

## The 'ARMER' Public Safety Radio System

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With over 91,000 active radios (MnDOT, January 2022), the statewide Allied Radio Matrix for Emergency Response (ARMER) system, built by Motorola Solutions and owned and operated by the Minnesota Department of Transportation (MnDOT), provides interoperable Land Mobile Radio (LMR) communication capabilities to law enforcement, fire, Emergency Medical Service (EMS), emergency management, public works, and other public safety users across Minnesota.

The ARMER system build-out began in the Twin Cities metropolitan area during the late 1990s and was expanded to include greater Minnesota in the mid-2000s. In late 2020, the ARMER system buildout was completed. There are now 335 state-maintained and 100 locally-maintained tower sites 'on-the-air' across Minnesota that provide mobile radio coverage to 95% of the state's geographic area.

Post-9/11, a significant amount of federal grant funding was made available to local public safety agencies in Minnesota to support the initial purchase of ARMER system radios. Since that time, the emergency communications ecosystem have evolved significantly and new ARMER system radio capabilities are being introduced to meet the operational needs of first responders (encryption, Wi-Fi connectivity, the ability to operate on neighboring state's radio systems, etc.). First and second-generation ARMER system radios that were acquired 10+ years ago when grant funding was plentiful are not capable of supporting these new features.

Based on feedback obtained from members of the state's seven emergency communications/emergency services board regions and the Statewide Emergency Communication Board (SECB), the vast majority of Minnesota's public safety agencies are currently using ARMER system radios supplied by Motorola Solutions. They also report that many of these entities, especially volunteer fire departments and ambulance services, are still operating first and second generation 'XTS' or 'XTL' ARMER system radios that, as of December 2019, are no longer supported by Motorola Solutions.

In October 2021, two divisions within the Minnesota Department of Public Safety, the Minnesota State Fire Marshal and Emergency Communication Networks, collaborated to survey fire, rescue, and EMS service providers across the state to assess their ARMER radio funding needs. Two hundred twenty two public safety agencies that provide emergency services to Minnesota communities in greater Minnesota and the Twin Cities metropolitan area responded to the survey. The highlights of the survey results include:

- Over sixty percent of the respondents indicated that they were operating first and second generation 'XTS' or 'XTL' ARMER system radios.
- Ninety percent of the respondents indicated that they did not have adequate funding to replace their aging ARMER system radios.
- Sixty-four percent of the respondents indicated that they needed additional ARMER system radios to meet their operational needs.

Depending on the desired features and functionality, the purchase cost of a newer generation ARMER system radio is approximately \$4-6,000 per unit. Currently, there are no state or federally supported funding programs in place that are dedicated solely to assisting local public safety agencies with meeting their ARMER system radio equipment needs.