November 7, 2018

Dear Member of the Texas Legislature,

The Texas Department of Public Safety in cooperation with the Texas Interoperable Communications Coalition, and other key local, state and tribal stakeholders, is pleased to report Texas’ progress toward public safety communications interoperability. In accordance with Texas Government Code Section 421.098, on behalf of the Office of the Governor, the Annual Report on Interoperable Communications is provided for your review and information at: http://www.dps.texas.gov/LawEnforcementSupport/communications/interop/index.htm

Highlights of the report include:

- Texas opted in to FirstNet Public Safety Broadband Network on September 19, 2017. (pg. 6)
- The Training Strategic Advisory Group offered local and state agencies the opportunity to attend multiple sessions of the Basic Radio Interoperability webinar based training. (pg. 7)
- The Texas Statewide Interoperability Channel Plan (TSICP) was updated, including new Federal Interoperable channels and Air to Ground channels. The TSICP included a new MOU with adoption by over 181 agencies to date. (pg. 8)

The 24 Texas Regional Councils of Government (COGs) and 3 tribal nations were each asked to complete a Focus Group Workbook, which provided greater clarity and details regarding public safety communications needs and accomplishments within each region.

With continued cuts in federal grant funding for these purposes, there will be significant impact on public safety communications interoperability for state, local and tribal responders across Texas.

Should you have questions or require additional information, please contact us.

Respectfully submitted,

Steve C. McCraw
Director
EXECUTIVE SUMMARY

The citizens of Texas rely on and expect emergency responders to arrive quickly to a scene and be ready to help them during a day-to-day incident or emergency. Texans are fortunate to have an impressive force of over 5,300 emergency response agencies that respond daily to emergencies and life-threatening incidents throughout Texas. However, for decades, inadequate and unreliable public safety communications systems have compromised the ability of emergency responders\(^1\) across Texas and the Nation to perform their mission critical duties – saving the lives and property of Texans.

This report highlights the planning, effectiveness, funding and accomplishments of interoperable communications in Texas for years 2016 and 2017.

Planning - The Texas Interoperable Communications Coalition adopted an updated Statewide Communications Interoperability Plan (SCIP)

Effectiveness- The reported Level of Interoperability across Texas increased from 3.85 to 3.87

Funding - The federal grant funding spent toward interoperable communications in the State of Texas for 2016 was $8,045,197.72 and $9,909,370.35 in 2017.

Accomplishments - The Texas Department of Public Safety and the regional Councils of Governments and Tribal Nations reported many accomplishments toward interoperability in 2016 and 2017.

\(^1\) The term ‘emergency responders’ refers to persons from the broad public safety and first responder community, including but not limited to: law enforcement, fire, emergency medical services, emergency management, transportation, public works, and hospitals.
CONTENTS

Statewide Communications Interoperability Plan (SCIP) ................................................................. 4
The Current Status of Voice Communications Interoperability in Texas ........................... 5
Expenditures toward Interoperability ................................................................................................... 5
Accomplishments toward Interoperability ............................................................................................ 6
Appendix: Voice Radio Communications Interoperability Levels Across Texas ..................... 11

REPORT PREPARED BY:
TEXAS DEPARTMENT OF PUBLIC SAFETY
PUBLIC SAFETY COMMUNICATIONS SERVICE

CONTACT: TODD EARLY
STATEWIDE INTEROPERABILITY COORDINATOR (SWIC)
(512) 424-2121
TODD.EARLY@DPS.TEXAS.GOV
Statewide Communications Interoperability Plan (SCIP)

The Statewide Interoperability Coordinator (SWIC) in consultation with the Texas Interoperable Communications Coalition (TxICC) performs as a broad group of members who work on public safety communications interoperability planning. The TxICC was specifically constituted to examine communication problems across Texas and identify cohesive solutions to address them through the Statewide Communications Interoperability Plan (SCIP). The TxICC established a SCIP Executive Council (SEC) consisting of one delegate from each Council of Governments (COG) region, the three Tribal Nations, and one State Agency representative to serve as the official voting members of TxICC to vote on items such as new versions of the SCIP. The SCIP is a tool developed by the U.S. Department of Homeland Security (DHS) and is used across the nation to assist the public safety community in identifying goals and initiatives to improve public safety communications.

TxICC representatives use the SCIP to help their respective communities improve public safety communications by prioritizing resources, strengthening governance, and educating and informing local, Tribal, and State elected officials and stakeholders of the importance of public safety communications and the need to continue funding it.

On a routine basis, the SWIC Office conducts a SCIP workshop to review existing goals and initiatives, develop new initiatives, and to set priorities for the following year. After updates are made to the SCIP, the TxICC holds its annual conference to review and vote on the new SCIP and discuss other important public safety communications issues and updates.

The latest version of the SCIP is posted on the Texas Department of Public Safety website. 
http://www.dps.texas.gov/LawEnforcementSupport/communications/interop/documents/texasSCIP.pdf

**REGIONAL INTEROPERABLE COMMUNICATIONS PLANS**

In 2011 the TxICC developed the original Regional Interoperability Communications Plans (RICP) to document public safety communications needs, create technical implementation and migration plans and identify the associated costs to meet those unique needs within each COG. These plans are maintained by each COG/Tribe and reviewed on a regular basis. Through their annual Regional Focus Group Workshop, COGs and Tribes bring together public safety responders to discuss and document progress on their RICPs and the SCIP, as well as priorities, accomplishments, challenges and needs.

The SWIC Office is working with the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Technical Assistance program providing workshops to
review and update RICPs. One multi-day workshop was completed in 2017 for the Rio Grande Valley COG, and three additional COGs will hold workshops in 2018.

### The Current Status of Voice Communications Interoperability in Texas

The Texas Statewide Communications Interoperability Maturity Model is based on the SAFECOM Interoperability Continuum. The model outlines the evolution from the lowest level to the highest level of communications interoperability (Level One – least interoperable to Level Five – most interoperable). In the Appendix, the map of Texas highlights the current status of each county regarding their level of interoperability in the “Voice Technology” lane of the model. The status is indicated by the individual colors associated with the five levels of interoperability. The information was obtained directly from the 24 COGs through a survey submitted to TxDPS. As the map indicates, Texas has achieved a high Level Three wireless communications interoperability rating on average.

### Expenditures toward Interoperability

Texas jurisdictions spent $8,045,197.72 in 2016 and $9,909,370.35 in 2017 towards equipment for interoperability. The Office of the Governor Homeland Security Grants Division distributes funding for interoperable communications technology purchases including infrastructure and equipment. There is no known centralized repository itemizing local communications operability/interoperability funding sources, amounts, and expenditures.

These amounts do not include expenditures on the development of standard operating procedures, training and exercises conducted, or funding for strategy and governance development, which are also critical elements of emergency response communications. The importance of these elements is further highlighted in the DHS SAFECOM Continuum². The Office of the Texas SWIC and the Homeland Security Grants Division work closely together. Each communications equipment purchase request is forwarded to the SWIC Office for review against the SCIP goals and initiatives.

---

² [https://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2.pdf](https://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2.pdf)
Accomplishments toward Interoperability

Representatives from the Texas emergency response community have been working together to overcome the identified communications challenges through the Texas Interoperable Communications Coalition (TxICC) since 2007. The TxICC is the State interoperability governance body and is responsible for planning and oversight of emergency communications interoperability throughout Texas. Outlined below are some of the achievements made through the TxICC, TxDPS and across the State in 2016 and 2017.

TxICC / Statewide Accomplishments

- **Texas opted in to FirstNet Public Safety Broadband Network on September 19, 2017.**
- Updates were made to the Texas Statewide Communications Interoperable Plan (SCIP) in coordination with the SCIP Executive Council (SEC) and obtained full SEC approval in both 2016 and 2017.
- **Buildout of emergency communications and mutual-aid capabilities have continued via:**
  - Disaster Communications: TxDPS and local jurisdictions continue to collaborate on the development and enhancement of deployable emergency communications equipment and communications response teams. Texas is ensuring disaster communications capabilities with strategically-located equipment and teams that can be quickly deployed to emergency incident sites.
  - State and local mutual-aid assets: Capabilities are recorded in the Communications Assets Survey and Mapping databases for emergency pre-planning efforts.

TxDPS Communications Emergency Operations Team (CEOT):

- **2016:** CEOT completed 23 deployments, including 15 deployments supporting TxDPS Task Force and Special Operations, and organizing and/or participating in six table top and in-person exercises to practice communications set up and usage during emergencies.
- **2017:** CEOT completed 30 deployments, including event support, several deployments to support Hurricane Harvey, and organizing and/or participating in four exercises to practice communications set up and usage during emergencies.

Communications Training Courses offered by TxDPS and OEC:

- **2016:**
  - One Auxiliary Communications class
  - One Radio Operator class
  - Two Communications Technician classes
  - Three Communications Unit Leader classes

- **2017:**
  - One Auxiliary Communications class
  - Two Communications Technician classes
  - Six Communications Unit Leader classes
Strategic Advisory Groups (SAGs):

SAGs are comprised of representatives from the TxICC and were established to achieve goals and initiatives outlined in the SCIP. The SAGs are outlined below:

- **System of Systems SAG**
  To achieve this vision and enable responders to better protect the lives and property of Texans, TxDPS, the TxICC, the 24 Texas COGs, and State agencies that use public safety radios formed a SAG to outline a “system-of-systems” approach. This approach consists of multiple regional emergency communications systems networked for coverage and interoperability when needed. The SAG completed the System-of-Systems Executive Summary document, which outlines a variety of interoperability options and presents a high-level methodology to manage the environment on an ongoing basis.

- **Texas Statewide Interoperable Channel Plan (TSICP) SAG**
  The SWIC Office re-engaged the TSICP SAG to update to the TSICP in 2016 and 2017. Changes include:
  - Updated statewide coordinated P25 radio unit identification plan guidance;
  - Added Federal UHF and VHF Interoperability Channels;
  - Added a reminder that fixed base repeaters operate as secondary use for all interoperability frequencies;
  - Added new 700 MHz Air-to-Ground Channels;
  - Updated the MOU to incorporate the federal interop channels; and
  - Updated section headings to match with National Interoperable Field Operations Guide (NIFOG) color shading for more consistency.

- **Tribal SAG**
  The Tribal SAG is comprised of partners from the three federally-recognized tribes in Texas. This Strategic Advisory Group was very active, with regular monthly meetings to discuss the FirstNet initiative, unique challenges to communications and interoperability from a tribal perspective. A major accomplishment of this SAG is the compilation of the Tribes of Texas Report which is written with the consensus of the three tribes. The report outlines the challenges, objectives and initiatives of the public safety broadband initiative from a Texas tribal perspective. It showcases the engagement, partnership and leadership that the Texas tribal partners are providing to FirstNet, communications and interoperability in Texas.

- **Social Media SAG**
  The Social Media SAG was formed April 2017 to discuss best practices and needs for social media guidance. Based on SAG input and feedback from other social media experts, a six-page document was developed to highlight existing resources and key questions to consider for better use of social media information sharing for public safety. Social media is becoming increasingly more important during emergency and response as the public looks to social networks for information on how to stay safe during emergencies. While larger entities may have a dedicated resource that is trained to manage social media, smaller entities are likely wearing many hats and can use all the resources and information they can get on successfully using social media for public safety.
• **Training SAG**
  A Training SAG was formed in 2017 to determine the best approaches to promulgate basic radio training across the State. The customizable training template has been updated for academy use and online training tools have been identified. In addition, over 100 people participated in webinar training sessions in 2017, which should lead to an increase in the number of radio training classes held across the state. The future online classes and standardized academy instruction on radio usage will also greatly increase interoperability across the State.

---

**Regional Accomplishments**

Based on information provided by the COGs and Tribes through their annual Focus Group Reports in 2016 and 2017, COG/Tribe accomplishments across the State include, but are not limited to:

**Governance**

- A new MOU was developed within the latest version of the TSICP. The SWIC Office requested all Texas agencies to re-sign the MOU to enable usage of interoperable channels. COGs/Tribes are working to identify the current signing authorities for their agencies, and to date, 181 entities have signed the new MOU.

- Many COGs and Tribes have a regional focus group in place to focus on public safety communications, and several are currently working to establish a regional group.

**Training and Exercises**

- The majority of the COGs/Tribes conducted some level of training (including Communication Leader and Communication Leader ‘Train the Trainer’ training) and/or tested interoperability capabilities during an exercise. More COGs/Tribes are integrating the basic radio usage training developed by TxICC members into their academies and other training curriculums. Three webinar train-the-trainer sessions were held in 2017 and more than 100 people participated. These webinars are continuing in 2018. West Central Texas COG is providing the Basic Radio Interoperable Communications Course (Radio 101) at the local and regional level.

- Heart of Texas COG has developed standardized end-user equipment, interoperability and RSOP training for use within the HOTCOG region, as well as developed and facilitated basic communications tabletop exercises focused on operability and interoperability throughout the region. They currently use the basic training curricula to train other agencies throughout the region.

- Many COGs provided a list of training academies in their region to enable the Training SAG to work with academies directly to encourage implementation of basic radio usage classes.
Standard Operating Procedures (SOPs)

- Most COGs have SOPs in place. Many are reviewing, updating, and training on them on a regular basis, (especially agencies using large systems), though some COGs still contend that the SOPs are not widely known or exercised.

- Many entities have updated their Regional SOPs by moving data to the new template, and many are in the process of migrating to the new template.

Technology

- Many COGs either have P25 standard radio systems or they are able to communicate with P25 systems.

- Many entities are beginning to migrate P25 radio unit IDs to their allocated statewide ID range as defined in the TSICP. In the 2017 Focus Group reports, COGs and Tribes provided a point of contact to manage ID allocations. Almost all regions have identified a point of contact to manage the ID allocations in their region.

- Four of the 24 regions have updated their RICPs through OEC Technical Assistance workshops. Additional workshops will be scheduled as additional technical assistance workshop requests are approved by OEC.

- Many COGs are programming radios in accordance with the TSICP. The SWIC Office collected contacts of radio programmers across the state in the 2017 Focus Group reports. The updated TSICP was shared directly with those programmers and a webinar was held with them to answer any questions. Having an updated list of entities that touch public safety radios, and sharing TSICP updates and revisions will increase the likelihood that radios are programmed with the correct interoperability channels.

Usage

- Each COG has at least one trained Communications Leader (COML) and most have numerous trained COMLs.

- Many COGs are testing use of radio interoperability channels or are at least promoting their use. Several COGs reported conducting drills on a regular basis to practice use of interoperability channels.

- Tigua Tribe reported that a routine for regular interoperability roll calls between the TMOC (Tribal Medical Operations Center) and the RMOC (BorderRac Regional Medical Operations Center) has been established. The Tribe is working on establishing a routine for interoperability calls for Law Enforcement and Fire Agencies.

Outreach and Information Sharing

- Some regions reported holding demonstrations at existing events to ‘show and tell’ their resources (communication vehicles, mobile towers, etc.) should a neighboring agency need them. Sharing this resource information at events lets neighboring agencies know what additional resources they could leverage in an emergency or incident.
• Many regions also reported that they educated their local elected officials about the importance of funding communications. Some officials may not be aware of the lack of funding and extreme need to continue supporting land mobile radio systems, including funding for technology and training.

Regional Funding Approach

• Some COGs are pursuing creative funding approaches as Federal funding has rapidly decreased and State funds have not yet been appropriated. Creative approaches include:
  o Charging user fees to agencies using the system
  o Local agencies working together to acquire and share communication resources
  o Many State agencies have system infrastructure sharing agreements with local entities for interoperable communications
  o More extensive efforts to apply for additional grants
  o Exploration of public/private partnerships

• BVCOG reported sharing fiber optic infrastructure for data backhaul, tower site space, and the redistribution of surplus radio equipment to help smaller agencies move to the BVWACS system.
APPENDIX:

VOICE RADIO COMMUNICATIONS INTEROPERABILITY

LEVELS ACROSS TEXAS
THE TEXAS STATEWIDE COMMUNICATIONS INTEROPERABILITY MATURITY MODEL

The Texas Statewide Communications Interoperability Maturity Model is based on the SAFECOM Interoperability Continuum. The model outlines the evolution from the lowest level to the highest level of communications interoperability (Level One – least interoperable to Level Five – most interoperable). In the Appendix, the map of Texas highlights the current status of each county regarding their level of interoperability in the “Voice Technology” lane of the model. The status is indicated by the individual colors associated with the five levels of interoperability. The information was obtained directly from the 24 COGs through a survey submitted to TxDPS. As the map indicates, Texas has achieved a high Level Three (Improved) wireless communications interoperability rating on average.

**Level One** = The lowest level of interoperability, which is accomplished by physically exchanging radios to communicate with other agencies (swap radios)

**Level Two** = Minimal interoperability, which is accomplished with the use of gateway devices (electronically interconnecting two or more disparate radio systems through gateways)

**Level Three** = Mid-range interoperability through the use of shared channels

**Level Four** = Improved interoperability through the use of shared proprietary system(s)

**Level Five** = The optimal level of full interoperability through the use of P25 standards-based shared systems to communicate with other agencies

The color-coded map in the Appendix reflects a snapshot of each county’s status of voice communications interoperability. This information was obtained directly from the 24 COGs through a survey submitted to TxDPS. As the map indicates, for the most part, Texas has achieved slightly above Level Four (Improved) wireless communications interoperability on average. In the Appendix, the three tables following the same map list the:

a) interoperability level of each county, sorted at the COG level;

b) interoperability level of each county, sorted by level; and

c) interoperability level of each county, sorted by county name alphabetically. The average level of interoperability statewide increased from 2016 from level 3.85 to 3.87 in 2017 on the five-level scale.
Texas Statewide Communications
Interoperability Maturity Model

Level 1
Minimal Interoperability
(Use of Gateways)

Governance
Individual Agencies Working Independently

SOP
Individual Agency SOPs

DATA Technology
Swap Files

VOICE Technology
Swap Radios

Training and Exercises
General Orientation on Equipment and Applications

Usage
Planned Events

Level 2
Limited Interoperability
(Use of Gateways)

Governance
Informal Coordination Between Agencies

SOP
Joint SOPs for Planned Events

DATA Technology
Common Applications

VOICE Technology
Gateway

Training and Exercises
Single Agency Tabletop Exercises for Key Field and Support Staff

Usage
Localized Emergency Incidents

Level 3
Mid-Range Interoperability
(Use of Shared Channels)

Governance
Key Multi-Discipline Staff Collaboration on a Regular Basis

SOP
Joint SOPs for Emergencies

DATA Technology
Custom Interfaced Applications

VOICE Technology
Proprietary Shared System

Training and Exercises
Multi-agency Full Functional Exercises Involving All Staff

Usage
Regional Incident Management

Level 4
Improved Interoperability
(Use of Proprietary Shared Systems)

Governance
Key Multi-Discipline Staff Collaboration on a Regular Basis

SOP
Regional Set of Communications SOPs

DATA Technology
One-Way Standards-Based Sharing

VOICE Technology
Proprietary Shared System

Training and Exercises
Multi-agency Full Functional Exercises Involving All Staff

Usage
Regional Incident Management

Level 5 - Full Interoperability
(P25 Standards-Based, Shared Systems)

Governance
Regional Committee Working within a Statewide Communications Interoperability Plan Framework

SOP
National Incident Management System Integrated SOPs

DATA Technology
Two-Way Standards-Based Shared Systems

VOICE Technology
Standards-Based Shared Systems

Training and Exercises
Regional Comprehensive Regionwide Training and Exercises

Usage
Daily Use Throughout Region

DATA Technology
One-Way Standards-Based Sharing

VOICE Technology
Standards-Based Shared Systems

Training and Exercises
Multi-agency Tabletop Exercises for Key Field and Support Staff

Usage
Regional Incident Management

Data
Local Area Network

Voice
Cellular

Texas DPS Report on Interoperable Communications to the Texas Legislature
COG Region Name | #
--- | ---
Alamo Area Council of Governments | 18
Ark-Tex Council of Governments | 5
Brazos Valley Council of Governments | 13
Capital Area Council of | 12
Central Texas Council of Governments | 23
Coastal Bend Council of Governments | 20
Concho Valley Council of Governments | 10
Deep East Texas Council of Governments | 14
East Texas Council of Governments | 6
Golden Crescent Regional Planning Commission | 17
Heart of Texas Council of Governments | 11
Houston-Galveston Area | 16
Lower Rio Grande Valley Development Council | 21
Middle Rio Grande Development Council | 24

Nortex Regional Planning Commission | 3
North Central Texas Council of Governments | 4
Panhandle Regional Planning Commission | 1
Permian Basin Regional Planning Commission | 9
Rio Grande Council of Governments | 8
South East Texas Regional Planning Commission | 15
South Plains Association of Governments | 2
South Texas Development Council | 19
Texoma Council of Governments | 22
West Central Texas Council of Governments | 7

Texas Statewide Communications Interoperability Maturity Model Color Codes:

- **Level One** (least interoperable) .................. 0 Counties
- **Level Two** .................................................. 13 Counties
- **Level Three** ............................................... 76 Counties
- **Level Four** ................................................. 95 Counties
- **Level Five** (most interoperable) .......... 70 Counties

**Total:** ................................................... 254 Counties

**Average Statewide Interoperability Level:** 3.87