



NORTH DAKOTA RADIO INTEROPERABILITY NETWORK (ND-RIN)

Project Overview

The State of North Dakota is undergoing tremendous social and economic changes in response to the rapid growth in the State's energy resource sector. While the State and its citizens receive undeniably important benefits from the energy boom, the resulting growth is stressing critical infrastructure and services vital to the life and safety of the citizens of the State. On behalf of public safety entities in the State of North Dakota, the Statewide Interoperability Executive Committee (SIEC) is spearheading a program to advance mission critical voice and paging communications across all state and local agencies. The SIEC commissioned a study to assess the growing technical and operational communication needs of first and second responders and to develop a solution that enhances and modernizes land mobile radio (LMR) communications in the State of North Dakota.

Current Profile of State and Local Radio Systems

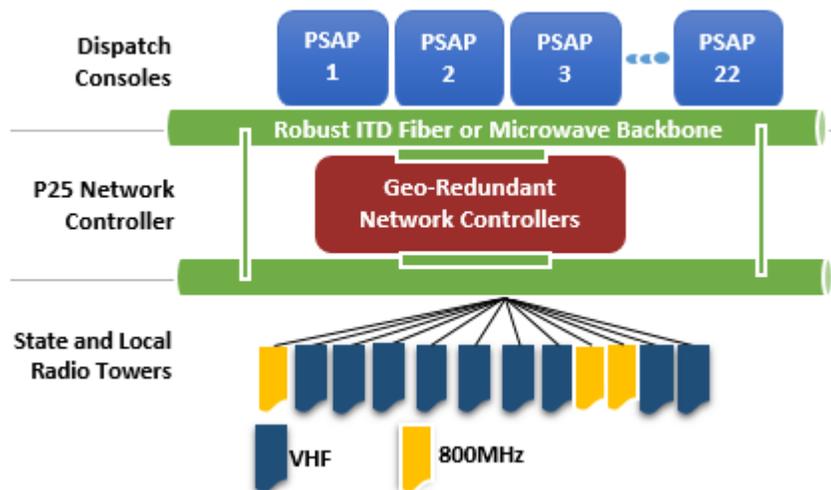
- Legacy systems anchored on outdated radio technologies
- Interference prone conventional radio networks that do not support seamless statewide radio communications
- Numerous independent networks that are not interoperable
 - The "State Radio" system providing primary radio service to State agencies and 24 Counties
 - Dozens of decentralized radio systems operated by Counties and local municipalities
- Insufficient portable radio coverage as public safety agencies increasingly seek greater in-building portable capabilities
- Frequent duplication and inefficient use, at greater cost, of state and local assets such as radio towers and frequencies
- Public safety acknowledged risks of existing radio networks

North Dakota Public Safety Agencies By The Numbers

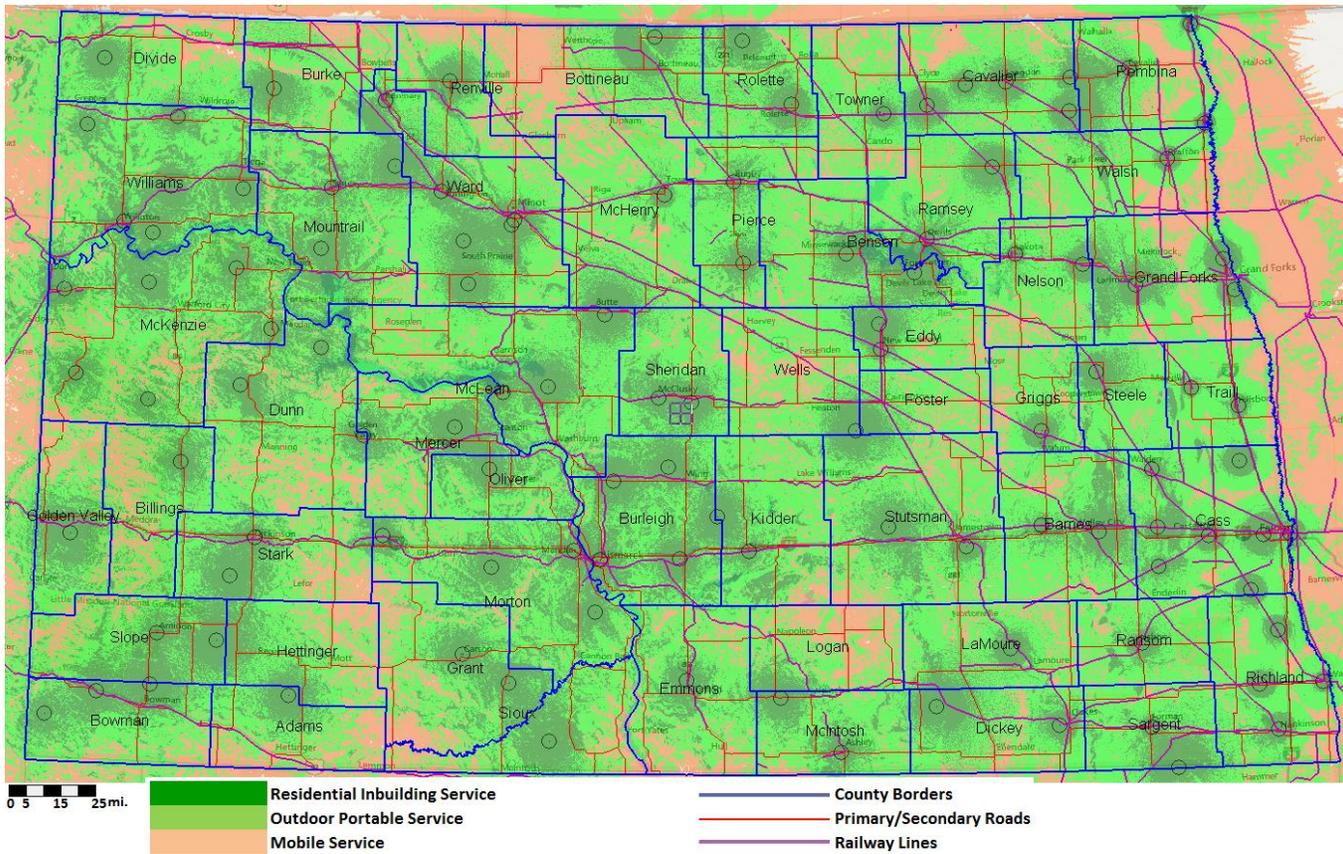
- 22 Public Safety Answering Points or Dispatch Centers
- 130+ Law Enforcement Agencies with 1700 sworn officers
- 180 public and private Emergency Medical Service departments
- 380+ primarily volunteer based fire departments
- Hundreds of supporting agencies such as public works, transportation and schools

PROPOSED ND-RIN OVERVIEW

- Unified statewide network – anchored on standards based Project 25 radio trunking technology – interfacing all PSAPs, radio sites and user devices
- Radio trunking architecture that enhances and simplifies network and end user operations and safety
- 125+ base station radio tower facilities serving all agencies
- Statewide VHF radio system with 800 MHz in metro areas
- Replacement or upgrade of 16,500 mobile and portable devices
- Federated interoperable, cost effective network solution



**Projected
ND-RIN
Statewide
VHF Coverage**



Benefits of Unified ND-RIN

- Enhanced portable and mobile coverage
- Seamless interoperability and statewide roaming
- Simplified dispatcher and field user operations
- Efficient use of radio towers and channel capacity
- Backup and shared PSAP services capability
- Advanced features and system interference mitigation
- Economies of scale derived from state and local radio network consolidation
- Long term operational cost reduction and sustainability
- Greater interaction and cooperation of statewide public safety entities
- Expanded emergency incident response communications training and exercise opportunities
- Greater safety for the first responder community

Cost & Implementation Approach

- \$160M in radio system and subscriber costs
- Phased multi-year implementation
- State funding spread over three bi-annum legislative periods
- Outreach and education efforts in 2015 to increase participation

Legislative Support Request

- Approve SIEC radio network implementation strategy
- Authorize capital funding allocation

Phase	High Level Activities	Y1	Y2	Y3	Y4	Y5
I - Pre-Acquisition	<ul style="list-style-type: none"> Site selection, frequency licensing Radio equipment inventory 					
II - System Acquisition	<ul style="list-style-type: none"> Specifications development Vendor Selection 					
III - Metro Area 800 MHz	<ul style="list-style-type: none"> Migrate Metro Areas to 800 MHz Site Development 					
IV - Regional VHF layer Deployment	<ul style="list-style-type: none"> Regional VHF deployment Four to six regions approach 					
Radio Procurement	<ul style="list-style-type: none"> On-going efforts to gather, provision and distribute radios 					
Estimated Annual Costs (in Millions)		\$ 10.20	\$ 47.34	\$ 38.96	\$ 37.49	\$ 25.16
Total Cost of Goods and Services		\$159,140,000				