NEBRASKA

Statewide Radio System
Standard Operating Procedures

A.   Statewide Radio System (SRS) Standard Operating Procedures

1.0   Purpose and Scope:

The Statewide Radio System (SRS) standard operating procedures provide written documentation for all subscriber organizations that are affiliated with the SRS, the proper use of the SRS, and interoperability. These standard operating procedures apply to all subscriber organizations, guest organizations, and managing organizations, including staff of the organizations that use, manage, and service the system.

2.0   Background

2.1   The Statewide Radio System (SRS) leverages new and existing resources to create a statewide wireless communication system for state public safety agencies and Public Power Districts.

2.2   The SRS serves multiple and diverse state agencies and public power entities.

2.3   The SRS is designed to connect users through the wide area network throughout the state of Nebraska.

2.4   The SRS is a VHF, digital, trunked, internet protocol based, land mobile radio system. The system meets Association of Public Safety Communication Officials (APCO) Project 25 (P-25) standards and the current industry standards for public safety digital radios. The initial design provides two master sites for redundancy and 51 tower sites providing mobile radio coverage over the State of Nebraska. The OCIO and NPPD are responsible for the construction, operation and management of the SRS. The system can be expanded with additional tower sites and frequencies to accommodate future needs.

3.0   Definitions

3.1   **Designated representative** means the person named to represent a subscriber organization on the Radio System Users Group. Each subscriber organization will have a designated representative.

3.2   **Guest organization(s)** means any agency, entity, or organization, whether private or public that is authorized to use the SRS, not as a primary communications system, but for interoperable communications with subscriber agencies. An example would be the Highway Patrol of a neighboring state or local dispatch office. Unless otherwise provided, SOPs that apply to subscribers or subscriber organizations also apply to guest organizations and guest subscribers.

3.3   **Managing organization(s)** means the organization(s) responsible for managing and maintaining the SRS and/or its infrastructure.

3.4   **Managing staff** means any person(s), regardless of their employment status, who is authorized to manage, operate or maintain the SRS and/or its infrastructure by the managing organization(s).

3.5   **TOC** is the Technical Operations Center for the SRS.

3.6   **NPPD** means the Nebraska Public Power District, a political subdivision of the State of Nebraska.

3.7   **N-WIN Council** means the Nebraska Wireless Interoperable Network Council created by Governor Heineman through Executive Order No. 08-03 to provide governance and policy direction for the N-WIN system.

3.8   **OCIO** means the Office of Chief Information Officer as created by Nebraska Revised Statute sections: Neb. Rev. Stat. §§ 86-519 and 86-520; 81-1116 et seq.; 81-1120.01 et seq.; 86-401 et seq.; 86-501 et seq.; 86-550 et seq.; 86-569 et seq.; and other related statutes.

3.9   **Public Safety Agency** means any federal, state, or political subdivision entity which provides emergency and public safety services, including medical services, law enforcement services, fire management services, correctional services, and emergency and disaster relief services. [Nebraska Revised Statute section 86-408]

3.10   **SOP(s)** means standard operating procedures as adopted by the State Radio Users Group and the NWIN Council.

3.11   **SRS** means the Statewide Radio System, a VHF P25 digital trunked land mobile radio system built through a partnership between the State of Nebraska and NPPD.

3.12   **Subscriber** means any person(s), worker(s), officer(s), dispatcher(s) or anyone else associated with a subscriber or guest organization, regardless of their employment status, authorized to operate a radio or any other device on the SRS.

3.13   **System Operating Group (SOG)** means owners and operators of the SRS, responsible for operation, management, maintenance, and ongoing development of the SRS.

3.14   **System User Group (SUG)** means user agencies of the SRS responsible for representing agency users for the ongoing development of user protocols and need

3.15   **Subscriber organization** means any state or federal agency, electrical power entity, or any other agency, entity, or organization, whether private or public that is authorized to use the SRS radio system as a primary communication system.

3.13   **Talk group(s)** means a predetermined affiliation or grouping for radio channel operation that allows subscribers to transmit and hear each other's radio traffic, while the system assigns frequencies and coordinates user roaming between the tower sites automatically.

4.0   Responsibilities

4.1   These protocols and standard operating procedures pertain to all parts of the SRS system and to any future expansions or enhancements to the system.

4.2   The Office of Chief Information Officer (OCIO) together with the Nebraska Public Power District (NPPD) are responsible for operation, management, and maintenance of the SRS.

4.3   The SRS is intended for use by public safety agencies and public power districts. However, federal, state, and other local entities that need to communicate with public safety and public power districts may also connect into the SRS.

4.4   The NWIN Council is responsible for granting final approval for new subscriber and guest organizations to operate on the SRS.

4.5   The System Operating Group (SOG) is composed of the State Chief Information Officer and the NPPD ITT Manager or their respective designees. The SOG is responsible for the development, management, operation, and maintenance of the SRS. The SOG determines which agencies or users can be added to the SRS and develops the requirements and costs for the additional users. This information and recommendations are forwarded to the NWIN council for final approval of new users on the SRS. [Interlocal Cooperation Agreement between NPPD and OCIO, Article II].

4.6   The purchase and maintenance of radios, vehicle repeaters and other subscriber equipment is the responsibility of the subscriber and guest agencies in coordination with the SOG.

4.7   Managing, subscriber and guest organizations are responsible for training their own subscribers about the proper use of the radio system and these SOPs or obtaining training officially sanctioned by the SUG and/or SOG.

4.8   Only subscriber equipment approved by the SOG may be used on the SRS.

4.9   The Network Operating Agreement between the OCIO and NPPD contains additional responsibilities for the operation, maintenance, development, and management of the SRS. It is an attachment to the SOPs.

5.0   Acceptable Use Policy

Inappropriate use of the SRS may jeopardize the Federal Communication Commission licenses and place offending agencies and/or personnel at risk of substantial fines.

Public safety and service organizations using the SRS and technical support organizations servicing the SRS, will follow the governing acceptable use principles outlined below:

5.1   The SRS is intended for use by state agencies and public power entities and other subscriber organizations approved by NWIN Council.

5.2   The SRS may be used for responding during routine and emergency situations.

5.3   The SRS may be used for training and exercises that are planned and scheduled.

5.4   Managing staff shall use the talk groups for testing and troubleshooting on the system so as to minimize interference with system operations. SRS managing staff may transmit on other talk groups, if necessary, as a part of troubleshooting problems.

5.5   System maintenance personnel shall use the designated talk groups for testing and troubleshooting on the system. They may transmit on other talk groups, if necessary, as a part of maintenance and troubleshooting.

5.6   SRS System use is restricted to official business only and traffic that is appropriate for the radio system.

5.7   Malicious, disruptive and inappropriate use is strictly prohibited. This includes the use of the SRS system in a manner that precludes or significantly hampers its use by other subscribers.

5.8   All software for the SRS system must be approved by the SOG prior to installation. The introduction of malicious software, computer worms, viruses, spyware, etc. to the SRS system is strictly prohibited. Persons who intentionally introduce malicious software may also be referred for prosecution.

5.10   If a subscriber or subscriber organization violates SRS SOPs, the NWIN Council may direct the SOG to limit, restrict or revoke either the subscriber's radio privileges or the privileges of the subscriber organization.

5.11   Subscriber organizations have the primary responsibility to enforce the SRS SOPs within their organization through appropriate personnel action(s).

6.0   Routine Radio Traffic

6.1   Radio communication should be brief and to the point. Lengthy conversations and casual discussions, even if related to official business, are not appropriate radio traffic.

6.2   Radio system traffic shall be limited to official business only.

6.3   All communications on the SRS must be conducted in a professional manner, using proper radio etiquette.

6.4   To help avoid confusion and to enhance interoperability, all communications shall be conducted using plain speech. However, subscribers should be aware that talk groups that are not encrypted can be monitored by the public.

6.5   On the SRS, subscribers select the talk groups they wish to be affiliated with, but the system selects the tower sites and the frequencies to use.

6.6   If secure communications are needed and the subscriber has a radio with encryption, the subscribers will turn to a secure or "SEC" talk group.

6.7   A caller will wait for clear air time on selected talk group, before initiating a conversation.

6.8   Radio messages on the SRS will be made and received in the following manner:

6.8.1   When initiating communication on the SRS, the following format will be used: Caller identifier to receiving unit, on talk group used. Example: *"Agency 123 to dispatch on Agency Sidney".*

- Someone on the SRS who is receiving will acknowledge by stating their state assigned/approved call sign. Example: *"Scottsbluff, go ahead Agency 123."*

- Subsequent SRS communication can be shortened to the caller identifier. Example: "Agency *123 acknowledged*."

6.8.2   On the SRS, the emergency button activation will preempt any other radio traffic. The emergency button is to be used only in the event of an emergency. Activation of the emergency button will not only declare an emergency, it will cause the radio to have top priority for voice transmissions on the system until the emergency is cleared. Emergency response and possible testing of emergency button activation is contained in individual agency SOP's.

6.9   Radio equipment generates Radio Frequency Interference (RFI) that may interfere with the operation of medical or other sensitive equipment. In standard operation a mobile or portable radio on a trunked radio system will periodically transmit without the operator pushing the push-to-talk button. Caution needs to be observed when operating radio equipment in hospitals, nursing homes, hazardous environments, around explosives, or in other such areas.

6.10   SRS Private Call: When utilizing private call, call sign protocol is at agency discretion. Private call is still use of state resources and should be used for state/agency business only.

6.11   SRS Data: Data transmissions are secondary to voice. There are three channels available for communication, all three can be used for voice, only one can be used for data. The SRS will transmit data that is inherent to the system and non-inherent data, such as license plate information.   Data that is non-inherent to the SRS system can tie up radio resources for a lengthy period of time, making it necessary to limit the use of these radio resources. The SRS system will not be used to run pictures of individuals or other lengthy data transmissions, this should be done using cellular technology or other means.

7.0   Emergency Radio Traffic on the SRS

7.1   An emergency is a non-scheduled event that requires immediate response to save lives, protect property or to preserve public safety. Usually it requires the coordinated response and interoperability of multiple agencies.

7.2   All emergency communications will be subject to the National Incident Management System (NIMS) guidelines. This includes incidents that move between jurisdictions. It is important that all interagency emergency traffic will be conducted in clear language so as to minimize confusion and to enhance interoperability.

7.3   When an emergency situation requires coordinated resources from multiple first responder agencies, and one or more are not SRS subscriber organizations, a subscriber may request assistance from dispatch to facilitate either a patch or the use of local mutual aid frequencies.

7.4   When the situation dictates coordinated resources from multiple agencies, communications will be on the designated interagency talk groups as selected by NSP dispatch.   Responding units from all agencies will monitor the interagency talk group designated by NSP dispatch.

7.5   Special operations talk groups will be assigned for the duration of the emergency upon request.

7.6   NSP dispatch will be notified by requesting agency or acting Communications Unit Leader within the Incident Command/Unified Command when the requested talk group will no longer be needed.

8.0   Operation of the SRS outside of local area

8.1   When a SRS talk group is transported to another part of the state by a radio system subscriber, all traffic associated with their home talk group is repeated over the local tower that the subscriber is affiliated on, tying up local radio resources. This can cause the system to overload on the local tower, especially if a large number of subscribers are affiliated with their home talk groups. This overload may result in a busy condition for local subscribers and may also impact talk groups back in the subscribers' home area.

8.2   SRS radio subscribers traveling outside their normal operating area need to switch from their home talk group to the appropriate local talk group or zone and talk group. This is necessary to prevent radios from unnecessarily tying up system resources.

8.3   When outside of their normal service area, SRS subscribers should use home talk groups only when absolutely necessary.

8.4   Monitoring talk groups from outside of a subscriber's home area for non-service related business also ties up radio resources. The effect on the system is the same as outlined above.

8.5.1   Monitoring is defined as the physical affiliation of the radio on the talk group selected.

8.5.2   Non-selected talk groups being scanned do not have the same impact on system and this policy does not limit such scanning.

9.0   Planned/Scheduled Events

9.1   NSP Dispatch will assign special operations talk groups to scheduled events that require additional communications resources.

9.2   Special operations talk groups should be scheduled with dispatch well in advance of the scheduled event and will be available for the duration of the event.

9.3   Talk group assignment is subject to pre-emption if required for reassignment to an emergency incident.

9.4   When the requested talk group is no longer needed, the requesting agency or incident commander will notify dispatch.

10.0   SRS Heavy Traffic Conditions

10.1   When a dispatcher or an incident commander determines that excessive non-essential radio traffic is impacting dispatch operations or incident operations, the incident commander or dispatcher will make a radio traffic restriction announcement on the appropriate talk group(s). A typical radio traffic restriction announcement would be, "All subscribers with non-essential radio traffic, stay off the air."

10.2   An alternate agency or interoperable talk group can be assigned by dispatch for non-incident related communications.

10.3   When the condition is over, the dispatcher or incident commander will broadcast a message announcing resumption of normal radio traffic conditions.

11.0 Interoperability

11.1   SRS subscribers may communicate with other SRS subscribers, even those in different agencies, by using designated interoperable talk groups. A subscriber should contact State Patrol dispatch to be direct to a common talk group.

11.2   If a SRS subscriber needs to speak with someone from an organization outside the SRS, they may request that a dispatcher establish a patch with the appropriate organization. Dispatchers will be able to use a patch or gateway, such as an integration program, to connect a subscriber and a non-subscriber agency or organization.

11.3   Designated VHF and 700/800 MHz mutual aid interoperability channels available from outside entities will be programmed into radios as required, upon approval by the NWIN Council. Technical standards for patching and interconnects will be approved by the SOG.

12.0 Failure of parts of the SRS

Statewide Radio System operation:

12.1 The Technical Operations Center (TOC) will monitor system alarms and report service affecting failures or planned service-affecting maintenance to dispatch centers and other interested parties via electronic mail, dispatch console, or by telephone. When the system failure has been corrected, the TOC will again notify the dispatch centers, and the dispatch centers will notify the subscribers. The TOC procedure manual lists the dispatch centers to be contacted when system failures occur. Dispatch centers will be responsible for distributing this information to subscribers as needed.

12.2 If the SRS is completely disabled, radio subscribers should communicate using the talk-around channels using their portable radios. The subscribers should still be able to speak directly to each other as long as their portable radios remain within range.

If a subscriber experiences a failure of the radio system functionality, they should use whatever means available, such as cell phones, to notify the local dispatch center or agency contact. The dispatch or agency contact will be responsible for contacting the TOC regarding the problem.

12.3 Subscribers and dispatchers should be as specific as possible when reporting a system failure, indicating the most serious failure first, the location of the failure, the impact to the system, the functionality that has been lost, how the problem was indicated, and what the subscriber saw or heard. This will help technicians to determine if the failure is one of hardware or software, a tower site issue, loss of network connectivity or a master site failure.

13.0   User Notification Process

13.1   Process to add a mobile or portable radio to the SRS

13.2   Process for handling lost mobile or portable radio on the SRS

14.0   Communications with other States

It is anticipated that first responder agencies from states bordering Nebraska which operate on VHF systems will have access to the SRS to facilitate interoperability. Nebraska is adopting a trunked fleet map plan to accommodate neighboring VHF trunked system users to talk directly on the SRS. Mutual aid frequencies are shared in a non-trunked analog coverage overlay with other systems. The channel plan will be coordinated with adjacent states [See Nebraska trunked and mutual aid programming template]. All first responder/public safety radios in the state of Nebraska are encouraged to include this channel plan when programming/reprogramming their radio equipment.

(See Nebraska Mutual Aid Plan See Part B)

15.0   Controls and Measures:

15.1   Subscriber organizations and guest organizations have primary responsibility for enforcing these SOPs within their own agency or organization. If a subscriber or guest organization has failed to resolve improper use of the SRS, the NWIN Council will take action pursuant to these SOPs. A violation may include detrimental use of a local, state, or mutual aid system and their interconnections.

15.2   The SOG may limit, restrict or revoke the privileges of a subscriber, at the request of the subscriber organization employing that subscriber.

15.3   The SOG will notify the designated representative of the subscriber organization when they detect excessive, improper or inappropriate usage of the SRS. The SOG will report usage violations to the NWIN Council and provide documentation of the use as requested by the agency.

15.4   The SOG will be responsible for providing documentation of use of the SRS when requested by a subscriber organization, System User Group, or the NWIN Council.

15.5   Subscribers, subscriber organizations, management staff and management organizations not following SRS SOPs may be subject to corrective action by the NWIN Council as necessary which may include the following: (1) A letter of censure; (2) having the privileges of an subscriber limited, restricted or revoked, or (3) having the privileges of the subscriber organization limited, restricted or revoked.

15.51   Action may be taken based on violation of SRS protocols and standard operating procedures, not for violation of agency specific policies.

[Refer to NWIN Council procedures for corrective action process]

15.6   Corrective actions shall be taken at the direction of the NWIN Council, except in the event of an emergency. A system emergency is an event or activity involving the SRS that poses a significant risk to the integrity or operation of the radio system.

15.6.1   In the event of a system emergency, if possible, the SOG in identifying the system emergency should first notify the subscriber agency of the situation and give it a reasonable opportunity to correct the problem.

15.6.2   If a system emergency threatens to cause the SRS system to fail, the SOG may take immediate, temporary action to limit, restrict or revoke the privileges of operations staff or a subscriber organization. Such emergency action shall be limited to action necessary to preserve the system operation. It shall be limited to affect the fewest subscribers necessary to preserve the SRS during the emergency situation and limited in duration to the minimum time necessary to address the situation.

15.6.3   The system emergency and response shall be brought before the NWIN Council at the earliest opportunity, together with documentation showing the basis of the system emergency and justifying the response.

The chairman of the NWIN Council may modify any temporary emergency actions until the matter can be heard by the NWIN Council, if the problem has been adequately addressed.

15.7 Subscriber and management staff not following these SOPs will be referred to management in their agency or organization for appropriate personnel actions.

15.8 Vendor personnel not following these SOPs will be referred to their management for appropriate action.

B. Shared Talk groups and Mutual Aid Channel Usage

1.0 Standard Operating Procedures Purpose:

1.1 Nebraska agencies using mutual aid frequencies to communicate across jurisdictions or agencies must have a common understanding of how and when mutual aid channels are used. This procedure establishes general rules for assignment and use of these channels in emergency and non-emergency situations. The intended audience includes all potential subscribers of the mutual aid communications system.

1.2 The purpose of this standard operating procedure is to provide a framework to guide assignment and use of mutual aid channels in Nebraska.

2.0 Mutual Aid Standard Operating Procedure:

2.1 Mutual aid channel usage for emergencies take priority over non-emergencies.

    2.1.1 An example of non-emergency mutual aid channel use is an agency calling for directions when transporting prisoners through or to an area that they are not familiar with.

    2.1.2 Emergency use of mutual aid channels will be guided by NIMS principles of incident command.

2.2 Mobile communication assets brought into an area will be subject to mutual aid channel assignment by the local incident commander or communication leader.

    2.2.1 All mobile communication assets must report their communication capabilities to the incident commander or communication leader upon arrival at a site and before initiating any communication via their resources.

2.3 Mutual aid frequencies will not be patched by anyone who has not been designated to function as a primary communication center.

    2.3.1 It is permissible to patch a mutual aid channel to another working channel when it is done by order of an incident commander or communication leader in an emergency or per local approved plans in non-emergency situations.

2.4 Mutual aid PSAP dispatch centers will take direction regarding   mutual aid channel assignment and usage from the local incident commander or

communication leader in an emergency situation and local dispatch centers in non-emergency situations.

2.4   Local communication center personnel will serve as the   communication leader until one is designated by the local incident commander in an emergency.

2.5   Local communication center personnel will assign channel usage in non-emergency situations and will designate initial channel usage in an emergency situation until incident command is established.

2.6   Generally, mutual aid channels are used in situations where multiple agencies are involved in a special event or common cause. The following are examples of proper use of mutual aid channels but are not exclusive of other appropriate uses.

   2.6.1   Working channels for multiple fire departments fighting a fire together

   2.6.2   Coordination during a police chase through multiple jurisdictions where the agencies have no other communication links with each other

   2.6.3   Communication during extended joint operations among multiple police agencies such as drug operations or civil unrest

   2.6.4   Coordination of an event during recovery operations after a disaster (e.g., a tornado) that requires local, state and federal officials to have a common communications link

   2.6.5   Any responder outside their own jurisdictional area needing assistance or needing to report to the local dispatch center.

   2.6.6   Coordination of multi-jurisdictional events involving mass casualties.

2.7   Coordination of multi-jurisdictional events involving hazardous materials.

3.0   The following are examples of improper use of mutual aid channels, but are exclusive of other improper uses.

   3.1   Support of functions that are purely administrative in nature

   3.2   Use of a mutual aid channel as an extra working channel for   a single   public safety agency supporting a special event

   3.3   Use of a mutual aid channel as a surveillance channel among members of the same public safety agency

   3.4   Use of any mutual aid channel for paging

4.0   Assignment of mutual aid channels in an emergency situation that requires incident command will generally include assignment of channels to serve the communication needs of specific functions. An initial assignment of a staging channel by local dispatch may precede designation of other functional channels by incident command.

   4.1   For example, one channel will be designated by incident command as the Command Channel that is not used as a call channel. Other functions will be assigned a mutual aid channel as required by the event, such as:
   4.1.1   Law Enforcement
   4.1.2   Fire
   4.1.3   Emergency Medical Systems

Attachments 1.1

Nebraska mobile communication resources and frequencies

Attachment 1.2 Phonetic Alphabet examples

A phonetic alphabet is a list of words used to identify letters in a message transmitted by radio or telephone. Below are two commonly used phonetic alphabets. Normally the letter is stated, followed by the phonetic word that represents that letter. For example, "A-Alpha; C-Charlie; T-Tango"

Law Enforcement

A	Adam	N	Nora
B	Boy	O	Ocean
C	Charlie	P	Paul
D	David	Q	Queen
E	Edward	R	Robert
F	Frank	S	Sam
G	George	T	Tom
H	Henry	U	Union
I	Ida	V	Victor
J	John	W	William
K	King	X	X-ray
L	Lincoln	Y	Young
M	Mary	Z	Zebra

Military / EMS

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu

Attachment 1.3   Mutual aid radio communication guidelines

Be ACCURATE

It is important that the exchange of information in a public safety setting be precise and accurate. One way to insure that information is received accurately is to repeat vital information a second time so the receiver can check for errors.

Be BRIEF

Radio transmissions must be brief and to the point. Say only what needs to be said and then stop transmitting. Superfluous (unnecessary) words hinder the smooth operation of any communication system. Use of filler words and jargon must be avoided.

Only information of an official nature is to be transmitted over the mutual aid radio system. Use a telephone, whenever practical and appropriate, rather than the radio to provide confidential or extensive information or to obtain expansive consultation.

Be CLEAR

Words must be pronounced correctly, distinctly and as clearly as possible in order to be understood. The Phonetic alphabet is a helpful tool, especially when dealing with difficult to pronounce names, locations or when transmitting numbers. Another aspect of clarity is the rate that one speaks. When communicating by radio, it is important to speak at a normal conversational rate. Speaking too fast or too slow makes it difficult for the other person to clearly receive messages.

Subscribers should try to maintain a neutral tone of voice, not allowing anger or other emotion to show in their radio transmissions. Subscribers should never engage in sarcastic or disrespectful language, or editorialize regarding persons or circumstances. Subscribers should not engage in argumentative and unnecessary questioning of other personnel over the air.

TRANSMISSION GUIDELINES
- Listen First
    - Listen for instructions on channel usage
    - Listen for your identifier being called
    - Listen for details related to your role in the communication and/or event
- Think before you Speak
    - Pause momentarily by taking one or two breaths before speaking over the mutual aid channel. This will allow the speaker to quickly formulate an accurate, brief, clear message using plain language.
- Pause for Equipment
    - Some radio equipment may require the sender to pause before speaking so that the entire message is heard.
- Pause for Priorities
- Be prepared for Questions/Clarifications
    - Although radio traffic should be kept at a minimum, it is important that the message you are sending is received accurately. Questions about your transmission will help the receiver understand your message.

C.   Agency Specific Policies:

1.0   Nebraska Game and Parks Communications Policy:

2.0   Nebraska Public Power District Communications Policy:

3.0   Nebraska State Fire Marshal Communications Policy:

4.0   Nebraska State Patrol Communications Policy