

**Emergency Services Communication
in
North Dakota
A Status Report
2008**

**Prepared by the
Emergency Services Communications Coordinating
Committee**

**Pursuant to:
NDCC 57-40.6-12**

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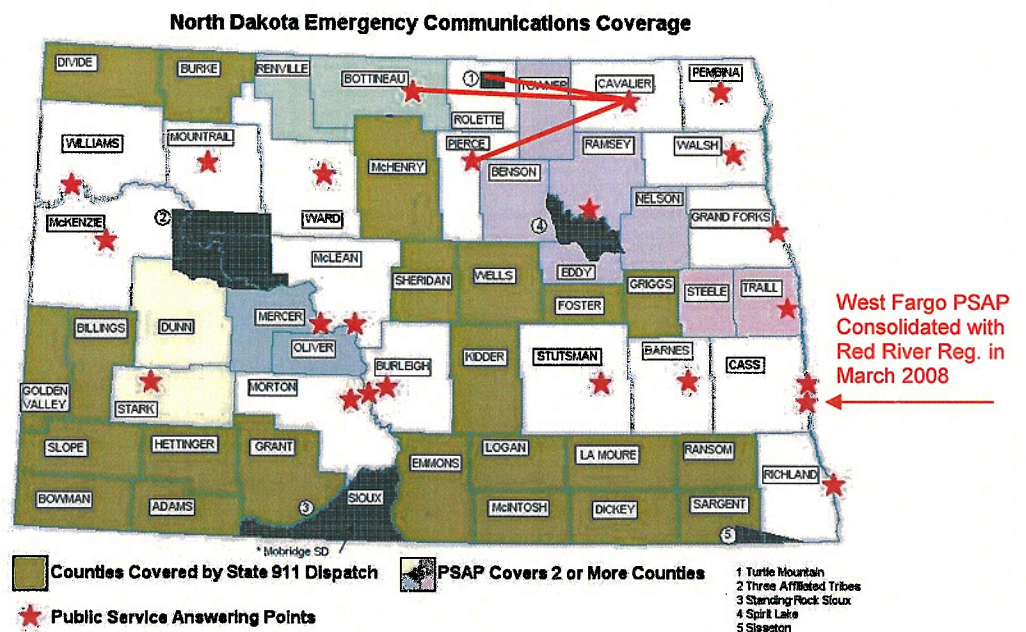
Purpose

North Dakota Century Code (57-40.6-12) establishes an “emergency services communications coordinating committee” and creates for the committee a reporting requirement concerning the compiled “income, expenditures, and status” information of 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 2008 report, and has been prepared for submittal as requested by the Legislative Council to the Energy Development and Transmission Committee.

Background

Emergency services communication is a complex and multi-faceted system of telephones, computers, and radios that connects every citizen of the State to law enforcement, fire departments, and emergency medical responders through 23 public safety answering points (PSAPs) in North Dakota and one in South Dakota. While from one perspective this network can be viewed as 24 separate systems, it is in reality a single system with 24 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 E-911. E-911 refers to the policies, procedures, and technologies that allow immediate connection to the appropriate PSAP from almost any phone in the State by dialing the digits 9-1-1; and the ultimate dispatch of the most appropriate and available emergency service. The integration of these policies, procedures, and technologies has been partially funded through a 911 fee levied on phone service in the State. Since 2007, 53 counties and 2 cities have imposed such fees.



Rolette County was the final geographic area of the State to establish such a fee. The County and the Bureau of Indian Affairs have negotiated a cooperative agreement and they are in the process of linking local dispatch workstations with the 911 Controller housed in Cavalier County that also serves Pierce, Bottineau and Renville Counties.

Obviously with 55 governing bodies imposing fees but only 24 PSAPs, there is considerable sharing of services. 22 of the counties are served by the PSAP operated by State Radio, five are jointly dispatched by the Lake Region Law Enforcement Center, and five other two-unit PSAPs exist. A complete listing is attached to this report as Appendix B. This Appendix also indicates the jurisdictions and approximate population served by each PSAP.

It is often of interest to compare North Dakota to neighboring states in the area of emergency services communication. The table contrasts the number of PSAPs operated in the surrounding states with their population. North Dakota is very close to the regional average for the number of persons served per PSAP, but has by far the fewest number of PSAPs of any State in the region.

Rank	State	Total Number of PSAP's	Population 2000 Census	Persons Served Per PSAP
1	North Dakota	23	642,200	27,922
2	South Dakota	45	754,844	16,774
3	Idaho	49	1,293,953	26,407
4	Wyoming	56	493,782	8,818
5	Montana	59	902,195	15,291
6	Minnesota	115	4,919,479	42,778
7	Iowa	123	2,926,324	23,791
8	Kansas	165	2,688,418	16,293

North Dakota law (NDCC 57-40.6) allows 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*". Additionally, through home rule powers, counties can impose such a fee within the limits of their home rule charter. Two cities have used their home rule authority for this purpose. Of the governing bodies that have imposed a fee through the statutory

provisions or their own home rule powers, all are currently levying a dollar. It is very important to note, as this report will show, Emergency Services Communications is much broader than simply E-911. 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, the location information, mapping software, faxes, and numerous other components make it possible for local emergency services to arrive and deliver services in the shortest time possible. This will become increasingly complex as our statewide system migrates to "Next Generation 911" (NG911) as termed by the federal government, which is discussed later in this report.

Methodology

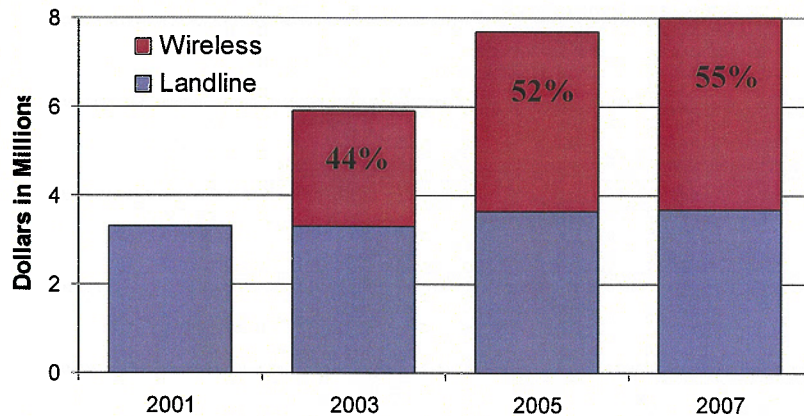
To facilitate the statutorily required reporting, each jurisdiction collecting the emergency services communications system (ESCS) fee was asked to complete a financial survey. Additionally, each PSAP was asked to complete an operational survey. Statewide data was also made available through the joint "Wireless/VoIP 911 Project" and a series of stakeholder meetings to begin planning for NG911.

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 2007 revenue and expenditure data was requested all jurisdictions. The actual 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 E) 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 2007 ESCS costs, as well as notes regarding unusual expenditures made in 2007 or anticipated for the future.

Status - Financial

The overall financial data indicates several significant changes since the last survey. For the first time on a statewide basis, the revenue received by local jurisdictions from landline communication companies has declined slightly. This, coupled with the continued increase in wireless revenues, moved the wireless percentage of the funds to 55% (from 52% two years ago). While all but several of the largest jurisdictions saw a decline in landline revenue since 2005, surprisingly several of the more rural counties saw a decrease in wireless revenue as well.

Emergency Services Communications System Fees Comparison of Landline vs. Wireline - Statewide



When analyzing the revenues and expenditures associated with emergency services communications, a greater consistency was possible for this report. 2007 Legislation directed the development of expenditure guidelines for costs considered appropriate for support with ESCS fee revenue. While the guidelines were not official until January 1, 2008, they were under discussion in draft for several months and facilitated a much clearer understanding of the various cost categories used in the survey.

While the largest portion of ESCS expenditures are paid from the special fund created by the statutory and home rule fees, many jurisdiction reports clearly indicate that there are significant costs of supporting their systems 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.

Appendix C contains the actual data gathered from the individual jurisdictional reports; however the following table and charts provide a statewide picture of the finances. The reports have been grouped by "State Radio" and "Non-State Radio" dispatched counties, and some grouping of expenditure categories has been done to make the charts more meaningful.

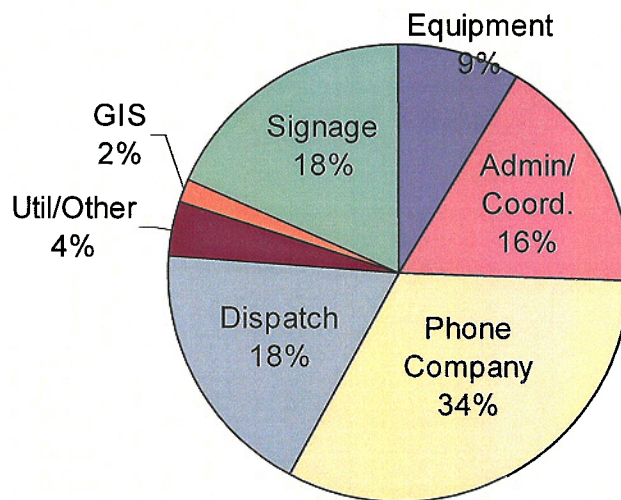
	State Radio Dispatched Jurisdictions	Non-State Radio Dispatched Jurisdictions
2007 Landline Revenue	\$ 429,367	\$ 3,326,509
2007 Wireless Revenue	\$ 404,826	\$ 4,043,142
Other Funds/Previous Reserves	\$ 169,664	\$ 5,148,516
2007 ESCS Expenditures	\$ 905,304	\$12,369,223

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

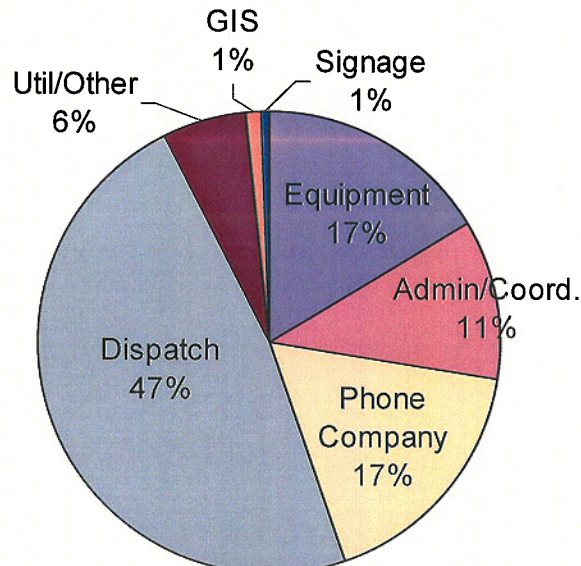
Some of the jurisdictions also included notes (Appendix E) regarding major purchases they are anticipating in 2006 or 2007. As an example, Grand Forks indicated they are planning a major PSAP relocation and upgrade, and Ward/Minot is involved in a \$1.3 million renovation and upgrade. Many of the State Radio dispatched counties spoke of maintaining reserves in anticipation of the expected dispatch fee increase, and all counties are looking to the network upgrade necessary for Next Generation 911 (discussed below). We believe that the data documents the prudent planning for strategic expenditures that was envisioned by the Legislature when this special revenue source was created.

In the next two charts, to facilitate comparison between the two types of jurisdictions, the category "Dispatch" includes direct salaries and benefits paid to staff as well as payments made to other jurisdictions for contract dispatch. The "Equipment" category

State Radio Dispatched Counties



Non-State Radio Dispatched Counties



category includes both the purchase of towers, dispatch consoles, computers, base stations, etc. as well as the ongoing maintenance of this equipment. The "Phone Company." category includes payments for voice and data trunks as well as the portion of the wireless project fees that are paid for data base services and selective routing on behalf of the wireless carriers. Probably the most notable difference between the two groups is the variation in the portion of funds used for 911 signage. As most non-state radio counties have completed their sign projects and are in a maintenance mode, their costs are significantly less. The fairly large cost of a countywide signage project makes it a much longer term project for some of the state radio dispatched counties with fairly small revenue streams.

Status – Operational

The financial information is better understood when the PSAP's supported by this revenue are profiled. The table below provides a picture of what the surveys have indicated. It is significant to realize that in a single year the public safety answering points of North Dakota manage 175,700 emergency calls, over half of which are now coming from cellular phones. This indicates another 6% shift from landline to wireless calls in the last two years.

	Statewide Total	Largest PSAP	Smallest PSAP
Dedicated 911 Trunks	86	10	2
Administrative Phone Lines	178	10	5
911 Calls per Month	14,642	4,320	83
Admin. Calls per Month	93,984	13,985	1,443
Total of all Calls per Month	108,626	17,920	1,576
Total 911 Calls per Year	175,700	47,217	990
Wireless as % of 911 Calls	55%	54%	17%
Active Dispatch Stations	67	7	3
Dispatchers – Full-Time	172	22	4
Dispatchers – Part-Time	24	0	2
LE Agencies Dispatched	113	9	4
Ambulances Dispatched	141	16	14
Fire Agencies Dispatched	<u>385</u>	<u>26</u>	<u>8</u>
Total Agencies Dispatched	639	51	26

For individual jurisdiction data see Appendix D

In the busiest PSAPs, they average a 911 call every 10 minutes – 24 hours a day, 7 days a week, 52 weeks a year. Statewide, these agencies handle an additional 93,984 administrative calls per month, or a combined total of over 1.3 Million total calls per year.

184 full-time and 26 part-time staff handle this volume of calls on the front line as call-takers and dispatchers, of which anywhere from 32 to 44 are on duty at any given time. Additionally, these front-line individuals are supported by 54 full-time and 18 part-time dispatch supervisors, computer/radio technicians, GIS specialists, trainers, and administrative staff.

These PSAPs coordinate and manage the activities of over 600 emergency responding agencies. It is interesting that some of the PSAP's serving the smallest population and the most rural areas have the largest number of agencies to dispatch. On the average, each PSAP must manage 27 responding agencies, and sometimes several of them are being dispatched simultaneously.

Statewide, on an annual basis, over 400,000 emergency response services of all types (fire, EMS, law enforcement) are dispatched by the 23 North Dakota public safety answering points. To dispatch these services, the individual PSAP's manage from 2 to 17 local radio frequencies, in addition to those of State Radio.

Issue – Wireless 911

The single most significant change in emergency services communications since its inception has been the development of cellular technology and its rapid adoption by the public. The ability to make emergency calls from virtually anywhere at anytime has dramatically improved the possibility of rapidly dispatching emergency services.

This development, however, posed challenges for local 911 jurisdictions as well as the cellular companies themselves. While the federal government (FCC) has mandated that cellular companies implement “wireless 911 services”, they made the requirement contingent upon local and state authorities, requesting the services, being capable of receiving the data, and the existence of a “cost-recovery” mechanism. The FCC also reserved the “technology decision” to each cellular company. In North Dakota, every company has chosen to use a “GPS solution” which relies on GPS-enabled cell phones to transmit location information derived from GPS satellites.

The 2001 Legislature responded by enacting legislation allowing governing bodies that have imposed a 911 fee on landline

communication service to extend that fee to wireless (cellular) service. Every 911 jurisdiction did this in 2001.

The 911 authorities, through a joint powers agreement, designated a project coordinator and made a statewide request for “wireless 911 services” from the eight cellular service providers operating in the State. Initially dedicating 50-cents per wireless device per month to “cost-recovery”, that amount was lowered to 38-cents after a statewide, 5-year, \$7 million contract was negotiated for payments for cellular company costs, and the initial “non-recurring” costs were paid.

It was originally projected that approximately 190,000 cell phones would be routed through approximately 350 cell sites throughout the state. As the project has progressed and the popularity of cellular phones continues to grow, this number has grown to more than 400,000 cell phones, routed through over 660 cell sites. This increase of 310 tower sites and over 210,000 cell phones has resulted in increasing local revenues as well as wireless 911 implementation costs. Currently, local government is paying phone companies approximately \$150,000 per month for the services supporting wireless 911.

As of May 2005, every North Dakota PSAP had deployed the necessary hardware and/or software upgrades in order to receive the wireless location (latitude/longitude) information, and every cellular company had implemented “wireless 911 services” statewide. North Dakota became the sixth (6th) state in the nation to achieve 100% statewide implementation. (See Bismarck Tribune Article – Appendix F)

New towers continue to be built – requiring “911 testing” upon completion, but at this time, any 911 call initiated by a cell phone deployed in the last three years will be immediately routed to the appropriate PSAP and that PSAP will received the call with a call-back number and tower location (Phase 1) as well as the latitude and longitude of the calling device (Phase 2). The survey data indicates this is becoming more and more important as cell phones begin to replace traditional landline service, and the percentage of 911 calls from these devices increase.

The elimination of “analog” cellular service by every provider in North Dakota is changing system as well. Analog cell sites are rapidly being taken “off-line”, while additional digital sites are being constructed.

Issue–Pre-paid Wireless

Citing challenges to properly collecting and remitting the ESCS fee, some telecommunication companies interpreted North Dakota law to exempt “pre-paid wireless” phone service from the ESCS fee. This has created a situation of unequal service costs within the communication industry, and reduced local government revenues as landlines are removed in favor of wireless service.

The 911 jurisdictions brought this issue to the attention of the 2005 Legislature; although, a clarification to the statute was not adopted. The 2005 performance audit of the ESCS fees however identified this situation as a problem and recommended that legislation be considered to assess the fee on this particular type of wireless service – leveling the playing field for all communication providers. This Legislative change was made in 2007.

While many wireless providers indicate that fees on pre-paid service are now being collected in North Dakota, the largest provider in the nation, TracFone, continues to refuse to make payments to States and local jurisdictions throughout the country. Lawsuits have been filed in other States and North Dakota local governments are following this litigation carefully.

Issue – VoIP

Like “wireless” five years ago, Voice over Internet Protocol or VoIP is a rapidly growing new technology that poses significant challenges for local 911 jurisdictions. This technology allows individuals to use almost any existing personal computer with an Internet connection to place voice calls to anywhere in the world.

The pricing of this service has made it quite attractive for some businesses and it is also becoming increasingly popular with individuals as well. As the customer count increases, the cost of service is expected to decrease and the rate of growth of VoIP is therefore projected to climb.

Since this service can be activated anywhere and later moved almost anywhere else that the customer desires, a PSAP can find 911 calls from VoIP subscribers much more difficult to handle – if they are received at all.

The FCC has required that VoIP service providers (VSPs) immediately route all 911 calls to the proper PSAP and that appropriate location information be provided. In North Dakota, the governing board of the joint powers agreement for wireless directed their wireless 911 Project Manager to facilitate VoIP 911 implementation by the VSPs. This prompted an agreement with

one of the largest national VSPs, Vonage, Inc., to begin deployment in North Dakota.

Vonage is working with the same database providers that route wireless calls to North Dakota, (as are most other VSPs). Thus far testing of VoIP-911 has been very successful throughout the State.

As with pre-paid wireless, State law was considered a bit unclear regarding the collection of the ESCS fee on behalf of local jurisdictions. The State Performance Audit suggested a statutory change to ensure fair collection and the 2007 Legislature implemented that change.

Vonage, is collecting and remitting the ESCS fee on behalf of the 36 jurisdictions in which they have customers. Unfortunately, North Dakota has no reporting requirement for VSPs; therefore it is currently not possible to determine how many of them operate in the State. One website suggests there may be as many as 1,700 operating in the world. Ensuring that all VSPs with customers in North Dakota are collecting the fee appropriately, and even notifying them of this obligation will be an ongoing challenge.

Issue – Next Generation 911

Text, data, images, and video are increasingly common in personal communications and are critical to future transportation safety and mobility advances. Additionally, crash notification systems in commercial as well as personal vehicles are providing ever larger volumes of critical emergency data. However, the 9-1-1 system of the 1970s was created to transmit voice media only and was not designed to handle the challenges of multimedia communication in a wireless, mobile society.

The nationwide, cumulative efforts to overhaul the system to meet these advancing needs have been termed “Next Generation 911” for NG911. From the federal level, the US Department of Transportation has been given a lead role, and they are working cooperatively with the National Emergency Number Association (NENA) to develop a migration plan. NENA has contracted with the consulting firm L.R. Kimball to assist in plan design.

It is generally recognized that this transition will require the addition of a broadband Internet Protocol (IP) based network that will gradually replace the existing voice-only network.

PSAP equipment replacement will ultimately be necessary, very likely with IP-based equipment that will reside on this new broadband network and serve multiple PSAPs.

Again, the North Dakota jurisdictions have leveraged their joint powers agreement to address this issue cooperatively. The governing board has authorized a consulting contract to begin North Dakota's system assessment and initial network design.

North Dakota local government will be using the same firm under contract with NENA, as well as doing state plans for Minnesota and Montana – L.R. Kimball. The scope of work calls for completion by December 2008. The results of this study will form the foundation for statewide deployment of NG911. The study will be shared with local and state government officials, as a transition of this magnitude will require the cooperation of all levels of government to be a success.

Issue – Mapping

The incorporation of mapping software in dispatch centers has been an on-going challenge. While the technology has advanced to make the integration of 911 call data and mapping software possible, the costs of the software, hardware, and base map development have made it a long-term investment for many PSAPs.

As we move from E-911 to NG911, mapping becomes much more critical. The new devices sending text, video, crash data, etc. to the PSAPs will use latitude and longitude as locatable addresses that will require very accurate mapping and GIS processes. Both traditional addressing and geocoding will require much greater accuracy, and the nature of NG911 will demand seamless consistence from jurisdiction to jurisdiction.

This has prompted discussions among public safety agencies of the need for a statewide base map. This concept would leverage the mapping already completed by State and local government, "stitching" it together where sufficient accuracy can be proven. For the unmapped areas of the State and those with insufficient accuracy, a statewide project is currently being scoped.

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 and 2007.

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 three members, one appointed by the North Dakota 911 association, one appointed by the North Dakota association of counties, and one appointed by the adjutant general to represent the division of state radio.
2. The committee shall:
 - a. Recommend to the legislative council 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; and
 - d. Periodically evaluate chapter 57-40.6 and recommend changes to the legislative council.
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

As directed by statute, the three identified entities have selected individuals to serve on the Public Safety Answering Points Committee for the 2005-2007 Interim. They are:

Appointing Authority

Appointee

North Dakota 911 Association

Jerry Bergquist, Stutsman County 911 Coordinator

North Dakota Assoc. of Counties

Terry Traynor, NDACo Assistant Director

Adjutant General

Russ Timmreck, Director of State Radio

Public Safety Answering Points in North Dakota

APPENDIX B

<u>PSAP Location</u>	<u>Counties Served</u>	<u>Service Area Notes *</u>	<u>Census Estimate*</u>
Fargo	Cass, Clay MN	Includes Moorhead - Now includes West Fargo	~200,000
Bismarck	Burleigh	Includes portion of McLean Co. (Wilton Area)	73,818
Grand Forks	Grand Forks		65,940
State Radio Bismarck	Adams, Billings, Bowman, Burke, Dickey, Divide, Emmons, Foster, Golden Valley, Grant, Griggs, Hettinger, Kidder, LaMoure, Logan, McHenry, McIntosh, Ransom, Sargent, Sheridan, Slope, & Wells		64,534
Minot	Ward		55,767
Rolla	Rolette	Single PSAP Controller - Distributed Dispatching in four locations	13,864
Bottineau	Bottineau		9,163
Langdon	Renville		4,330
Rugby	Cavalier		4,291
Deville Lake	Pierce		
Deville Lake	Ramsey, Eddy, Towner, Benson & Nelson		27,022
Dickinson	Stark & Dunn		25,515
Mandan	Morton	Includes fringe areas of Stark, Dunn, Mercer, Oliver & Grant Counties	25,528
Jamestown	Stutsman		20,835
Williams	Williams		19,282
Wahpeton	Richland	Portions of Sargent & Ransom Co. ND and Wilken & Roberts Co. SD	17,340
West Fargo	City Only	Combined into Red River Regional March 2008	14,940
Grafton	Walsh		11,607
Valley City	Barnes		11,075
Stanton	Mercer & Oliver		10,177
Hillsboro	Traill & Steele		10,328
Washburn	McLean		8,604
Cavalier	Pembina		8,038
Stanley	Mountrail		6,513
Watford City	McKenzie		5,549
Mobridge, SD	Sioux	Sioux County is dispatched out of South Dakota	Unknown

* Census figures do not include small portions of adjoining counties

2007 ESCS Revenues, Expenditures, & Reserves
APPENDIX C

	a)	b)	c)	d)	e)	f)
State Radio Counties	Landline Revenue	Wireless Revenue	Total Fee Revenue	Other Rev. or Reserves	Total Expenditures	Reserves Dec. 31, 2007
Adams County	16,583	15,542	32,125	-	28,000	62,315
Billings County	6,085	5,043	11,128	3,433	14,561	41,492
Bowman/Slope	29,858	23,508	53,366	23,965	77,331	40,222
Burke County	16,551	14,644	31,195	-	21,880	91,908
Dickey County	32,791	34,184	66,975	-	65,408	106,873
Divide County	16,294	11,379	27,673	-	21,391	43,374
Emmons County	23,181	19,567	42,748	4,235	46,983	21,528
Foster County	24,752	23,220	47,972	-	33,780	202,853
Golden Valley	11,719	9,633	21,351	-	17,279	45,992
Grant County	14,448	12,257	26,706	-	24,530	44,735
Griggs County	16,423	16,770	33,193	-	26,173	45,871
Hettinger County	16,148	12,589	28,737	1,375	30,111	21,352
Kidder County	16,118	15,151	31,268	69,675	100,943	10,343
LaMoure County	26,859	25,986	52,844	731	53,576	26,629
Logan County	12,723	13,511	26,234	51,408	77,642	14,092
McHenry County	31,739	51,690	83,429	-	59,029	230,504
McIntosh County	20,439	11,192	31,631	-	23,947	67,042
Ransom County	32,718	36,651	69,369	-	63,906	96,947
Sargent County	23,739	27,131	50,870	9,925	60,795	64,366
Sheridan County	10,369	7,543	17,912	4,917	22,829	9,921
Wells County	29,831	17,636	47,468	-	35,209	75,488
SUBTOTAL	429,367	404,826	834,193	169,664	905,304	1,363,846

Other Jurisdictions	Landline Revenue	Wireless Revenue	Total Fee Revenue	Other Rev. or Reserves	Total Expenditures	Reserves Dec. 31, 2007
Barnes County	41,591	84,250	125,841	-	111,778	105,126
Bismarck/Burleigh	430,608	579,545	1,010,153	612,150	1,622,303	659,404
Bottineau/Renville	66,015	75,166	141,180	134,759	275,939	312,434
Cass/City of Fargo	733,698	946,803	1,680,502	201,838	1,882,340	232,694
City of West Fargo	103,801	123,214	227,015	243,918	470,933	517,815
Cavalier County	29,886	29,720	59,607	97,781	157,388	-
Grand Forks County	313,473	464,299	777,772	1,663,264	2,441,036	1,117,497
Lake Region E-911	158,089	184,607	342,696	20,902	363,598	27,786
McKenzie County	35,961	27,031	62,992	41,430	104,422	197,782
McLean County	53,461	54,463	107,925	126,353	234,277	41,484
Mercer/Oliver E911	53,472	55,449	108,921	469,507	578,428	53,094
Morton County	129,406	177,584	306,991	158,461	465,452	750,516
Mountrail County	42,793	45,524	88,317	-	66,486	164,562
Pembina County	50,092	60,312	110,404	-	107,397	74,991
Pierce County	26,684	28,440	55,124	4,235	59,359	75,545
Richland County	96,260	105,932	202,192	403,373	605,565	1,834
Rolette County	61,666	68,508	130,175	-	27,403	109,123
Sioux County	8,776	10,194	18,970	-	12,941	24,563
Stark/Dunn	158,225	158,225	316,450	445,000	761,450	260,790
Steele/Trail	111,232	65,873	177,106	76,369	253,475	146,215
Stutsman County	120,804	122,349	243,153	162,105	405,258	202,854
Walsh County	67,630	81,317	148,947	284,693	433,640	205,979
Ward/Minot	370,214	375,196	745,411	2,378	747,789	1,999,377
Williams County	62,669	119,141	181,810	-	180,566	99,021
SUBTOTAL	3,326,509	4,043,142	7,369,652	5,148,516	12,369,223	7,380,487
TOTAL	3,755,876	4,447,969	8,203,845	5,318,180	13,274,527	8,744,333

2008 PSAP Operational Status Survey

PSAP	Agencies Dispatched			Dispatch Stations	911 Trunks	Admin Lines	911 Calls	Percent Wireless	Admin. Calls	Full-Time Staff			Part-Time Staff			Maximum Staffing		
	LE	Fire	EMS							Dispatcher	Supervisor	Other	Dispatch	Supervisor	Other	Shifts	Dispatcher	Supervisor
Bismarck/Burleigh	3	7	8	5	5	10	21,433	39%	46,025	16	2	3				12/8 Hour	3	
Bottineau/Renville	7	17	10	2	2	2	1,519	40%	18,583	3			2		1	8 Hour	1	
Cavalier County	1	10	3	2	2	3	953	21%	16,317	4		1	1			12/8 Hour	1	1
Pierce County	2	9	5	2	2	9	267	56%	6,805	4			2			12 Hour	1	
Rolette County	NOT OPERATIONAL IN CY2007																	
Grand Forks	7	17	3	4	3	18	19,191	63%	115,237	10	2	5				10 Hour	2	1
Lake Region 911	7	29	16	3	5	7	4,114	51%	9,582	8		2	1			12 Hour	2	
Mckenzie County	4	14	8	3	2	5	990	17%	18,310	4			4			12/8 Hour	2	
McLean County	1	9	7	3	2	3	1,615	48%	17,228	6		2				8 Hour	1	
Mercer/Oliver E911	6	7	3	2	2	6	1,584	40%	19,213	10	1					8 Hour	2	1
Minot Central	5	17	10	3	4	13	11,896	59%	107,017	12		1	1	3		8 Hour	2	1
Morton/Mandan	2	7	6	3	3	22	14,379	60%	165,359	12	2				2	12/8 Hour	3	1
Mountrail County	3	11	8	3	8	10	3,563	36%	24,095	5		2				8 Hour	1	
NDDES/State Radio	50+	100+	50+	8	12	5	16,800	45%	60,000	24	4	5				12 Hour	5	1
Pembina County	5	10	9	3	2	3	1,187	40%	15,698	6					3	12/8 Hour	2	
Red River Regional	9	27	16	7	10	10	51,842	62%	178,517	22	6	3				10 Hour	5	1
Richland County	5	16	15	4	6	6	2,259	91%	15,222	7	2	2				12/8 Hour	2	1
Stark/Dunn	6	9	5	6	3	15	7,302	66%	51,298	10	1	10				12 Hour	2	
Stutsman County	2	14	8	3	3	11	4,193	57%	71,438	2		2	7	3		8 Hour	1	1
Valley City/Barnes	2	15	15	3	2	6	2,975	66%	68,255	6	2					12/8 Hour	1	
Walsh County	2	11	9	3	3	7	3,581	67%	41,288	5	1		1		2	8 Hour	2	
Williston/Williams	3	8	6	2	3	5	5,697	36%	22,866	6	1					10 Hour	1	
Trall/Steele	5	13	8	2	2	6	1,699	60%	21,000	4			1		1		2	
	113	385	141	76	86	182	179,039	55%	1,107,451	186	24	38	20	6	9		44	9

Sum services dispatched by multiple PSAPs

PSAP	Controller	Mapping	CAC	Radio Console	Instant Recall Function	Logging Recorder	Logging Recorder Channel Capacity	Forecasting Format	Alarm Clock	Public Notifier	Landing AUI	
Bismarck/Burleigh	FlintCML	GeoTechCap	Swingard HTE	McAfee	FlintCML	NICE	64	Online	McAfee	Dialing (DCC)	Intrac	
Bottineau/Renville	FlintCML	Siguel		McAfee	CML	Eventide	8	EMD			Intrac/Local	
Cavalier County	FlintCML	Siguel		Flint	F/D Sentinel	RACAL	15	EMD	McAfee		Local	
Pierce County	FlintCML	Siguel		McAfee	Unired	Unired					Local	
Rolette	NOT OPERATIONAL IN CY2007											
Grand Forks	Fesfror	AvanGlobe	CSPCC	McAfee	Eventide	Eventide	40	EMD Drive		Cignavabdh	Intrac	
Lake Region 911	Zetron	Siguel		Zetron	Zetron	ComLog	24	Digital Oplica	Erancy	7/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000		
McKenzie County	Procon	Mappr		Zetron	Zetron	Eventide	15	EMD			Intrac	
McLean County	Zetron	Siguel		Zetron	Zetron	Eventide	15	EMD			Local	
Mercer/Oliver E911	Procon	Siguel		Zetron	Zetron	Ats	15	CD			Local	
Minot Central	Teladyne	Bullbary	Nav W/rdc	McAfee	Encyclopedia	Ats	43	EMD	Spectro	Radio Nctfy	Local	
Morton/Mandan	Fesfror	Bullbary	Arctonx	McAfee	Maxxola	Eventide	43	EMD	Fesfror		Intrac	
Mountrail County	Zetron	Bullbary		McAfee	Zetron	Lark	24	EMD		Cignavabdh	Intrac	
NDDES/State Radio	Zetron	Siguel		McAfee	Zetron	Eventide					Intrac/Local	
Pembina County	Zetron	Bullbary		McAfee	Eventide	Eventide	15	Tape	McAfee	Cignavabdh	Intrac	
Red River Regional	Fesfror	Posibon	Bocing	McAfee	NICE	NICE	52	CAT	Spectro	Code Fast	Intrac	
Richland County	FlintCML	Bullbary	CS	McAfee	Highground	Highground	35	CD	Spectro	Erancy 911	Local	
Stark/Dunn	Zetron	Bullbary	Arctonx	Zetron	Zetron	Eventide	32	CAT	Spectro	Cignavabdh	Intrac	
Stutsman County	Zetron	Bullbary	CS	McAfee	Zetron	Eventide	32	EMD		Cignavabdh	Intrac	
Valley City/Barnes	Fesfror	Bullbary		McAfee	Fesfror	Accibeg	15	EMD		Code Fast	Intrac	
Walsh County	Fesfror	Bullbary		McAfee	Ats	Ats	24	EMD/HRAM		Arcton	Intrac	
Williston/Williams	Fesfror	Power Map		McAfee	Ats	Ats	15	Digital		Cignavabdh	Intrac	
Trall/Steele	Zetron	Siguel									Local	

Comments Regarding Fund Balances

Bowman/Slope - Possible equipment expenditures to solve paging problems. Cover proposed dispatch fees when announced by State Radio

Emmons County - We would like to implement a reverse 911 system.

Grant County - The fund balance will be used to purchase and erect signs also replacement of damaged sign.

Griggs County - We feel now that we have the funds to start and complete our Co. road signage project. Increases in dispatch services and some trunking changes.

Hettinger County - Have approximately 1/2 of the county to sign Township roads for 911, this is to be completed in the spring of 2008.

Kidder County - In 2007 signs, posts and hardware were purchased for county roads. Townships were also allowed to purchase signs, etc. for their townships, but did reimburse the E911 fund for their purchases.

Logan County - Signage maintenance, mapping expenses, siren replacement/construction, office equipment, salary, truck charges, data updates, tower lease, 911 contracts, supplies, software and license fees, travel and training.

McIntosh County - This summer, we will be putting 911 signs through our entire county. This cost will be around \$55,000.00.

Sheridan County - Process of signing rural roads. Have been doing this in annual increments.

Bismarck/Burleigh - NG9-1-1, AVL, HS Mobile Data, Radio infrastructure, CAD replace, CPE replace...capital expenditures.

Bottineau County - Funds set aside for NG911 and Reverse 911 projects. We will contracting our controller switch and other services this year and expect annual income/expense to be close to breakeven.

Renville County - Renville County has joint E911 operations center with Bottineau County. A signed contract states that all equipment & repairs are shared 25%cost-Renville County; 75%-Bottineau County. We are presently in the process of upgrading equipment and am looking at an alert notification system.

Cass County - Well, as you can see from the "other income" we are heavily funding 911 from our general property taxes. So, the fund balance at the end of 2007 will just be a few dollars less that we will have to fund with property tax dollars in 2008.

City of Fargo - All fund balance is dedicated to future capital outlay needs for equipment upgrades and software purchases for dispatch and records management.

City of West Fargo - Fund will eventually go to Red River Regional Dispatch Center as per contract

Grand Forks County - We are in the Process of moving forward with the PSAP relocation project and the monies carried over are intended for that project.

Lake Region E-911 - The current fund balance will be used up plus more as our 2008 budget shows a deficit of 33,089.90.

McKenzie County - Purchase new 911 controller in near future. we needed to replace recorder this January (2008)

McLean County - We will be doing an equipment upgrade in 2008 and 2009 as we move into our new law enforcement center.

Mercer/Oliver E911 - Putting \$20,000 per year aside for equipment. Our present equipment is 10 years old, we need \$100,000 to replace.

Morton County - The fund balance is being kept large due to plans on a LEC addition for a new dispatch center. This Money will be spent on equipment.

Mountrail County - yearly salaries, contract expenses, equipment repair and/or replacement, 911 road signs and installation

Pembina County - Upgrade software, computer upgrades, communications improvement, maintenance of equipment, plan for next generation and/or other technological upgrade needs.

Pierce County - Carryover balance- One dispatcher's wages and benefits comes out of the Wireless revenue.

Rolette County - We are in the beginning stages of implementing Rolette County's system. We have ordered equipment and expect to begin the install of our system.

Stark/Dunn - Computer Aided Dispatch (CAD) Install & Implementation, Time Synchronization, AVL (Auto Vehicle Location), Replace PSAP Logger, Add 9-1-1 trunk(s), Add 1-2 Dispatch consoles, Update Radio system, Establish Alternate Dispatch location and Equip., Upgrade Mapping capabilities, Expand ENS (Emerg. Notification system) & Emerg. Warning (sirens) system

Steele County - Traill County is contracted to perform dispatch duties for Steele County.

Stutsman County - \$80,000.00 of these funds have been budgeted to complete the digital mapping project for the City of Jamestown. The remaining funds have been set aside to pay for technology upgrades to the 9-1-1 system and other associated PSAP systems in future budget years.

Walsh County - Fund balance is for future equipment upgrades -- current need for new Recorder -- Future Next Gen equipment upgrades. Plan to cover mover dispatcher costs in future budgets then currently covered.

Ward/Minot - A complete upgrade/ renovation of Minot Central Dispatch is planned for 2008. The estimated cost is \$1.1 million. In addition to the income percentages allocated to the wireless project and to PSAP costs, estimated fund allocations for the upcoming year total \$236,306 (depreciation, trunk/phone, and tower charges).

Williams County - Williams County owns four tower and building sites, one tower site where we lease the building and land and we lease space on another tower. Fund balance is set aside for the replacement, repair and maintenance of the towers/repeaters, and communication equipment in the county.

State leading the pack in 911-cell technology

By ZACHARY FRANZ

Bismarck Tribune 06-24-2006: news-local

North Dakota is ahead of the curve in its ability to locate people who use cell phones to call 911, according to a new report by the Government Accountability Office.

The report, released earlier this month, detailed each state's ability to locate callers at two levels of technology - Phase I and Phase II. At the Phase I level, dispatchers can tell what cellular service tower the caller is using. In urban areas, that might narrow the location down to a few square blocks, but in rural areas a tower might serve an entire county. Phase II technology gives the call's origin within a few hundred yards and often comes within a few dozen yards.

About half the states have widespread Phase I technology, but only 10 have full Phase II technology. North Dakota is one of those 10 and one of just three states west of the Mississippi River that has Phase II capabilities at every site to which emergency calls are routed.

"It's been great how it has come together," said Russ Lindblom, wireless 911 project manager for the North Dakota Association of Counties. "The call centers were good about getting updated, and (the cell phone companies) were very good about working with us."

The technology has the potential to save lives. For years, 911 call centers have had the ability to automatically find the origin of calls on land lines, but, until recently, they had to rely on the caller to give them an address if the call came by cell phone. If the caller didn't know exactly where he was, gave poor directions, or was physically unable to communicate, dispatchers didn't know where to send help. One such case in Morton County involved a woman who had been stung by bees, to which she was highly allergic. She called 911 on her cell phone, but her throat had swollen so badly that she could hardly speak. By the time paramedics found her, it was too late.

There are now more cell phones than land lines in North Dakota, and most 911 calls come from cell phones, Lindblom said. So far, the upgrade has cost about \$4 million, not including the costs incurred by individual call centers, Lindblom said. Most of that money comes from the \$1 per month fee tacked on to cell phone bills. With continued revisions and improvements to the system, the final cost is likely to exceed the original budget of \$7 million, Lindblom said. Still, he considers it a small price to pay.

"It aids in saving lives and property," he said. "If you're in a situation where responders can get there faster, how can you put a price on that?"

Since Phase II was introduced early last year, Burleigh County hasn't had a situation in which it made a clear life-or-death difference, though it has saved valuable time in some less-critical situations, said county communications manager Mike Dannenfelzer. It has made an impact elsewhere in the state, too.

Jason Schatzke was snowmobiling outside Fargo in January 2005 with several friends. It was the morning after a big snowfall, and they couldn't resist doing some exploring, Schatzke said. "In hindsight, we should have stuck to the trails, but it was such a beautiful day," he said.

One of his friends hit the shoulder of a road that had been hidden by snow and was launched into the air. He landed so hard it crushed vertebrae in his spine.

Schatzke called 911 on his cell phone, but he didn't know his exact location. Fortunately, the call center had Phase II capabilities, and the dispatcher was able to locate the group and get an ambulance there quickly.

Phase II technology does have limitations, though. The system can operate in two ways: using the global positioning system to locate the digital chip in a caller's phone, or by triangulating their position with multiple cell phone towers. In North Dakota, the GPS system is the more commonly used method, Lindblom said. GPS can work in areas with only one cell tower and is very precise, but it can take a couple of minutes for satellites to locate the caller, and it might not work at all in buildings or during cloudy weather. Also, older cell phones that operate on the analog system don't have the digital chip required for the system to work.

North Dakota is unusual because the technology is especially lacking in most states with low population densities. In Montana, for example, only 2 percent of counties have Phase II, and in South Dakota 6 percent of counties have it, according to the report.

"Everybody worked together, and we just did it," Lindblom said. "It's been a fun job because it's important."