



South Dakota Legislative Research Council

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STATE RADIO COMMUNICATIONS--ITS ROLE IN STATE GOVERNMENT AND ANTICIPATED CHANGES IN ITS OPERATION

State Radio Communications is one of four divisions within the office of the Attorney General. State radio communications' most apparent duty is providing statewide law enforcement/public safety communication needs. This division also manages the South Dakota Law Enforcement Information System, which provides federal, state, and local criminal justice agencies with access to various data bases nationwide. These data bases include the National Crime Information Center (NCIC), National Law Enforcement Telecommunications System (NLETS), National Oceanographic and Atmospheric Administration (NOAA), all fifty states, Canada, and Puerto Rico motor vehicle and drivers license files. In addition to these data bases, state radio communications provides South Dakota data bases containing wants and warrant information, as well as protection orders. Its mission, in short, is to provide federal, state, and local authorities with a common and stable communications network across South Dakota.

State radio communications derives its authority from SDCL 1-13-1 through 1-13-17. In 1945, the Federal Communications Commission (FCC) allotted the state of South Dakota frequencies to be used in conducting an emergency, police, and public safety communications system, under the direct supervision and absolute control of the Attorney General's Office. These original frequencies have come to be known as "low-band" frequencies and are still in use statewide today.

Low-band frequencies range from 39.0 to 39.5 MHz and provide direct communication between two mobile units or between a mobile unit and the base unit. These frequencies allow a communication range of approximately twenty miles between mobile units and between fifty and sixty miles from a base unit to a mobile unit. As might be expected, technology has changed over the past fifty years, and potential changes in the way the system is operated was a subject of

considerable debate during the most recent Legislative Session.

The state prison system and the South Dakota Department of Transportation use a communications system that operates on a range of 150 to 160 MHz. This system is commonly referred to as “high-band.” High-band systems utilize equipment that amplifies the signal and extends the coverage area. This machinery is known as a “repeater” because the signal travels from the originating unit to the base, is amplified, and then is relayed to the receiving unit. In a low-band setup, the signal travels directly from the transmitting unit to the receiving unit. The repeater is able to more than double a signal’s range between mobile units. While a low-band scheme allows approximately twenty miles between mobile units, a high-band system extends the range to roughly eighty miles. A high-band’s range between a mobile unit and a base unit remains about the same as a low-band structure.

Employees in the state radio division estimate that upgrading the entire communications system to state-of-the-art, high-band equipment would cost \$10 to \$20 million. According to those in this division, this upgrade would greatly improve

communications for the South Dakota Highway Patrol. The highway patrol’s primary frequency is low-band, but they have limited access to high-band frequencies through the use of their portable radios. These are programmed into the high-band frequencies used by federal agents and local authorities in many of the state’s larger communities. The federal authorities must carry equipment for both bands in order to communicate with most local authorities.

There are other benefits to upgrading. For instance, as time passes, it is increasingly difficult to obtain replacement parts for low-band machinery, as this style of equipment becomes more outdated. Another benefit to high-band technology would be the additional options that local and state authorities would have at their disposal in the field. According to engineers, high-band implements would allow the state to eventually install mobile data terminals in vehicles. This would have the most obvious benefit to the highway patrol. Mobile data terminals allow officers to access, from their car, all information pertinent to an individual they may have stopped. Such information could include arrest records, fingerprints, any outstanding warrants, etc. Under

such a setup, officers in the field would have access to all databases that are at the disposal of the state radio division.

As the first step in determining what might best serve the state's needs, the state radio communications division is planning a comprehensive study of what technology is available, and what would best fit into the state's operations. This study will be funded by the federal government. Due to the fact that South Dakota does not have a law mandating that motorcyclists wear helmets, the state is being "fined" by the federal government. Under this arrangement, the federal government requires that a portion of its allocation for highway construction projects be used only for safety and education programs.

Those in the state radio division hope to obtain some of this money late in calendar year 1995 and begin this study. Because the study is expected to be an in-depth, time-consuming undertaking, it will probably be presented to the full Legislature no sooner than the 1997 Session. Testimony during this past legislative session indicated that an equipment upgrade might make it possible for the system to operate with only one or two stations. However, no determinations in this

area are expected before such a study has been completed.

Considerable debate during this past legislative session pertained to the number of dispatch locations statewide used to operate the state radio system. Currently there are five dispatch locations: Rapid City, Pierre, Huron, Webster, and Parker. Plans call for the Webster station to be closed sometime late this summer, likely after the conclusion of the state fair. The Parker station is slated for closure during fiscal year 1996. Officials in the division estimate this closure will come next winter, late in calendar year 1995 or early 1996.

The state radio communications' budget for fiscal year 1996 was approved by the Legislature at a total of \$2,317,904, with 40.0 FTE. Of this total, \$1,615,373 is general funds and the remainder, \$702,531, other funds. This represents a reduction of 6.0 FTE from FY 1995, while the budgeted figure for FY 1996 is an increase of \$64,667 from FY 1995. The reduction in FTE is due to the Webster station's closure.

The teletype fund is the primary source of other funds for state radio communications. Local law enforcement authorities pay into the teletype fund in order to have access

to the aforementioned data bases within the division. Some state agencies, most notably the Department of Transportation, also pay into this fund in order to have access to weather reports such as road conditions. This service, which is self-supporting, is funded through a monthly fee charged to those authorities that use it. General funds are used to pay the salary of the system manager, but all other expenses associated with the information system are supported through the fees paid into the teletype fund.

Under the current setup, there are some areas of the state that are under served. For instance, there are no communication towers in the northwest corner of the state. An improvement to the system is under way in the Tripp area in southeast South Dakota. According to employees in this division, an antenna, base, and power supply is being installed on an educational television broadcast tower at an approximate cost of \$2,000. This enhancement should be operational by the end of June 1995.

Further expansion of the system is planned for the future. These other proposed changes in the system will allow the dispatch control for certain areas of the state to be altered. One

example is the Tripp tower. In planning for the closure of the Parker station, this link will allow the Pierre terminal to serve as the dispatch center for the southeast portion of the state. This added coverage area for the Pierre station has led to another change in the system planned for FY 1996. Plans call for expanding the Rapid City terminal's coverage area further east. This would be taken from the Pierre station's current area.

Some other possible "expansion" of the system is geared toward establishing a backup system for the main communication lines. The current scheme does not provide for a means of communicating if the primary lines malfunction for any reason. "Looping" is the process of directing a signal through a different series of lines. This would permit the system to continue operating while the main lines underwent maintenance or repair. Of course, funding for any expansion projects must be provided for this to occur.

It seems that state radio communications' operations could be changed considerably in the next few years. The results of the technology study could cause the Legislature to decide whether or not to invest in a rather sizable technological upgrade. Depending

on the timing and results of this study, this division's operational scheme could be altered more in the next five to ten years than has occurred in decades.

This issue memorandum was written by Chris Eitemiller, Fiscal Analyst for the Legislative Research Council. It is designed to supply background information on the subject and is not a policy statement made by the Legislative Research Council.
