expectations Work Remains

Emergency Services Communicatons System (9-1-1) Jurisdiction Evaluation

Based on CY2017 Survey Compiled by the Emergency Services Communications Coordinating Committee

Questions	Yes	No	N/A
Does the governing body / committee have authority to enter into written agreements with participating organizations and agencies (e.g. memorandums of understanding, PSAP contracts, etc.)?	54	0	0
Does the governing body / committee have authority to designate lines of responsibility and authority?	53	1	0
Does the governing body / committee have a written plan for the assignment of rural addresses, if applicable, which has been coordinated with local postal authorities?	49	5	0
If the governing body/committee has a written plan for the assignment of rural addresses, does it conform to the modified burkle addressing plan?	50	4	0
If the plan does not conform to the modified burkle addressing plan, was a previous addressing system in place before January 1, 1993?	4	6	31
If implemented, do rural street signs comply with the manual on uniform traffic control device standards?	43	2	9
Does the governing body/committee have a records retention plan for all printed, electronic, and recorded records that is in accordance with state law and jurisdictional requirements?	51	3	0
Is the governing body/committee supportive of 911 as a cost-free call?	53	1	0
Does the emergency services communications systems coordinator maintain law enforcement, fire, and emergency medical service response boundaries for the PSAP service area?	53	1	0
Does the emergency services communications system coordinator ensure that dispatch protocols for emergency service notifications are documented and communicated with all law enforcement, fire, and emergency medical services who provide service within the jurisdiction of the governing body/committee?	53	1	0

Maintenance Frequency	Daily	Weekly	Monthly	Quarterly	Annually	Never
How frequently is address and mapping data updated in the emergency services communication system database and mapping system?	10	22	22	0	0	0
How frequently does the emergency services communications system coordinator perform a complete review of the emergency services communication system land line database?	0	0	8	4	38	4
How often does the PSAP document testing of equipment that protects critical equipment and systems from irregular power conditions under load? (PSAP Response Only)	0	0	14	5	2	0

Meets Expectations Work Remains

APPENDIX F

ESCS SURVEY COMMENTS – NOTES REGARDING PLANS FOR FUND BALANCES

State Radio Dispatched Counties

1. Emmons - Continued maintenance of the current 911 system to include monthly expenditures and replacement signs.
2. LaMoure – Waiting on SIRN and FirstNet projects.
3. McIntosh – Money will stay there for emergencies and such.
4. Hettinger – Continue to pay for staffing and related expenditures
5. Dickey – Maintain LMR Communication infrastructure and paging systems.
6. Griggs – We plan to put up more 911 street signs.
7. Sargent – Communication, Mapping, Local Reverse 911, Signing.
8. McKenzie – Use for equipment, maintenance and training.
9. Morton – Utilize for infrastructure maintenance and repairs to radio towers, paging and 911 mapping.
10. Grant – I am currently looking into projects that some of these funds can be used for.

Other Single & Multi-Jurisdictional PSAPs

1. Central Dakota Communications Center – Currently upgrading CAD, MCT, RMS & AVL systems. Need to upgrade radio console system. Planning for a new facility

2. Bottineau/Renville - $7500.00 was borrowed from General Fund to cover dispatcher portion of $31,000.00 to Bottineau County. As the New E-911 Coordinator I am still working to understand the past expenditures and budget processes.

3. Red River Regional Dispatch Center - You will see that the figures don't really add up, basically I included fee revenue above, I did not include the $358,662 that we transferred to the fund from the General Fund. Fee revenues are not sufficient to run the dispatch center!

4. Pembina – NG911 Vesta contract maintenance & Midco backup ETS, CAD software & other equipment maintenance, NG911 radio consoles, NG911 logging recorder, 911 retro-reflectivity street sighs, 911 dispatch computers.

5. Walsh – Maintain Program -- Less and Less funds available

6. Grand Forks - Radio console upgrades, SIRN infrastructure migration, upgrade telephone CPE, upgrade dispatch furniture

7. Richland – $402,000 Transferred from General Fund,$100,000.08 City of Wahpeton, $12,000 NDSCS

8. Lake Region - Currently saving funds for the State Telephone Network installation in August.

9. Stark - A minimum of $100,000 is kept in the equipment fund.

10. Mercer/Oliver - All extra fund is dedicated to equipment fund which will be used for NG 911 Installation and Upgrades.

11. Stutsman - Balance will go toward purchasing 9-1-1 equipment to become part of statewide system managed by ITD. Any remaining balance will be used to purchase new radio consoles that will interface with the SIRN project.

12. Traill/Steele - Next Gen 9-1-1

13. Ward - Extra funds are kept in a dedicated account for the repair, upgrade and/or replacement of mission critical communication equipment

14. Williams - Other city revenues, including basic safety funds, are used to cover shortages.

15. Sioux – Signs, wages and mapping

16. Mountrail - Normal yearly expenses and equipment contracts