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# State of Kansas

# KSICS Usage – System Guidance

## (Kansas Statewide Interoperable Communications System)

**January 2024**

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# Signature Page

***Approved by:***

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| Name/Title/Agency | Date |
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| Name/Title/Agency | Date |

# Record of Changes

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This Standard Operating Procedure (SOP) is subject to information updates and changes. The use of this Record of Change helps manage SOP modifications throughout the life of this document. All attempts have been made to ensure the accuracy of the information within this SOP.

# Executive Summary

The Kansas State Interoperable Communications System (KSICS) consists of 800 MHz tower sites owned by the Kansas Department of Transportation (KDOT) and many different local agencies throughout the state. The statewide wide-area trunked P25 type II compliant radio system, in combination with the option to lease 800 MHz radios, provided users who desire to operate in this environment greater communications flexibility and interoperability. In addition to the 800 MHz enhancement, KDOT installed, at each of its 76 tower sites, a method for other 800 MHz public safety and local governmental users to communicate. The frequencies selected for use in these frequency bands include either the national interoperability channels or designated public safety talk-groups.

**Overview**

The enhanced 800 MHz communication system allowed first responders, the Kansas Highway Patrol (KHP) and other emergency response agencies to communicate with each other effectively and seamlessly across the state. This statewide capability helps reduce response time and improve coordination during large area emergencies which frequently occur during severe weather and natural disasters such as tornadoes and floods, multi-agency responses to fires and hazmat releases, and the pursuit of criminal suspects across local jurisdictional boundaries, all of which will promote public safety. The State of Kansas, in conjunction with the Cybersecurity and Infrastructure Security Agency (CISA) Interoperable Communication Technical Assistance Program (ICTAP), created this guidance to provide KSICS users with a unified document.

**Conclusion**

This document lays out the framework for system best practices, rules and general guidance on KSICS system usage. The CISA Encryption best practices along with the KSICS user agreements are included in this document. A variety of documents were utilized to frame up this guidance along with an active workgroup across numerous disciplines.

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# 1. Introduction

Public safety agencies within the State of Kansas recognize the need for interagency communication, interoperability, and cooperation. Kansas police, fire response, and Emergency Medical Services (EMS) have well-established day-to-day capabilities and mutual aid agreements in place. Today's public safety realities highlight the need for agencies to work together to establish communications interoperability and mutual aid plans not only across traditional jurisdictional boundaries but across disciplines as well.

To remedy the lack of interoperable communications among disciplines and agencies, public safety agencies lean heavily on the use of the Kansas State Interoperable Communications System (KSICS). The State of Kansas worked cooperatively with public safety agencies across the state to develop this Standard Operating Procedure (SOP).

# 2. Scope

The scope of this SOP is to delineate the authority, roles, and procedures for incident/event public safety personnel to coordinate the use of the KSICS as a means to achieve interoperable communications across agencies in Kansas.

# 3. Document Terminology

The terms "shall", "must" and "required" are used throughout this document to indicate required parameters and to differentiate from those parameters that are recommendations. Recommendations are identified by the words "should", "desirable", or "preferably".

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# 4. KSICS Usage

The State of Kansas has adopted the National Incident Management System (NIMS) as the framework for management of all emergency incidents within the state. Establishing standardized operating guidelines, procedures, and protocols for utilization of interoperability resources is directly aligned with objectives and initiatives contained in the National Emergency Communications Plan (NECP) as well as the Communications and Information Management Component of NIMS. NIMS elements addressed by or embedded in this SOP document include:

- Training and exercises.
- Usage of common terminology and nomenclature.
- Provides a mechanism for establishing a common operating picture.
- Common technology platform for interoperability.
- Offers potential solution for Strategic, Tactical, and Support communications.
- Communication of incident information.
- Establishes radio usage procedures.

Authorized signature(s) below confirm that this SOP document has been reviewed and approved by the Statewide Interoperability Advisory Committee (SIAC) for compliance with the National Incident Management System and certified by the SIAC Chairperson.

| | | |
|---|---|---|
| (SIAC Chair) Signature | Title/Agency | Date |
| (KSICS Administrator) Signature | Title/Agency | Date |
| (Vice Chair) Signature | Title/Agency | Date |

# 5. Migration to KSICS, Templates and Programming

**Step 1:** Validate that the county/agency has a signed shared user agreement with Kansas Department of Transportation (KDOT).

**Step 2:** Purchase authorized equipment based on the attached radio requirement guidance.

The following minimum features are required for all KSICS radios.

- P25 Compliance Assessment Program (CAP) Certified
- P25 Trunking Phase 1 (FDMA)
- 700/800 MHz
- FCC Part 90 Compliance Certification

Law Enforcement Radios must be a model capable of having the following features added if requested.

- Multi-Key
- AES 256 Encryption

Recommended Capabilities.

- Over the Air Rekeying (OTAR)
- P25 Trunking Phase 2 (TDMA)

**Step 3:** Request ID for the radios that will need access to KSICS.

**Step 4:** Contact your vendor for programming of the radio.

**Note:** If you are using Encryption, you must utilize the state encryption template and adhere to the KSICS Encryption Requirements.

The following regional and statewide talkgroups are required in ALL KSICS radios to ensure interoperability. These talkgroups shall be considered the base load for radio equipment while additional local channels can be added.

## 5.1. Regional Talkgroup Information

- Although regional talkgroups are organized by zone, they are available for use statewide.
- Each zone's talkgroups are set up identically to correspond with the position of the channel selector on the radio (the first 8 channels are the same in all zones).
- There are 16 positions on the radio's channel selector knob. (Note: That is not the case with all equipment, especially mobile units).
- The channel is named with the region and zone indicator and then the discipline. Example: SE1-PSAP is the Southeast Region, Zone 1, PSAP talkgroup.
- The Kansas Highway Patrol (KHP) Event channels in each zone are specific to certain towers.
- Use the County listing to find which zone you need to be in to communicate within the appropriate talkgroup, then set your radio to that zone and turn the selector knob to get to the correct channel.
- Listing of the channels in each zone:

**Table 1: Regional Talkgroup Layout (Channel Type)**

| |
|---|
| PSAP |
| MED (Hospitals/Medical) |
| TAC 1 (Tactical) |
| TAC 2 (Tactical) |
| AES (Encrypted) |
| KDEM CALL (Kansas Division of Emergency Management Calling) |
| NWS (National Weather Service for the region specified) |
| Channel 8 and on are KHP event channels specific to that zone |

**Table 2: Regional Talkgroup Layout SE1 – NC8**

| Ch | SE1 | SE2 | KC3 | NE4 | NE5 | NE6 | NC7 | NC8 |
|---|---|---|---|---|---|---|---|---|
| **1** | SE1-PSAP | SE2-PSAP | KC3-PSAP | NE4-PSAP | NE5-PSAP | NE6-PSAP | NC7-PSAP | NC8-PSAP |
| **2** | SE1-MED | SE2-MED | KC3-MED | NE4-MED | NE5-MED | NE6-MED | NC7-MED | NC8-MED |
| **3** | SE1-TAC 1 | SE2-TAC 1 | KC3-TAC 1 | NE4-TAC 1 | NE5-TAC 1 | NE6-TAC 1 | NC7-TAC 1 | NC8-TAC 1 |
| **4** | SE1-TAC 2 | SE2-TAC 2 | KC3-TAC 2 | NE4-TAC 2 | NE5-TAC 2 | NE6-TAC 2 | NC7-TAC 2 | NC8-TAC 2 |
| **5** | SE1-AES | SE2-AES | KC3-AES | NE4-AES | NE5-AES | NE6-AES | NC7-AES | NC8-AES |
| **6** | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL |
| **7** | NWS WICH | NWS WICH | NWS TOP | NWS TOP | NWS TOP | NWS TOP | NWS GOOD | NWS GOOD |
| **8** | H-EVNT-1 | H-EVNT-1 | A-EVNT-1 | A-EVNT-1 | B-EVNT-1 | B-EVNT-1 | C-EVNT-1 | C-EVNT-1 |
| **9** | H-EVNT-2 | H-EVNT-2 | A-EVNT-2 | B-EVNT-1 | B-EVNT-2 | B-EVNT-2 | C-EVNT-2 | C-EVNT-2 |
| **10** | H-EVNT-3 | H-EVNT-3 | A-EVNT-3 | B-EVNT-2 | B-EVNT-3 | B-EVNT-3 | C-EVNT-3 | C-EVNT-3 |
| **11** | | | | B-EVNT-3 | C-EVNT-1 | C-EVNT-1 | D-EVNT-1 | |
| **12** | | | | C-EVNT-1 | C-EVNT-2 | C-EVNT-2 | D-EVNT-2 | |
| **13** | | | | C-EVNT-2 | C-EVNT-3 | C-EVNT-3 | D-EVNT-3 | |
| **14** | | | | H-EVNT-1 | | | | |
| **15** | | | | H-EVNT-2 | | | | |
| **16** | | | | H-EVNT-3 | | | | |

**Table 3: Regional Talkgroup Layout SC9-NW14**

| Ch | SC9 | SC10 | SW11 | SW12 | NW13 | NW14 |
|---|---|---|---|---|---|---|
| **1** | SC9-PSAP | SC10-PSAP | SW11-PSAP | SW12-PSAP | NW13-PSAP | NW14-PSAP |
| **2** | SC9-MED | SC10-MED | SW11-MED | SW12-MED | NW13-MED | NW14-MED |
| **3** | SC9-TAC 1 | SC10-TAC 1 | SW11-TAC 1 | SW12-TAC 1 | NW13-TAC 1 | NW14-TAC 1 |
| **4** | SC9-TAC 2 | SC10-TAC 2 | SW11-TAC 2 | SW12-TAC 2 | NW13-TAC 2 | NW14-TAC 2 |
| **5** | SC9-AES | SC10-AES | SW11-AES | SW12-AES | NW13-AES | NW14-AES |
| **6** | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL | KDEM-CALL |
| **7** | NWS WICH | NWS WICH | NWS DODG | NWS DODG | NWS GOOD | NWS GOOD |
| **8** | C-EVNT-1 | E-EVNT-1 | E-EVNT-1 | E-EVNT-1 | D-EVNT-1 | D-EVNT-1 |
| **9** | C-EVNT-2 | E-EVNT-2 | E-EVNT-2 | E-EVNT-2 | D-EVNT-2 | D-EVNT-2 |

| Ch | SC9 | SC10 | SW11 | SW12 | NW13 | NW14 |
|---|---|---|---|---|---|---|
| **10** | E-EVNT-1 | E-EVNT-3 | E-EVNT-3 | E-EVNT-3 | D-EVNT-3 | D-EVNT-3 |
| **11** | E-EVNT-2 | F-EVNT-1 | | | E-EVNT-1 | |
| **12** | E-EVNT-3 | F-EVNT-2 | | | E-EVNT-2 | |
| **13** | F-EVNT-1 | F-EVNT-3 | | | E-EVNT-3 | |
| **14** | F-EVNT-2 | YODER | | | | |
| **15** | F-EVNT-3 | | | | | |
| **16** | YODER | | | | | |

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## 5.2. Statewide Talkgroups Information

Use of the statewide talkgroups listed in the table below must be requested through the Statewide Interoperability Coordinator (SWIC) / Emergency Communication Section.

Statewide ICS talkgroups -- may be used for multiagency events if expands beyond a sub-region (e.g., Wildland Fire).

Mutual Aid (M/A) 800 and 700 MHz – Using the national interoperability channels listed in the table below.

State – State agency owned talkgroups that can be used with authorization for a major event.

- Kansas Turnpike Authority (KTA)
- State Fire Marshal (SFM)
- Wildlife & Parks (W&P)

**Table 4: Statewide Talkgroup and Mutual Aid Layout**

| Ch | Zone 1-ICS | Zone 2-ICS | South ERT-ICS | North ERT-ICS | M/A 800 | M/A 700 * | M/A 700 ** | STATE |
|---|---|---|---|---|---|---|---|---|
| **1** | KDEM CALL | KDEM CALL | ICS-1 | ICS-11 | 8CALL90 | 7CALL50 | 7CALL70 | KTA South |
| **2** | ICS-1 | ICS-11 | ICS-2 | ICS-12 | 8CALL90D | 7CALL50D | 7CALL70D | KTA North |
| **3** | ICS-2 | ICS-12 | ICS-3 | ICS-13 | 8TAC91 | 7TAC51 | 7TAC71 | KTA Event-1 |
| **4** | ICS-3 | ICS-13 | ICS-4 | ICS-14 | 8TAC91D | 7TAC51D | 7TAC71D | KTA Event-2 |
| **5** | ICS-4 | ICS-14 | ICS-5 | ICS-15 | 8TAC92 | 7TAC52 | 7TAC72 | KTA Event-3 |
| **6** | ICS-5 | ICS-15 | ICS-6 | ICS-16 | 8TAC92D | 7TAC52D | 7TAC72D | SFM INV-1 |
| **7** | ICS-6 | ICS-16 | ICS-7 | ICS-17 | 8TAC93 | 7TAC53 | 7TAC73 | SFM HZM-1 |
| **8** | ICS-7 | ICS-17 | ICS-8 | ICS-18 | 8TAC93D | 7TAC53D | 7TAC73D | SFM SAR-1 |
| **9** | ICS-8 | ICS-18 | ICS-9 | ICS-19 | 8TAC94 | 7TAC54 | 7TAC74 | SFM CMD-1 |
| **10** | ICS-9 | ICS-19 | ICS-10 | ICS-20 | 8TAC94D | 7TAC54D | 7TAC74D | SFM TAC-1 |
| **11** | ICS-10 | ICS-20 | COMMON-1 | COMMON-5 | | 7TAC55 | 7TAC75 | W&P EVT 1 |
| **12** | COMMON-1 | COMMON-5 | COMMON-2 | COMMON-6 | | 7TAC55D | 7TAC75D | W&P EVT 2 |
| **13** | COMMON-2 | COMMON-6 | COMMON-3 | COMMON-7 | | 7TAC56 | 7TAC76 | W&P EVT 3 |
| **14** | COMMON-3 | COMMON-7 | COMMON-4 | COMMON-8 | | 7TAC56D | 7TAC76D | W&P EVT 4 |
| **15** | COMMON-4 | COMMON-8 | COMU | COMU | | | | W&P EVT 5 |
| **16** | COMU | COMU | | | | | | MERG-4 |
| | | | | | | | | |
| | | | | | | * Denotes Primary Calling Channel | | |
| | | | | | | ** Denotes Secondary Calling Channel | | |

### 5.3. Programming Procedures for KSICS Equipment

An Advanced System Key (ASK) is a specialized hardware device used in programming subscriber equipment (radios.) The ASK has predefined security and permissions to prevent unauthorized use of software, programming information, and radio types that access KSICS. Programming capability is only authorized by KDOT to authorized radio shops and infrastructure owners. Key holders are required to complete a programming training delivered by their specific radio manufacturer and may be required by KDOT to show proof of certification or course completion prior to issuance of the ASK. *Computers used for KSICS system level programming are not allowed to connect to the open internet.* Software system keys are not permitted across the KSICS system. ASK holders are held to the highest standards in order to ensure the integrity of the system, the radio equipment, and the first responders that rely on a radio in performance of their duty.

## 6. Baseline System Usage Guidance – Best Practices

Each radio in a shared system, such as the Kansas 800 MHz P25 system, affiliates with one tower site, one Zone Controller, and one talkgroup at a time. Sites are linked by fiber/T-1 lines, phone lines, microwave or LTE, which creates a network of repeated connectivity. Under normal circumstances, the system operates as a Wide Area network, which allows users to communicate not only with others affiliated with the same site, but also with those affiliated with other sites across the network. Users can communicate across cities, counties and even across the state.

The KSICS and the statewide interoperable template give communications capabilities to command and operational personnel responsible for responding to a regional incident requiring multiple jurisdictions and disciplines. It is intended to support multi-agency, multi-jurisdictional communication capabilities when other means of communication are not adequate. KSICS serves as a communication system available to public safety users, state agencies and local agencies who have elected to migrate to it.

1) The following protocols will be utilized when KSICS is activated for interoperability purposes:
    a) NIMS compliant ICS structure will be utilized on the response.
    b) Plain language will be utilized for radio communications in accordance with NIMS standards.
    c) Unit identification will consist of home city or county and agency, to avoid any confusion of units that might share the same identifier.
    d) All radios will operate in a “clear” mode, if encryption capable, unless otherwise directed.

e) The Incident Commander, or Communications Unit Leader (COML) if assigned, will ensure that utilized talkgroups are monitored while in use.

2) The following list is a hierarchy of projected operational needs based on priority, with the first operation holding the highest priority. The list is provided for operational context for use of the KSICS system for interoperability.

a) A large-scale emergency incident requiring multi-agency, multi-jurisdictional response.

b) Everyday response-level communications to emergency or urgent incidents that require mutual aid response from multiple agencies, when other common means of communication are not available.

c) Special event control activities, generally of a pre-planned nature, involving joint participation of two or more agencies.

d) Drill, maintenance, and test exercises.

During operations:

- Notify responding units of the appropriate talkgroups and have the units switch to the designated interoperability resource. Confirm that responding units are operating on the appropriate talkgroup.
- Monitor the talkgroups to address requests as required.
- Monitor the talkgroups for problems that may arise that may require technician intervention, or for system problems.
- When the interoperability resources of KSICS are no longer required, the following deactivation procedures should be followed: An announcement that the KSICS interoperability resources are being operationally deactivated will be made over the talkgroup(s) being utilized. Prior to deactivation of the talkgroups, agencies should ensure that all personnel have returned to their appropriate home systems. After deactivation of the interoperability resources, normal operations may be resumed.

## 6.1. Talkgroup Procedures

- Local incidents should utilize regional, interoperability talkgroups (i.e., PSAP, MED, TAC 1, TAC 2, AES, etc.) for small scale events. Regional talkgroups are listed in Section 5, Tables 1-3.
- Large multi-agency incidents or training should utilize ICS talkgroups (i.e., Zone 1 (ICS-1 through ICS-10, COMMON-1 through COMMON-4, and COMU) and Zone 2 (ICS-11 through ICS-20, COMMON-5 through COMMON-8, and COMU) for larger scale events of longer duration (i.e., more than one day.) ICS talkgroups are listed in Section 5, Table 4.

**ICS Talkgroups are Utilized for Emergency Training/Events**

1. KDEM – Call (KDEM staff duty officer monitored 24/7) (785) 646-2000
2. ICS 1 – ICS 20 (Talkgroups available on-scene incident communications as per direction of Incident Commander)
3. Common 1 – Common 8 (Talkgroups available for Incident command staff only)

**Assigning an ICS Operations Channel**

Assignment of ICS operational channels are made through the Statewide Interoperability Coordinator (SWIC) or the ESF-2 position. Users are to request channel access prior to utilization for training events. Tracking information will be located on the WebEOC Communications calendar. Emergency Channel usage will be coordinated through the ESF-2 and assigned COML. Contact information listed below.

## 6.2. Patching

Patching can have a variety of terms that mean the same thing: (Patching, Bridging, Cross-connect, Gateway Patching, Interconnect, etc.). KSICS is utilized for interoperability with users on the statewide 800 MHz P25 digital trunked radio system. KSICS is not intended to be made interoperable with local level radio systems or cellular systems through the use of patching. Any type of patching of local channels to talkgroups on KSICS is prohibited without prior written authorization of KDOT and KHP. This prohibition includes patching of LMR to LMR and LTE to LMR.

## 6.3. Paging

Paging is accomplished across Kansas in a variety of formats. Currently, a majority of agencies either page requests for services on low band or VHF. Paging has remained relatively unchanged over the last twenty years. As technology advances, new forms of alerting will be included in this guidance. Currently, Quickcall II over P25 and Talkgroup ID paging operations are authorized on KSICS with restrictions. Restrictions include forcing the “paging” talkgroup Ids to sites through the use of critical or requested site access and using fixed equipment to affiliate paging talkgroup Ids to a site. For additional paging guidance on KSICS contact ksics_encryption@ks.gov .

## 6.4. Encryption

KSICS is built on the Project 25 (P25) standard; therefore, this policy recommends the use of P25 encryption, standards-based security solution using NIST FIPS 140-2/197 compliant Advanced Encryption Standard (AES) 256-bit to ensure the highest level of secure communication and interoperable communications. AES, Data Encryption Standard (DES) and Motorola Advanced Digital Privacy (ADP) are the most common algorithms used today. Agencies that continue use of RC4/ADP, AES 128 or DES algorithms should consider a plan transitioning to AES 256 in the future. All new KSICS encrypted talkgroups will be AES only and assigned as secure only. National Interoperability keys continue to operate with both AES 256 and DES algorithms.

It is important to note that AES 256 is the only algorithm that is recognized by the Department of Homeland Security’s P25 Compliance Assessment Program (P25 CAP), which sets the requirements for grant eligible equipment. This means that to be compliant with P25 CAP requirements, radios must:

1. Have no encryption; or
2. Have AES 256 (for U.S. agencies only); or
3. Have AES 256 along with any other non-standard encryption algorithms.

Additional information can be found at https://www.dhs.gov/science-and-technology/approved-grant-eligible-equipment

The following Common Key Reference (CKR) / Storage Location Number (SLN) tables for Kansas are designated for the AES 256 algorithm and must be followed.

**Table 5: State of Kansas CKR/SLN Plan**

| STATE OF KANSAS ENCRYPTION SLN/CKR PLAN | | |
|---|---|---|
| **SE1** | | |
| COUNTY | CO # | SLN/CKR |
| Allen | 1 | 1460-1469 |
| Bourbon | 6 | 1470-1479 |
| Cherokee | 11 | 1480-1489 |
| Crawford | 19 | 1490-1499 |
| Labette | 50 | 1500-1509 |
| Neosho | 67 | 1510-1519 |
| **SE2** | | |
| COUNTY | CO # | SLN/CKR |
| Chautauqua | 10 | 1520-1529 |
| Elk | 25 | 1530-1539 |
| Greenwood | 37 | 1540-1549 |
| Montgomery | 63 | 1550-1559 |
| Wilson | 103 | 1560-1569 |
| Woodson | 104 | 1570-1579 |
| **KC3** | | |
| Johnson | 46 | 1580-1589 |
| Leavenworth | 52 | 1590-1599 |
| Wyandotte | 105 | 1600-1609 |
| MARC (MARRS) | | 1420-1439 |
| **NC7** | | |
| Cloud | 15 | 1610-1619 |
| Jewell | 45 | 1620-1629 |
| Mitchell | 62 | 1630-1639 |
| Osborne | 71 | 1640-1649 |
| Republic | 79 | 1650-1659 |
| Smith | 92 | 1660-1669 |

| STATE OF KANSAS ENCRYPTION SLN/CKR PLAN | | |
|---|---|---|
| **NC8** | | |
| COUNTY | CO # | SLN/CKR |
| Clay | 14 | 1670-1679 |
| Dickinson | 21 | 1680-1689 |
| Ellsworth | 27 | 1690-1699 |
| Lincoln | 53 | 1700-1709 |
| Ottawa | 72 | 1710-1719 |
| Saline | 85 | 1720-1729 |
| **SC9** | | |
| Barton | 5 | 1730-1739 |
| Edwards | 24 | 1740-1749 |
| Harvey | 40 | 1750-1759 |
| Marion | 57 | 1760-1769 |
| McPherson | 59 | 1770-1779 |
| Pawnee | 73 | 1780-1789 |
| Reno | 78 | 1790-1799 |
| Rice | 80 | 1800-1809 |
| Stafford | 93 | 1810-1819 |
| **NE4** | | |
| Anderson | 2 | 1820-1829 |
| Chase | 9 | 1830-1839 |
| Coffey | 16 | 1840-1849 |
| Franklin | 30 | 1850-1859 |
| Linn | 54 | 1860-1869 |
| Lyon | 56 | 1870-1879 |
| Miami | 61 | 1880-1889 |
| Morris | 64 | 1890-1899 |
| Osage | 70 | 1900-1909 |
| **NE5** | | |
| Douglas | 23 | 1910-1919 |
| Geary | 31 | 1920-1929 |
| Shawnee | 89 | 1930-1939 |
| Wabaunsee | 99 | 1940-1949 |

| STATE OF KANSAS ENCRYPTION SLN/CKR PLAN | | |
|---|---|---|
| **NE6** | | |
| COUNTY | CO # | SLN/CKR |
| Atchison | 3 | 1950-1959 |
| Brown | 7 | 1960-1969 |
| Doniphan | 22 | 1970-1979 |
| Jackson | 43 | 1980-1989 |
| Jefferson | 44 | 1990-1999 |
| Marshall | 58 | 2020-2029 |
| Nemaha | 66 | 2030-2039 |
| Pottawatomie | 75 | 2040-2049 |
| Riley | 81 | 2330-2339 |
| Washington | 101 | 2610-2619 |
| **SC10** | | |
| Barber | 4 | 2050-2059 |
| Butler | 8 | 2060-2069 |
| Comanche | 17 | 2070-2079 |
| Cowley | 18 | 2080-2089 |
| Harper | 39 | 2090-2099 |
| Kingman | 48 | 2100-2109 |
| Kiowa | 49 | 2110-2119 |
| Pratt | 76 | 2120-2129 |
| Sedgwick | 87 | 2130-2139 |
| Sumner | 96 | 2140-2149 |
| **SW11** | | |
| Clark | 13 | 2150-2159 |
| Ford | 29 | 2001-2010 / 2550-2555 |
| Grant | 34 | 2170-2179 |
| Gray | 35 | 2180-2189 |
| Haskell | 41 | 2190-2199 |
| Hodgeman | 42 | 2200-2209 |
| Meade | 60 | 2210-2219 |
| Morton | 65 | 2220-2229 |
| Seward | 88 | 2230-2239 |
| Stanton | 94 | 2240-2249 |
| Stevens | 95 | 2250-2259 |

| STATE OF KANSAS ENCRYPTION SLN/CKR PLAN | | |
|---|---|---|
| **SW12** | | |
| COUNTY | CO # | SLN/CKR |
| Finney | 28 | 2260-2269 |
| Greeley | 36 | 2270-2279 |
| Hamilton | 38 | 2280-2289 |
| Kearny | 47 | 2290-2299 |
| Lane | 51 | 2300-2309 |
| Scott | 86 | 2310-2319 |
| Wichita | 102 | 2320-2329 |
| **NW13** | | |
| Ellis | 26 | 2600-2609 |
| Graham | 33 | 2340-2349 |
| Ness | 68 | 2350-2359 |
| Norton | 69 | 2360-2369 |
| Phillips | 74 | 2370-2379 |
| Rooks | 82 | 2380-2389 |
| Rush | 83 | 2390-2399 |
| Russell | 84 | 2400-2409 |
| Trego | 98 | 2410-2419 |
| **NW14** | | |
| Cheyenne | 12 | 2420-2429 |
| Decatur | 20 | 2430-2439 |
| Gove | 32 | 2440-2449 |
| Logan | 55 | 2450-2459 |
| Rawlins | 77 | 2460-2469 |
| Sheridan | 90 | 2470-2479 |
| Sherman | 91 | 2480-2489 |
| Thomas | 97 | 2490-2499 |
| Wallace | 100 | 2500-2509 |
| **TRIBAL** | | |

| STATE OF KANSAS ENCRYPTION SLN/CKR PLAN | | |
|---|---|---|
| Sac and Fox | | 2510-2519 |
| Iowa | | 2520-2529 |
| Kickapoo | | 2530-2539 |
| Potawatomi | | 2540-2549 |
| **STATE OF KANSAS** | | |
| State of Kansas | 0 | 1440-1459 |
| **SE REGIONAL** | | |
| REGIONAL | CKR/SLN | |
| INTEROP 1 | 2556 | |
| INTEROP 2 | 2557 | |
| INTEROP 3 | 2558 | |
| INTEROP 4 | 2559 | |
| INTEROP 5 | 2560 | |
| **KC REGIONAL** | | |
| REGIONAL | CKR/SLN | |
| INTEROP 1 | 2561 | |
| INTEROP 2 | 2562 | |
| INTEROP 3 | 2563 | |
| INTEROP 4 | 2564 | |
| INTEROP 5 | 2565 | |
| **NE REGIONAL** | | |
| REGIONAL | CKR/SLN | |
| INTEROP 1 | 2566 | |
| INTEROP 2 | 2567 | |
| INTEROP 3 | 2568 | |
| INTEROP 4 | 2569 | |
| INTEROP 5 | 2570 | |
| **NC REGIONAL** | | |
| REGIONAL | CKR/SLN | |
| INTEROP 1 | 2571 | |
| INTEROP 2 | 2572 | |
| INTEROP 3 | 2573 | |
| INTEROP 4 | 2574 | |
| INTEROP 5 | 2575 | |
| **SC REGIONAL** | | |
| REGIONAL | CKR/SLN | |
| INTEROP 1 | 2576 | |
| INTEROP 2 | 2577 | |
| INTEROP 3 | 2578 | |

| | |
|---|---|
| INTEROP 4 | 2579 |
| INTEROP 5 | 2580 |
| **SW REGIONAL** | |
| REGIONAL | CKR/SLN |
| INTEROP 1 | 2581 |
| INTEROP 2 | 2582 |
| INTEROP 3 | 2583 |
| INTEROP 4 | 2584 |
| INTEROP 5 | 2584 |
| **NW REGIONAL** | |
| REGIONAL | CKR/SLN |
| INTEROP 1 | 2586 |
| INTEROP 2 | 2587 |
| INTEROP 3 | 2588 |
| INTEROP 4 | 2589 |
| INTEROP 5 | 2590 |

**For further information on Encryption, please contact the Kansas SWIC:**

Jason Bryant, Statewide Interoperability Coordinator, State of Kansas

785-452-0974 or email jason.bryant@ks.gov

**For further information on SLN/CKR, KID assignments, please contact the KDOT:**

ksics_encryption@ks.gov

## 6.5. Dispatch Center Responsibility

Each PSAP across Kansas currently has a KSICS radio and should be monitoring for emergencies and monthly roll call checks on the 1st Monday of each month.

## 6.6. Reduced System Performance with KSICS

In the event of communications failure, resulting in the inability to receive or transmit, the following procedure will be followed:

1. Users should contact their local radio department for assistance.
2. In the event of a KSICS system scheduled outage, notification should be made in advance to users affected.
3. In the event of a non-scheduled KSICS outage, users may experience conditions such as Out-of-Range, Site Trunking or Failsoft.
4. Information on system outages and updates can be obtained by emailing here - ksics_encryption@ks.gov

***Non-Scheduled KSIC Outages:***

Out-of-Range indication on the radio indicates the inability to access the communications towers. This condition can be a multitude of different causes:

- Power Outage
- Non-Line of Sight communications
- Incorrect talkgroup affiliation
- Subscriber unit failure
- Weather

***Site Trunking***

Site Trunking is probably the most misunderstood component of the statewide 800 MHz system and of any shared communication system. When the system goes into Site Trunking, many users think that the radio system is down. This is an inaccurate perception. When the radio system goes into Site Trunking, it is still working, but with reduced wide-area capabilities.

Even though the system is working as designed, a system in Site Trunking can frustrate users out in the field and in the dispatch center. A clear understanding of Site Trunking concepts and practices will alleviate some of that frustration and can help users recognize when their radio goes into that mode.

## 6.7. Broadband

Broadband is, for the purpose of this document defined as Cellular Push to Talk Data services to include WAVE and FIRSTNET PTT services.

The chart below identifies interoperability ZONE 6 of the Broadband PTT template, as recommended by the SIAC for disaster and event response.

| BROADBAND ZONE 6 TALKGROUPS | |
|---|---|
| **ZONE NAME** | **ZONE 6** |
| Channel 1 | COMU |
| Channel 2 | ICS-1 |
| Channel 3 | ICS-2 |
| Channel 4 | ICS-3 |
| Channel 5 | ICS-4 |
| Channel 6 | ICS-5 |
| Channel 7 | ICS-11 |
| Channel 8 | ICS-12 |
| Channel 9 | ICS-13 |
| Channel 10 | ICS-14 |
| Channel 11 | ICS-15 |
| Channel 12 | BF-KS-TAC51 |
| Channel 13 | BF-KS-TAC52 |
| Channel 14 | BF-KS-TAC53 |
| Channel 15 | BF-KS-TAC54 |
| Channel 16 | BF-KS-TAC55 |

### 6.8. LTE to LMR

LTE to LMR utilizes a cloud-based connection between KSICS and LTE devices through an approved application. The use of this technology on KSICS is relatively new and has been determined **NOT** to be considered public safety grade for mission critical communications.

The KSICS system administrator and Kansas Highway Patrol shall approve ALL connections via LTE to KSICS talkgroups. No unauthorized connections to the KSICS system or talkgroups will be allowed without written prior authorization.

## 7. Requesting Resources

When requesting additional KSICS resources, it is important to identify the gap or current problem instead of specific resources needed. One example is a tower site on wheels. While a tower site on wheels is extremely useful for existing degraded or dark sites, it may not be the appropriate solution for every scenario.

Requests start at the Emergency Manager of the County and then progress to the State Emergency Operations Center (SEOC). At that point the request is routed to the SWIC / ESF2 lead for need determination.

## 8. Applicable Policies and Documents

### 8.1. Kansas Field Operations Guide

**For Android Devices**

Intentional separation to help scanner

**For Apple Devices**

### 8.2. KSICS End User Agreement *(Example)*

**KANSAS DEPARTMENT OF TRANSPORTATION**

**COMMUNICATION SYSTEM INFRASTRUCTURE RADIO SHARED-USER FOR TALKGROUPS AGREEMENT**

THE PARTIES to this Agreement are the Secretary of the Kansas Department of Transportation (Secretary) acting by and through the Kansas Department of Transportation (KDOT) and Thomas County, (Shared-User), collectively referred to as the Parties.

## I. AUTHORITY FOR AGREEMENT

A The Secretary has authority to enter into agreements to effect the purposes of K.S.A. 2007 Supp. 75-5073 *et seq.*

B. The Secretary entered into a Memorandum of Understanding with the Kansas Highway Patrol (KHP) dated September 15, 2008 (MOU) which authorizes KDOT to enter into agreements with Public Safety Agencies as defined by K.S.A. 2007 Supp. 75-5073(e) to use KHP 800 MHz EVENT Talkgroups in accordance with this Agreement.

C. Shared-User is a public safety agency as defined by K.S.A. 2007 Supp. 75 5073(e)

## II. PURPOSE OF AGREEMENT

The Secretary owns and maintains an 800 MHz P25 digital radio system (System) and is licensed by the Federal Communications Commission (FCC) to operate the System in Kansas. The Secretary allows certain users to share the System for public safety purposes.

## III. DEFINITIONS

A. Talkgroup. A Talkgroup is an assigned radio channel that multiple users are given to conduct necessary communications.

## IV. SECRETARY'S RESPONSIBILITIES:

The Secretary will:

A. Maintain a license pursuant to 47 C.F.R. §90.603(b) (2006).

B. Keep this Agreement as part of the Site's records until the Agreement is terminated for any reason by either the Secretary or the Shared-User.

C. Be responsible for the costs of maintaining and operating the System.

## V. SHARED-USER'S RESPONSIBILITIES:

Shared-User shall:

A. Meet and maintain the requirements of eligibility for a license under 47 C.F.R. §90.603 and 47 CFR Subparts B or C (2006).

B. Be responsible for the cost of acquisition and maintenance of any additional radio equipment required to meet shared user's needs on the System.

C. Ensure any equipment provided pursuant to Paragraph V.B. complies with KDOT technical and performance standards that are intended to provide for reliable operation and prevent interference with the System by other users.

D. Report immediately to the Secretary or the Secretary's authorized

representative any incident that causes loss of control of any radio communication equipment operating on any System Talkgroup.

E. Not cross-connect any KHP Talkgroup or other user Talkgroup without prior written consent from KDOT and KHP.

F. When using a KHP Talkgroup:

1. Limit transmissions on KHP Operational Talkgroups (Car to Station) to emergency transmissions only.
2. Limit transmission on KHP Event Talkgroups to emergency situations absolutely necessary for public safety related activities.
3. Limit transmission on KHP Direct Talkgroups (Car to Car) to those situations absolutely necessary for law enforcement related activities.
4. Not interfere with KHP Communication Center radio traffic.
5. Use plain language for all transmissions, emergencies or critical incidents.
6. Monitor its use of KHP Talkgroups and correct any inappropriateness.

## VI. PARTIES MUTUALLY AGREE:

A. The Secretary makes no warranty and assumes no liability with respect to the programming of the Shared-User's radio equipment and the operational capability of the System.

B. To follow the operating requirements set forth in 47 C.F.R. § 90.403, and 47 C.F.R. Subpart N.

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# 9. Training/Exercise

It is recommended by the State of Kansas that all public safety agencies incorporate the use of the KSICS system in all trainings and exercises when appropriate and feasible and utilize the Emergency Communications Section training staff if needed.

# 10. Updates & Revisions

## Responsibilities of the Statewide Interoperability Advisory Committee (SIAC)

The SIAC has the responsibility to ensure this SOP is reviewed annually at a minimum. Requests for modifications or additions to this document should be submitted to the SIAC Point of Contact (POC) for distribution. Updates to this document can be recommended by any of the participating agencies.

The SIAC and its sub-committees will:

- Establish recommended training requirements in support of the SOP.
- Ensure that the SOP is maintained and updated at regular intervals, or as critical updated information is identified.
- Disseminate updated plans to all participating agencies.
- Promote interoperable communications capabilities through trained communications personnel.
- Promote regular interoperable equipment/solutions testing, assist agencies with test evaluations, and dissemination of the results.
- Re-evaluate regional requirements as technology evolves and circumstances dictate.
- Review communications related SOPs created by the included agencies, to preclude conflicts or non-compliance with current standards or initiatives.
- Governance structure will be established to ensure that legal, operational, technical, training, and funding issues are addressed.

**SIAC POC:**

| | |
|---|---|
| Name: | Jason E. Bryant |
| Title: | SWIC/SIAC Chair |
| Address: | 2808 N. New York, Wichita, KS 67214 |
| Cell Phone: | 785-452-0974 |
| 24/7 Phone: | 785-646-2000 |
| E-Mail: | jason.bryant@ks.gov |

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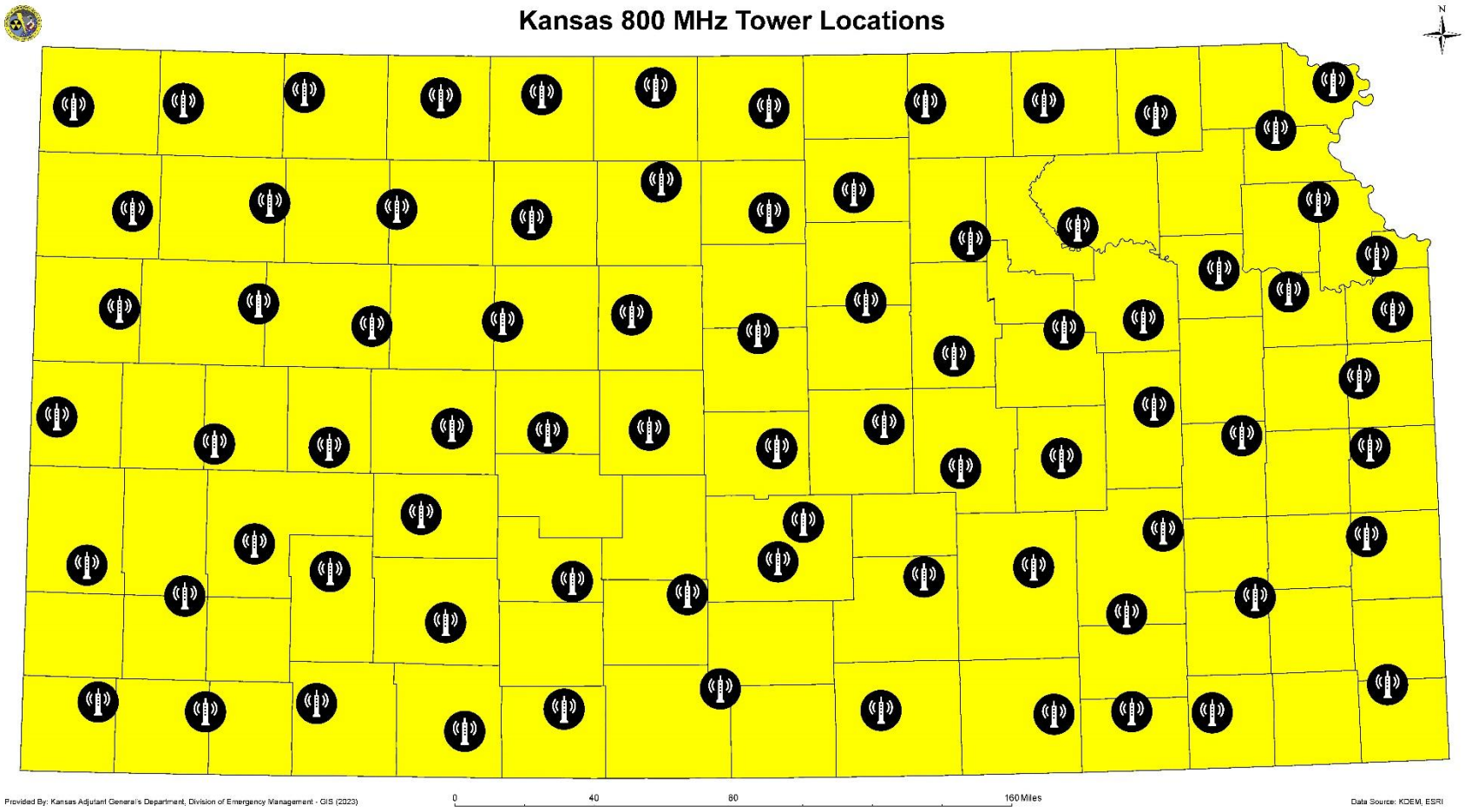
# Appendix A  KSICS STATEWIDE TOWER MAP

**Figure A - 1: KSICS (State Owned) Tower Map**



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# Appendix B KSICS REGIONAL LAYOUT


**Figure B – 1: Northeast Kansas Mutual Aid Channels**

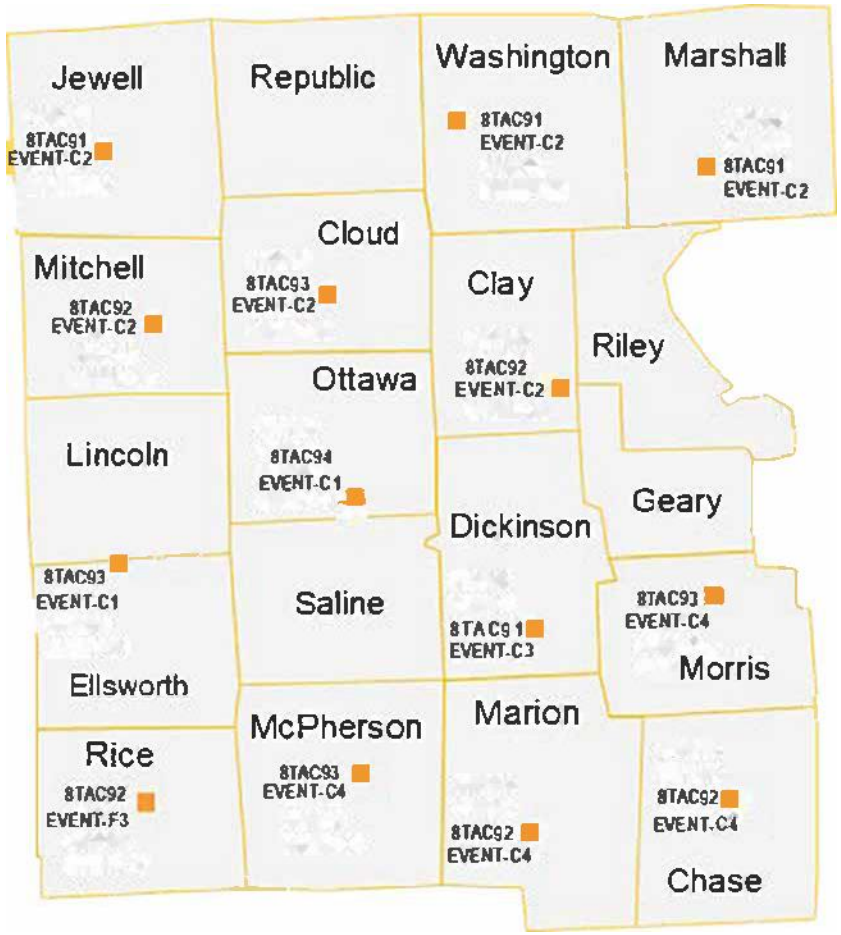


**Figure B – 2: North Central Kansas Mutual Aid Channels**

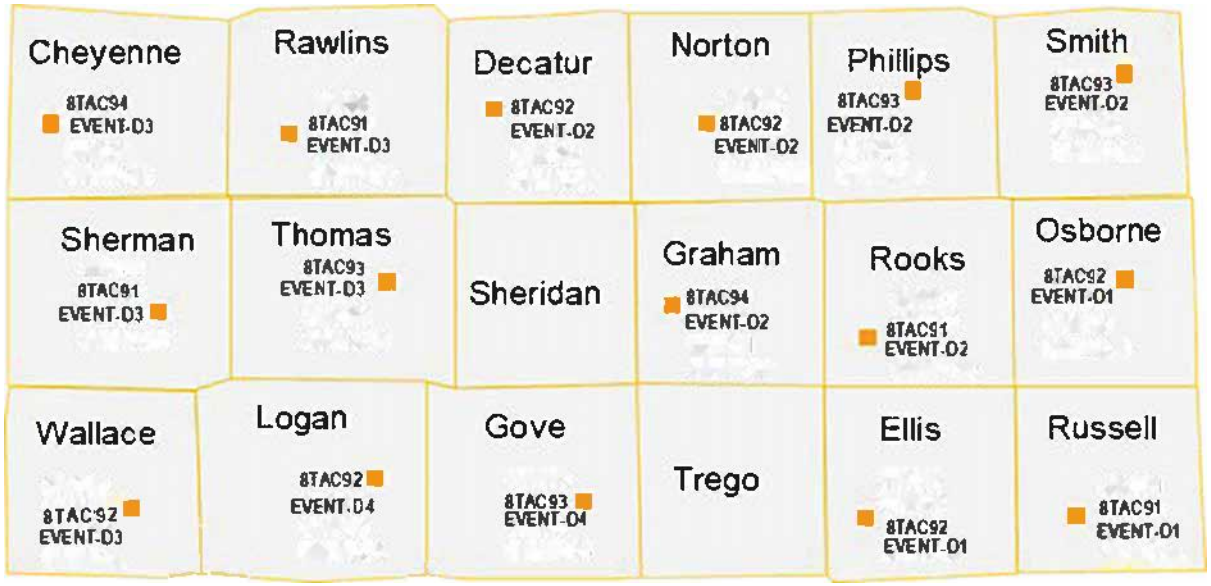


**Figure B – 3: Northwest Kansas Mutual Aid Channels**

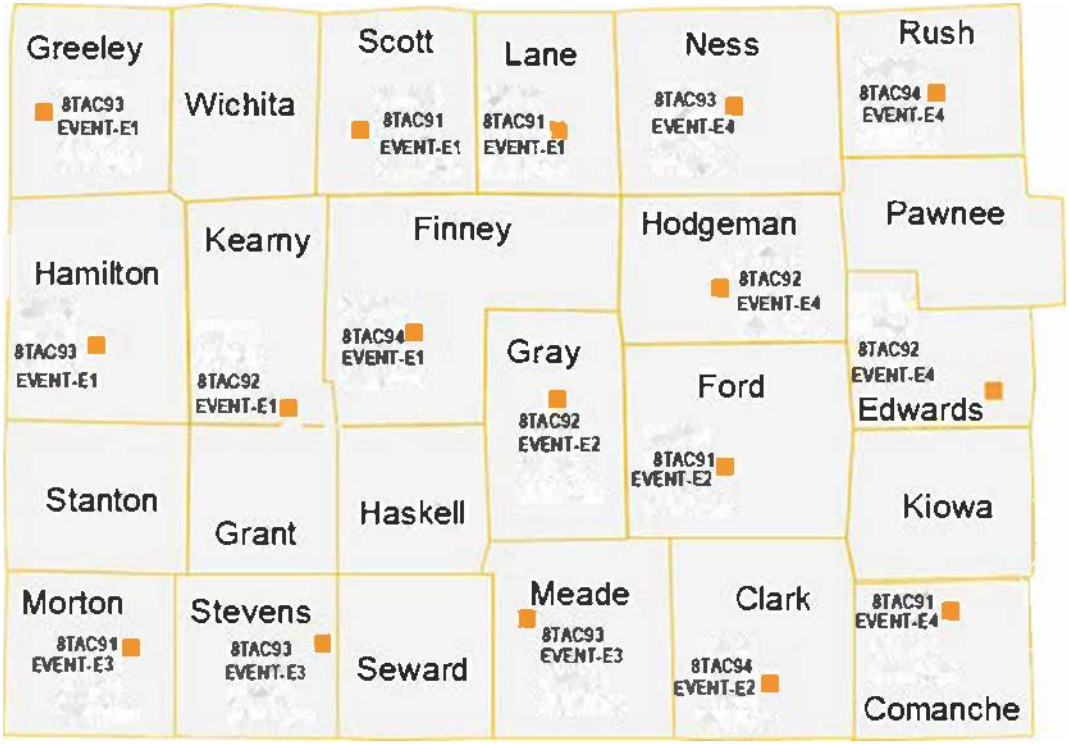


**Figure B – 4: Southwest Kansas Mutual Aid Channels**

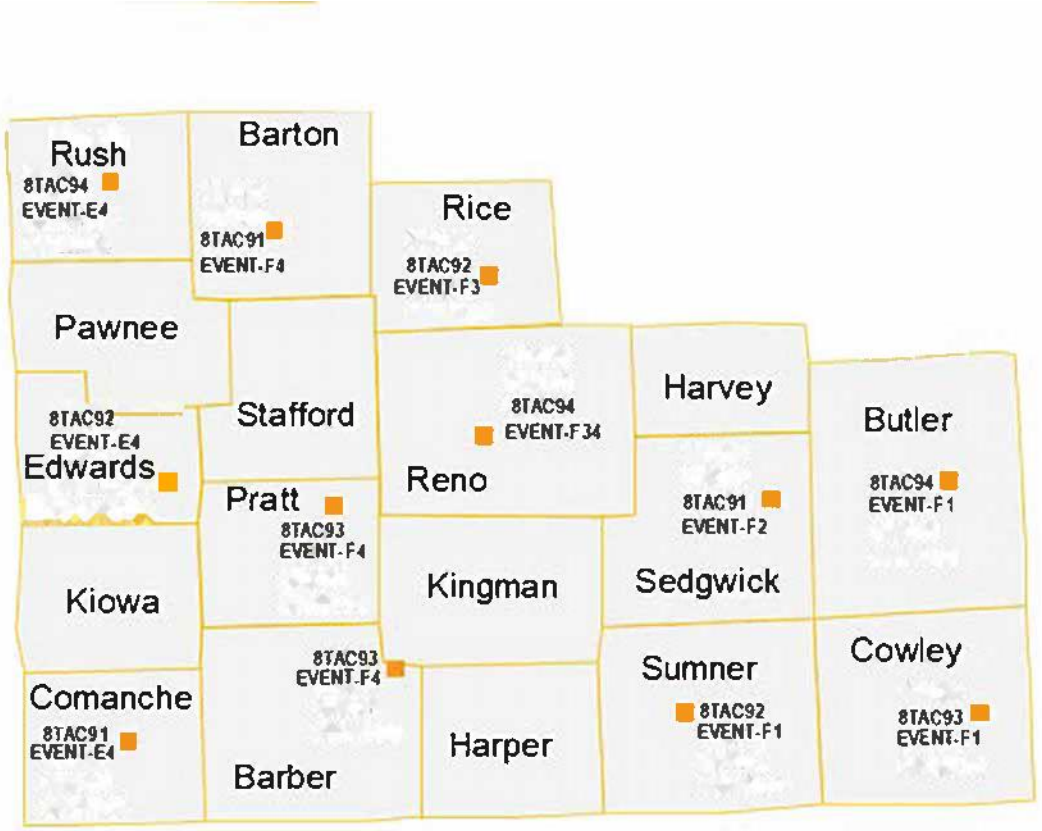


**Figure B – 5: South Central Kansas Mutual Aid Channels**


**Figure B – 6: Southeast Kansas Mutual Aid Channels**

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# Appendix D Glossary

| Item/Acronym | Definition |
|---|---|
| ADP | Advanced Digital Privacy |
| AES | Advanced Encryption Standard |
| ASK | Advanced System Key |
| CAP | Compliance Assessment Program |
| CISA | Cybersecurity and Infrastructure Security Agency |
| CKR | Common Key Reference |
| COML | Communications Unit Leader |
| COMU | Communications Unit |
| DES | Data Encryption Standard |
| EMS | Emergency Medical Services |
| FCC | Federal Communication Commission |
| IC | Incident Command |
| ICS | Incident Command System |
| ICTAP | Interoperable Communications Technical Assistance Program |
| ID | Identification |
| KDEM | Kansas Division of Emergency Management |
| KDOT | Kansas Department of Transportation |
| KHP | Kansas Highway Patrol |
| KID | Key ID |
| KTA | Kansas Turnpike Authority |
| LTE | Long Term Evolution |
| MHz | Abbreviation for megahertz. 5 MHz = 5,000,000 Hz or 5,000 kHz. |
| MOU | Memorandum of Understanding |
| NECP | National Emergency Communications Plan |
| NIMS | National Incident Management System |
| NPSTC | National Public Safety Telecommunications Council |
| NTIA | National Telecommunications and Information Administration |
| NWS | National Weather Service |
| OTAR | Over the Air Rekeying |
| P25 | Project 25 |

| Item/Acronym | Definition |
|---|---|
| POC | Point of Contact |
| PSAP | Public Safety Answering Point |
| PTT | Push to Talk |
| SFM | State Fire Marshal |
| SIAC | Statewide Interoperability Advisory Committee |
| SLN | Storage Location Number |
| SOP | Standard Operating Procedure |
| SWIC | Statewide Interoperability Coordinator |
| UHF | Ultra-High Frequency – Range of 300 to 3,000 MHz. For public safety LMR, usually refers to two bands. 380 to 460 MHz (low) and 460 to 512 MHz (high). |
| VHF | Very High Frequency – For public safety LMR, usually refers to VHF High Band with a range of 136 to 164 MHz. VHF Low Band has a frequency range below 100 MHz. |
| W&P | Wildlife & Parks |