Statewide Interoperability Radio Network (SIRN)
Standards, Protocols, Procedures

Document Section	2 – Management of System	Status:
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Standard Title	Operational Management and Maintenance Responsibilities	
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1. Purpose or Objective

The purpose of this standard is to define agency roles in the operational management and maintenance of the SIRN platform.

2. Technical Background

- **Capabilities**

SIRN is a statewide communications system with hundreds of network nodes throughout the State including RF sites, dispatch centers, core servers and applications. SIRN is centrally operated and managed by the State's North Dakota Information Technology (NDIT) under the oversight of the SIEC and various working groups responsible for setting operational procedures and policies.

NDIT operates SIRN on behalf of all system owners and users. Operational functions are provided by NDIT staff and its system vendors, namely, Motorola Solutions, Inc., its site link (backhaul transport) provider—DCN, and other third party subcontractors. This centralized operational structure approach coupled with the governance of the SIEC delivers a uniform user experience and standardized system management and maintenance objectives statewide.

Certain SIRN elements such as dispatch center equipment and end user devices are independently self-managed and maintained by their respective agencies. Operational responsibilities for representatives of those self-maintained components are defined in this Standard.

- **Constraints**

High availability communications services require not only vigilant and proactive network monitoring and maintenance functions, but the methodical flow of system health information across all Administrators and representatives for situational awareness and service recovery.

3. Operational Context

A system of SIRN's size necessitates well-defined and organized operational management structures and responsibilities.

This Standard describes general responsibilities and references other Standards specific to each function or responsibility. Several other SIRN Standards (in addition to this document) establish the operational and management responsibilities of the SIRN Operator (NDIT) and User Agencies, such as Public Safety Answering Points (PSAP), which own self-maintained SIRN-interfaced subsystems including dispatch consoles.

4. Recommended Protocol/ Standard

Formal Subsystem Administrators and Local User Administrators

Information flow is essential for situational awareness and timely decisions. Each service provider or subsystem owner will formally designate a Subsystem Administrator. User Agencies will similarly designate Local User Administrators. User Agencies are agencies which own and access SIRN strictly through radios; Subsystem Owner or provider, on the other hand, may own and operate certain SIRN infrastructure components or interconnected subsystems such as dispatch equipment or network interfaces.

- Note, in some cases, the same individual may act as the Subsystem *and* Local User Administrator for a given entity
- Subsystem Administrators owning and operating only dispatch center equipment may be interchangeably referred to as PSAP Managers

Both Subsystem Administrators and Local User Administrators will have the authority to represent their respective agency/agencies' interests and make decisions on issues related to the day-to-day operation of their subsystems and any urgent or emergency system operational or repair decisions.

The Statewide System Administrator will represent the centrally-owned and operated portion of the system.

Each Subsystem Administrator and Local User Administrator must designate an alternate, who will have the authority to represent their respective sub-system in the absence of the primary contact particularly for urgent matters. An urgent or emergency situation requires immediate decision authority to allow the system as a whole, or any of the sub-system components, to continue supporting normal wide-area communication services.

Responsibilities of All Administrators

NDIT operates a systemwide and converged Network Operations Center (SIRN NOC) to monitor network performance and to diagnose and troubleshoot system issues. In addition to NDIT, any participating agency, vendor or subsystems owner (hardware, software, connectivity) is responsible for routine monitoring and proactive maintenance of those SIRN elements. While specific duties will not be detailed in this document, the general duties of NDIT and other Subsystem Administrators include:

- Monitoring the system, subsystem and its components for normal operations
- Participating in the diagnosis of performance problems and the development of corrective actions recommendations
- Identifying an outage situation and determining the course of action for resolution
- Dispatching appropriate repair services in the event of a malfunction in subsystem equipment
- Managing and archiving database elements, including subscriber IDs, console IDs, network

parameters and system configuration plans
- Notifying users and other pertinent parties of planned and unplanned system issues affecting service
- Coordinating and seeking approval for any system planned maintenance activities with affected Administrators
- Maintaining accurate system and subsystem documentation and change logs reflecting any and all maintenance activities
- Ensuring all personnel assigned to perform maintenance activities on SIRN subsystem and devices have successfully completed appropriate training per the *SIRN Standard 2.17.0 Technical Staff and Maintenance Providers Training and Qualifications*
- Maintaining and replenishing spare parts and equipment at levels necessary for public safety service
- Adhering to all applicable FCC and other federal regulations

Statewide System Administrator Support to Subsystem and Local User Administrators

The Statewide System Administrator is also be responsible for:
- Periodic Administrator meetings to review operations of the system and share ideas or issues with their respective subsystems and users that may be of relevance
- Facilitate Administrators meetings to discuss recovery plans, lessons learned and after actions post system issues and outages
- Support Administrators to diagnose and resolve system operational problems that involve parameter changes, maintenance, or repair of equipment.
- Being the identified point of contact with "contracted vendor(s)" for issues related to the network equipment.
- Providing timely information about system equipment repair or maintenance issues.
- Monitoring the performance of the entire network for normal operations
- Monitoring the configuration of the system database for normal operations, particularly the properties of the equipment and database objects, in addition to conducting periodic database backups

Other Relevant Standards
Various SIRN Standards cover policies and procedures regarding SIRN Operations and management. Refer to the following Standards for additional details:

4.5.0 Preventative Maintenance for specific and routine planned preventative maintenance standards across all SIRN systems and subsystems

2.15.0 SIRN Dispatch Console Change Management Standards for specific operational, maintenance and management responsibilities of PSAP Managers at it applies to dispatch subsystems

4.3.0. Notification for System Changes and Outages for details regarding issue response and notification responsibilities of all Administrators: Systemwide, Subsystem and Local User

2.11.0 System Management Login Accounts on management of User Accounts for system and subsystem

administrators with access to and operational responsibilities for SIRN network functions.

2.17.0 Technical Staff and Maintenance Providers Training and Qualifications on the minimum required training and qualifications of maintenance and technical staff.

5. <u>Recommended Procedure</u>

The Statewide Administrators will maintain and update the database of SIRN Administrators, Subsystem Administrators and Local User Administrators.

6. <u>Management</u>

The Statewide System Administrator or their designee is responsible for the operational management of the system.