

STUDY OF ISSUES RELATED TO THE STATE RADIO PLAN - BACKGROUND MEMORANDUM

STUDY OVERVIEW

Section 3 (attached as an [appendix](#)) of 2013 Senate Bill No. 2353 provides for a Legislative Management study of the issues related to the development of the current State Radio communications plan, its costs and components, and evolving technologies that will better serve the public. The study is to consider input from city, county, and state public safety entities, including members represented on the Statewide Interoperability Executive Committee. The responsibility for this study was assigned to the Information Technology Committee.

BACKGROUND INFORMATION

State Radio

State Radio is established as a division of the Department of Emergency Services under the administration of the Adjutant General in accordance with North Dakota Century Code Section 37-17.1-02.1. The Director of State Radio is responsible for purchasing equipment to establish, maintain, and operate a radio broadcasting system to enable seamless interoperable communications on local, state, and federal levels in accordance with Chapter 37-17.3. The primary types of services provided by State Radio are 911 services and public safety communications services.

North Dakota provides 911 services to the public through a network of 23 public safety answering points (PSAPs). When a person places a wireless or landline 911 call, the call is directed to the nearest PSAP. Personnel at the PSAP receive the call and communicate with local emergency responders to dispatch assistance. Each PSAP operates independently, and State Radio manages one of the PSAPs to provide 911 services for 24 counties.

State Radio serves public safety personnel through the State Radio broadcast system. The broadcast system allows law enforcement to search databases and allows personnel from State Radio to send information to law enforcement. Since each PSAP operates different radio frequencies to communicate with local emergency responders, the statewide broadcast system provides a common radio frequency for PSAPs to communicate with each other. The broadcast system also allows federal, state, and local public safety personnel to communicate within the state using a common radio frequency. Some examples of specific public safety communications services provided by State Radio include AMBER Alert, National Crime Information Center (NCIC), National Law Enforcement Telecommunications System (NLETS), and National Warning System (NAWAS).

History of 911 Services

The history of 911 services in the United States dates back to the 1960s, but recent advances in technology have resulted in more rapid changes for 911 services in the past 15 years. A brief history of 911 services is shown in the table below.

Date	Event
1960s	The federal government recommended the use of a single number for police departments to provide rapid response to emergency situations.
1972	The Federal Communications Commission (FCC) recommended the implementation of 911 nationwide.
1980s	The first Enhanced 911 (E911) systems were tested on landline telephones to provide the caller's telephone number to the dispatcher.
1985	The Legislative Assembly authorized an emergency services communications system and authorized a monthly fee per telephone line.
1999	The FCC mandated all cellular phone companies provide Phase 1 and Phase 2 wireless 911 service, which are part of E911. Phase 1 wireless 911 service provides the caller's phone number and cell phone tower location to the dispatcher. Phase 2 wireless 911 service provides the caller's latitude and longitude through the phone's global positioning system (GPS) or through wireless signal triangulation.
2000	The National Emergency Number Association (NENA) identifies the need for a more robust 911 system to replace E911.
2001	The Legislative Assembly authorized Phase 1 and Phase 2 wireless 911 services.
2003	The United States Department of Transportation and NENA began developing the requirements for Next Generation 911 (NG911). NG911 is a digital system that can provide voice and data communications between callers, dispatchers, and emergency responders.
2005	North Dakota became the sixth state in the country to have both Phase 1 and Phase 2 wireless 911 service implemented on a statewide basis.
2007	The Legislative Assembly extended the emergency services communications fee to prepaid wireless, Voice over Internet Protocol (VoIP), and any other service interconnected to a PSAP.
2009	The Legislative Assembly directed the Emergency Services Communications Coordinating Committee (ESC3) to coordinate planning for NG911.
2013	The FCC presented a report to Congress on the legal and regulatory framework for NG911 services.

State Radio Broadcasting System Infrastructure

The State Radio broadcast system is comprised of the dispatch center located in Bismarck and remote tower locations across the state. The original broadcast equipment transmitted radio frequencies using analog signals. In 2004 the Department of Emergency Services entered an \$8.1 million lease purchase agreement with Motorola for the conversion of the Division of State Radio tower infrastructure and base equipment from analog to digital. The final lease payment was completed during the 2011-13 biennium.

During the 2007-08 interim, State Radio identified coverage gaps in the broadcast system, and the 2009 Legislative Assembly provided \$500,000 for a study of NG911 (\$100,000), alternatives to constructing new State Radio towers (\$75,000), and implementing a new tower site near Wales (\$325,000). The 2011 Legislative Assembly provided \$1,500,000 for the construction of new towers to address some of the coverage gaps, and the 2013 Legislative Assembly provided \$1,175,000 for more radio towers.

The federal Middle Class Relief and Job Creation Act of 2012 created the First Responder Network Authority (FirstNet) as an independent authority within the United States Department of Commerce National Telecommunications and Information Administration to provide emergency responders with the first high-speed, nationwide network dedicated to public safety. Upon completion of the switch from analog to digital television, the FCC established portions of the 700 megahertz (MHz) radio frequency to establish a nationwide, interoperable wireless broadband communications network for state, local, and tribal public safety personnel. The 700 MHz signal can be broadcast over large geographic areas and can provide enhanced capabilities for smartphones, tablets, laptops, and other mobile devices. FirstNet is currently seeking input from communications device manufacturers to identify cost-effective solutions for a high-speed network, including equipment capable of broadcasting and receiving 700 MHz signals. Although the network has not yet been established, this development reflects the future of public safety communications.

Interoperable Communications Plan

In 2007 the United States Department of Homeland Security Office of Emergency Communications required each state to develop a statewide communication interoperability plan (SCIP). The plans provide information on operating procedures, technology, training, and funding for interoperable emergency communications within the state. Testimony presented to the 2007-08 Public Safety Committee indicated a standardized statewide radio system would have:

- Integrated computer-aided dispatch systems, mapping systems, infrastructure, and frequencies.
- Integrated standard policies and protocols.
- Redundancy from any area in the state for statewide communications.
- Statewide standards for the hiring, training, and certification of communications specialists anywhere in North Dakota.

Project 25 (P25) is a set of industry standards for digital two-way wireless communications devices designed to enhance interoperable emergency communications. According to testimony presented to the 2013 Legislative Assembly, P25-compliant technology has been deployed on a statewide basis in 36 states, including Montana, Wyoming, South Dakota, and Minnesota. The deployment of P25-compliant equipment corresponds to the implementation of a state's SCIP, but the technology has not yet been deployed on a statewide basis in North Dakota.

2013 Legislative Action

As introduced, Section 1 of 2013 Senate Bill No. 2353 provided a statewide integrated radio communications system will more effectively serve the people of North Dakota. A Statewide Interoperability Board was established in Section 2 to support the deployment of a statewide integrated radio communications system. Section 3 provided for a Legislative Management study of the State Radio communications plan and related issues. Section 4 provided funding of \$5 million to the Statewide Interoperability Board to purchase equipment related to the statewide integrated radio communications system. The conference committee amendment to Senate Bill No. 2353 changed the name of the Statewide Interoperability Board to the North Dakota Statewide Interoperability Executive Committee, removed the appropriation of \$5 million for equipment, and provided funding of \$25,000 for costs related to the Statewide Interoperability Executive Committee. The Legislative Assembly approved Senate Bill 2353 as amended by the conference committee.

PREVIOUS STUDIES

2003-04 Emergency Services Committee Study

During the 2003-04 interim, the Legislative Council's Emergency Services Committee studied the state's emergency management system, the impact of federal emergency reorganization on the state's emergency operations plan, and the emergency management preparedness of state agencies and local governments. The Emergency Services Committee made no recommendation regarding the study of the state's emergency management system, the impact of federal emergency reorganization on the state's emergency operations plan, and the emergency preparedness of state agencies and local governments.

2007-08 Public Safety Committee Study

The 2007-08 Public Safety Committee conducted a study of the Department of Emergency Services, including the Division of State Radio. The committee recommended several bill drafts, including a bill draft to provide a \$7.2 million general fund appropriation to the Adjutant General for purchasing or leasing infrastructure and equipment for up to eight additional radio towers to expand coverage of the State Radio system. The 2009 Legislative Assembly did not provide funding for additional radio towers but did include funding of \$500,000 in House Bill No. 1016 to study the effects of NG911 (\$100,000), alternatives to constructing new State Radio towers (\$75,000), and implementing a new State Radio tower site near Wales (\$325,000).

2009-10 Public Safety and Transportation Committee and 2009-10 Taxation Committee Study

The 2009-10 Public Safety and Transportation Committee and the 2009-10 Taxation Committee studied the equity of the 911 fee structure, including consideration of fees, taxes, assessments for services, equity of services, and payments among residents in service areas; fee collection methods; and current and future funding of emergency services communications in the state.

The Public Safety and Transportation Committee recommended 2011 House Bill No. 1045, which was approved by the Legislative Assembly, to provide for changes in emergency communications operating standards as recommended by the Emergency Services Communications Coordinating Committee. The committee also recommended 2011 Senate Bill No. 2046, which was not approved by the Legislative Assembly, to provide \$110,302 for the operations costs of the state message switch, to provide \$5,500,000 for purchasing or leasing up to 12 additional State Radio towers, and to increase fees charged for the use of the law enforcement teletype system.

The 2009-10 Taxation Committee did not make any recommendations as a result of its study.

STUDY PLAN

The following is a proposed study outline for the committee's consideration in its study of issues related to the State Radio plan:

1. Receive and review information from representatives of the Statewide Interoperability Executive Committee, the Department of Emergency Services, the Division of Homeland Security, and the Division of State Radio regarding the allocation of homeland security funding, the operation of State Radio, the interoperability plan, and the impact of future emergency services communications technology.
2. Receive and review information from representatives of the Department of Emergency Services Advisory Committee, representatives of the Statewide Interoperability Executive Committee, and representatives of political subdivisions regarding the Department of Emergency Services' collaboration with political subdivisions.
3. Receive testimony from interested persons regarding the committee's study of issues related to the State Radio plan.
4. Develop recommendations and any bill drafts necessary to implement the recommendations.
5. Prepare a final report for submission to the Legislative Management.

ATTACH:1