

# TEXAS DEPARTMENT OF PUBLIC SAFETY

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August 31, 2023

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 progress toward public safety communications interoperability in Texas. In accordance with Texas Government Code Sections 421.098 and 421.0896, on behalf of the Office of the Governor, the Annual Report on Interoperable Communications is provided for your review and information at <https://www.dps.texas.gov/IOD/interop/docs/interopRpt.pdf>

Accomplishments noted in the 2023 Legislative Report include:

- Completed three RICP Workshops
- Annual TxICC Conference
- Distributed 13 TxICC newsletters and cybersecurity notices to state and local stakeholders

Twenty (20) of the twenty-four (24) COGs, one (1) of the three (3) Tribes, and the combined State Agencies completed a Focus Group survey in 2022, which provided greater clarity and details regarding public safety communications needs and accomplishments within each region during the 2022 reporting period.

With continued cuts in grant funding for these purposes, there will be an impact on public safety communications interoperability for state, local, and tribal responders across Texas. Available state and federal grant funding decreased in 2022.

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

Respectfully submitted,

A handwritten signature in black ink that reads 'Steven C. McCraw'.

Steven C. McCraw  
Director

**2023 Report on Interoperable Communications  
to the Texas Legislature as required by:**

**Texas Government Code 421.096**

**Texas Government Code 421.098**

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## EXECUTIVE SUMMARY

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Per Government Code 421.098, the Office of the Governor shall provide an annual report to the Legislature on the status of interoperable communications in Texas. The citizens of Texas rely on and expect emergency responders to arrive quickly at a scene and be ready to help them during a daily 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. Public safety communications systems provide emergency responders<sup>1</sup> across Texas and the nation to perform their mission-critical duties – saving the lives and property of Texans. Decades of focused funding have greatly improved the state of interoperability in Texas; however, some areas still have inadequate and unreliable systems.

The 2023 Legislative Report highlights the planning, effectiveness, funding, accomplishments, and challenges of interoperable communications activities completed in Texas during 2022, reported by the Texas Statewide Interoperability Coordinator's Office at the Texas Department of Public Safety, state agencies, regional Councils of Governments, and Tribal Nations through the annual Focus Group survey reports.

Comprehensively, in 2022, the counties in Texas reported a decrease in the Level of Interoperability from 3.80 to 3.76, likely due to several factors, including a reduction in grant funding, natural disasters, and operational/technical challenges in specific areas of the state. The SWIC Office developed educational materials to aid counties and agencies in better assessing their interoperability level, which led to some counties evaluating their capabilities more accurately.

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<sup>1</sup> 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.

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## Statewide Communications Interoperability Plan (SCIP)

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The Statewide Communications Interoperability Plan (SCIP) is a tool developed by the U.S. Department of Homeland Security (DHS). It is used nationwide to assist the public safety community by identifying goals and initiatives to improve public safety communications with input from local, state, tribal, and federal stakeholders. The SCIP document started in 2007 as a requirement in the DHS grant process and has continued as a best practice.

The Texas Statewide Interoperability Coordinator (SWIC), in consultation with the Texas Interoperable Communications Coalition (TxICC), works jointly on public safety communications interoperability planning and policy. The TxICC is specifically constituted to examine communication issues across Texas and identify cohesive solutions to address them through the 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 delegates of the TxICC.

TxICC representatives use the SCIP to help their respective communities improve public safety communications. The SCIP prioritizes resources, strengthens governance, and educates and informs 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 Texas SWIC Office conducts a workshop to review existing goals and initiatives, develop new initiatives, and set priorities for the following year. The TxICC holds its annual conference to review and vote on proposed updates to the SCIP and discuss other public safety communications issues and updates.

The current version of the SCIP is located on the Texas Department of Public Safety website.

<https://www.dps.texas.gov/IOD/interop/docs/texasSCIP.pdf>

### Regional Interoperability Communications Plans

In 2011, the TxICC initiated Regional Interoperability Communications Plans (RICP) to document public safety communications needs, create a technical implementation and migration plan, and identify the associated costs to meet those unique needs within each COG. Each COG/Tribe maintains and reviews the plans regularly. Through their annual Regional Focus Group Workshop, COGs and

**Communications is the fundamental capability within disciplines and jurisdictions that practitioners need to perform the most routine and basic elements of their job functions.**

**Agencies must be operable, meaning they must have sufficient wireless communications to meet their everyday internal and emergency communication requirements before they place value on being interoperable, i.e., able to work with other agencies.**

**Communications interoperability is the ability of public safety agencies (police, fire, EMS) and service agencies (public works, transportation, hospitals, etc.) to talk within and across agencies and jurisdictions via radio and associated communications systems, exchanging voice, data and/or video with one another on demand, in real-time, when needed, and when authorized.**

**It is essential that public safety has the intra-agency operability it needs, and that it builds its systems toward interoperability.**

Source: Target Capabilities List, www.DHS.gov, 29

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 partners with the U.S. Department of Homeland Security to hold workshops to review and update RICPs. Since 2017, twenty COGs and all three Tribes have conducted workshops to update their regional plans. The remaining COGs are scheduled to be completed by CY24.

## The Current Status of Voice Communications Interoperability in Texas

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The Texas Statewide Communications Interoperability Maturity Model is based on the SAFECOM Interoperability Continuum.<sup>2</sup> The model outlines the evolution from the lowest level to the highest level of communications interoperability. In Appendix A, the map of Texas highlights the status of each county regarding their self-reported level of interoperability in the "Voice Technology" lane of the model. As the map indicates, in 2022, Texas is reporting a level of 3.76 (Mid-Range) on the Voice Communications lane of the Maturity Model. This level is a decrease in maturity from 3.80 reported in the Fiscal Year 2022 Report on Interoperable Communications. Several factors contributed to the decline, including a reduction in grant funding, natural disasters, and operational/technical challenges in specific areas of the state, including aging radio equipment. The SWIC Office developed educational materials to aid counties and agencies in better assessing their interoperability level, which led to some counties evaluating their capabilities more accurately. The most common level of interoperability in Texas is Level 3, with a growing number of counties and agencies wanting to join regional radio systems as Statewide Emergency Radio Infrastructure (SERI) grants accommodate the construction of new towers and upgraded radios.

**Texas Statewide Communications  
Interoperability Maturity Model Color Codes:**

Level One (least interoperable)	2 Counties
Level Two	1 Counties
Level Three	146 Counties
Level Four	11 Counties
Level Five (most interoperable)	94 Counties
<b>Total</b>	<b>254 Counties</b>

**Average Statewide Interoperability Level: 3.76**

<sup>2</sup><https://www.cisa.gov/publication/interoperability> Through collaboration with emergency responders and elected officials across all levels of government, SAFECOM works to improve emergency response providers' inter-jurisdictional and interdisciplinary emergency communications interoperability across local, regional, tribal, state, territorial, international borders, and with federal government entities.

## **Expenditures Toward Interoperability**

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The Office of the Governor's Homeland Security Grants Division allocated Texas jurisdictions State Homeland Security grant funding of \$6,790,896.96 in 2022 to fund projects and equipment for interoperable emergency communications. Projects range from constructing towers and updating microwave equipment to purchasing radio equipment and accessories.

The Office of the Governor's Homeland Security Grants Division also allocated Texas jurisdictions Justice Assistance Grants (JAG) funding of \$657,151.78 in 2022 to spend on radios, accessories, and receiver/transmitting communications equipment. JAG grants also provide funding for emergency communications equipment.

The Office of the Governor's Homeland Security Grants Division awarded the 2022 Statewide Emergency Radio Infrastructure (SERI) grants totaling \$12,122,804.69. Funds were awarded to COGs and State Agencies and used toward expanding infrastructure and interoperability.

The decades-long trend of decreased grant funding continued in the amounts awarded in 2022, where Texas agencies realized a total grant funding decrease of over \$9.24M from the previous year. Lack of funding for equipment lifecycle replacements and maintenance leads to decreased capabilities over time.

Grant purchases for communication equipment are forwarded to the SWIC Office for review to ensure alignment with SCIP goals and initiatives.

## **Accomplishments Toward Interoperability**

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Representatives from the Texas emergency response community have worked together as the Texas Interoperable Communications Coalition (TxICC) to overcome the identified communications challenges since 2007. The TxICC is the State interoperability governance body responsible for planning and overseeing emergency communications interoperability throughout Texas. Below are some achievements reported through the TxICC, TxDPS, and across the state in 2022.

### **TxICC / Statewide Accomplishments**

- The SWIC Office conducted various stakeholder engagements and activities:
  - Processed 63 TSICP Memorandums of Understanding (MOUs) defining interoperable communications protocols
  - Approved 164 grant-funded communications equipment requests
  - One State Agency Communications meeting
  - Completed three RICP Workshops
  - Annual TxICC Conference
  - Distributed 13 TxICC newsletters and cybersecurity notices



- State Agencies improved their communications capabilities:
  - GLO – Added radio equipment, increased coverage, added marine capabilities, programmed USCG channels, and established a drone program
  - TPW – Issued APX mobile radios, executed TSICP MOUs with trunked radio systems, collaborated with DPS and TXDOT on tower optimization, working with DPS for radio programming services
  - TXDOT – Continued with tower projects, working toward issuing APX radios, Upgrading connectivity for MRG, STDC, Permian Basin, and Concho Valley areas, and implemented a drone program
  - TCEQ – Replaced camera system on mobile command post, added redundancy for satellite, implemented a drone program
  - DPS – FirstNet CRD equipment purchased, APX radios issued, TIRIS Network – Phase 1 complete, deployed the TAK server
  - TMD – Collaborated with DPS on TAK server, lifecycle replacement to APX radios, deployed STARLINK and Cradlepoints for OLS, implemented a drone program, and added 350 satellite hot-spots.
  - TDEM – Implemented a new IPAWS project in WebEOC, upgrading Amateur Radio go-kits and laptops, implemented a drone program

### **TxDPS Response Operations Deployments for 2022**

Completed eight deployments supporting TxDPS Task Force and Special Operations:

- Chilifest, Somerville 3/30-4/4, 2022
- NASCAR Operation, Texas Motor Speedway 5/19-23, 2022
- TDEM Conference, San Antonio 5/31-6/3/2022
- IACP Conference, Dallas 10/14-19/2022 Radio Tech refresh, Brownwood SP 11/06-18/2022
- Inflatable system training, Florence 12/5-6/2022
- Drone Expo, Florence 12/8-9/2022
- Border Operations support, El Paso 12/23/2022 to present
- 106 ft Site on Wheels to support OLS Video Downlink at Del Rio office
- 106 ft Site on Wheels to support OLS Communications at a rail yard

### **Communications Training Courses offered by TxDPS and DHS/ECD in 2022**

- Three (3) Communications Unit Leader classes (15, 4, and 9 attendees each)
- Two (2) Communications Technician classes (15 and 13 attendees each)
- One (1) Incident Tactical Dispatcher class (10 attendees)

### **State-Credentialed Communications Personnel**

- Texas has 324 State Credentialed Communications Unit personnel
- Texas has 76 State Credentialed Communications Unit instructors



## **Communications Exercises coordinated with TxDPS in 2022**

Communications Exercises (COMMEX) provide experiential learning based on disaster and critical incident scenarios.

- Natural Disaster Operational Workgroup (NDOW) COMMEX Training at Garner State Park - radio and data communications training with state and local agencies
- Natural Disaster Operational Workgroup (NDOW) Exercise at Galveston – radio and data communications support training with federal, state, and local agencies
- Interop 2022 at TEEK College Station – radio and data communications support training with state and local agencies
- Central States Exercise, at Quapaw, OK – radio and data communications training with numerous state and local agencies
- TX DPS Aircraft Operations Division Exercise in West Texas – radio and data communications support training for TX DPS personnel

## **Strategic Advisory Groups (SAGs)**

SAGs are representatives from the TxICC and are established to achieve the goals and initiatives outlined in the SCIP. Selected accomplishments from each of the SAGs are summarized below:

### **Radio over Internet Protocol SAG**

The Radio over Internet Protocol (RoIP) SAG and DPS were awarded a Statewide Emergency Radio Infrastructure grant to develop the Texas Interoperable Radio Interconnect System (TIRIS) – Phase 1 project. The system will initially connect four Trunked Regional Radio Systems, two DPS Communications Facilities, and one County Communications facility via a cloud-based server providing 10 Statewide Interoperable Talkgroups. The project was awarded funding in October 2020 for Phase 1 and October 2022 for Phase 2.

### **Texas Statewide Interoperability Channel Plan (TSICP) SAG**

The TSICP SAG began working on an update in 2022 to maintain compliance with the DHS National Interoperability Field Operations Guide (NIFOG)

## **Regional Accomplishments**

COGs and Tribes reported the accomplishments and challenges below through their annual Focus Group Reports. Appendix B highlights the Focus Group survey results from the COGs and Tribal Nations for 2022.

- Only 2 COGs are now reporting that less than 25% of their agencies are P25-compliant
- 7 COGs completed projects to join existing regional radio systems
- 12 COGs completed projects to construct towers, upgrade antennas, and generators
- 3 COGs reported conducting regular drills, exercises, and events using interoperability assets

- 1 COG reported developing a Cybersecurity Response Team
- 1 COG added Satellite Phones for key personnel
- COGs and Tribes reported that 33 agencies purchased P25 repeaters, subscriber radios, or dispatch console equipment
- 3 COGs reported projects that upgraded connectivity for radio systems

## Conclusion

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Interoperability is essential to public safety and quickly responding to emergencies. While Texas is at an average maturity level, opportunities for improvement remain.

As Texas seeks to improve our statewide interoperability maturity level, it is essential to have participation by local jurisdictions, and dedicated funding will help ensure that participation. Government Code Chapter 421 does not mandate the involvement of local governments. This lack of participation contributes to the lack of training, collaboration, standardization, and adoption of the best practices.

# APPENDIX A: VOICE RADIO COMMUNICATIONS INTEROPERABILITY LEVELS ACROSS TEXAS

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## THE TEXAS STATEWIDE COMMUNICATIONS INTEROPERABILITY MATURITY MODEL

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The Texas Statewide Communications Interoperability Maturity Model is based on the SAFECOM Interoperability Continuum.<sup>3</sup> 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). The map of Texas on page 12 highlights the 2022 status of each county regarding their level of interoperability in the "Voice Technology" lane of the model. The status is indicated by the distinctive colors associated with the five levels of interoperability. The information was obtained directly from the 24 COGs and 3 Federally Recognized Tribes in Texas through a survey submitted to TxDPS. The map indicates that Texas has achieved an average Level Three Mid-Range wireless communications interoperability rating.

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

**Level Two** = Minimal interoperability, accomplished using gateway devices (electronically interconnecting two or more disparate radio systems through gateways).

**Level Three** = Mid-range interoperability using shared channels.

**Level Four** = Improved interoperability using shared proprietary system(s).

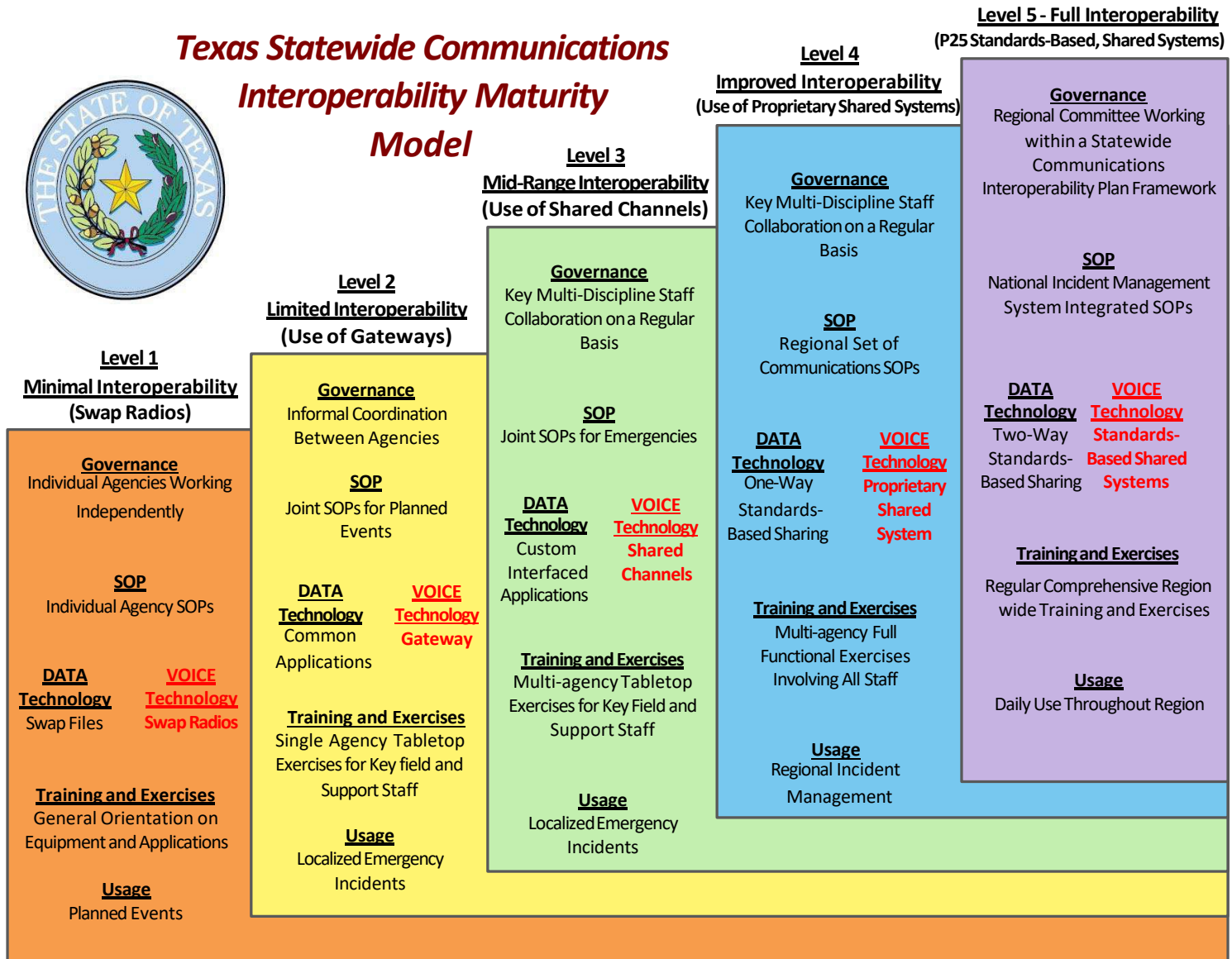
**Level Five** = The optimal level of full interoperability using P25 standards-based shared systems to communicate with other agencies.

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<sup>3</sup> <https://www.cisa.gov/publication/interoperability>



# Texas Statewide Communications Interoperability Maturity Model



2022

# Texas Statewide Voice Communications Interoperability Color-Coded Map by COGs and Counties

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 Governments	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 Council of Governments	16
Lower Rio Grande Valley Development Council	21
Middle Rio Grande Development Council	24

**Texas Statewide Communications Interoperability Maturity Model Color Codes:**

**Level One** (least interoperable) .....2 Counties

**Level Two** .....1 Counties

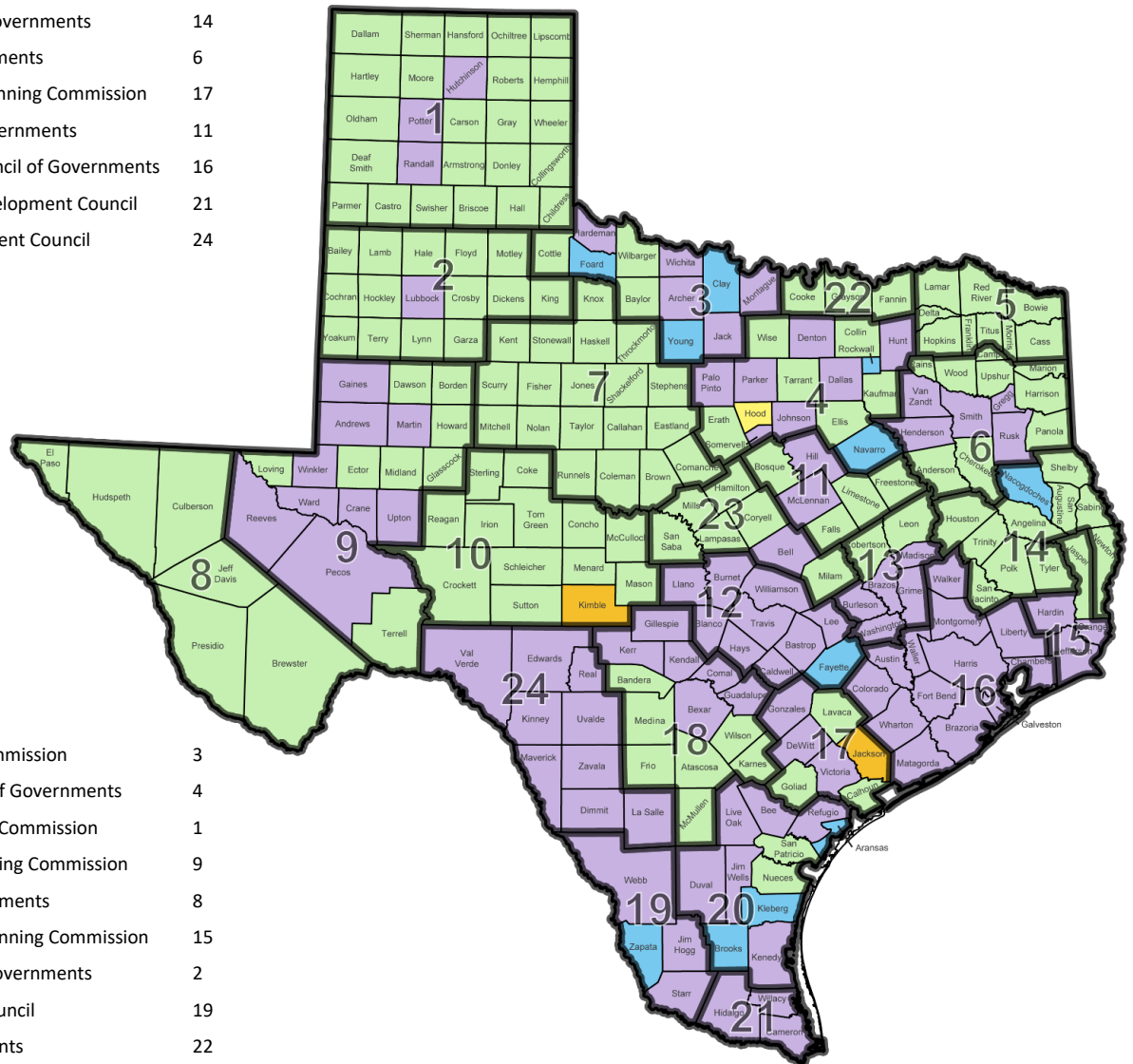
**Level Three** .....146 Counties

**Level Four** .....11 Counties

**Level Five** (most interoperable) .....94 Counties

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

**Average Statewide Interoperability Level: 3.76**



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

## **APPENDIX B: 2022 FOCUS GROUP SURVEY RESULTS**

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The Focus Group Survey was available for COGs, Tribes, and State Agencies from December 2022 through February 2023 to report on activities accomplished in 2022. 20 of 24 Texas COGs, 1 of 3 Tribes, and the Combined State Agencies completed the 2022 Focus Group Survey.

### **Governance**

- 92% of Texas COGs and Tribes reported that they have a Homeland Security Committee that meets regularly to set Interoperable Communications priorities
- 68% of the Committees meet as needed, but all meet at least annually
- 36% of Texas COGs have updated contact lists with the SWIC Office
- 72% of Texas COGs reported having met with regional decision-makers or elected officials to promote interoperability and support sustainable funding for communications

### **Planning and Procedures**

- 48% of Texas COGs participated in a public event displaying communications equipment
- 56% of COGs and Tribes have or are in the process of updating their RICP within the last five years, with another 43% updating since 2017.

### **Training, Exercises, and Evaluation**

- 74% of COGs and Tribes participate in regularly scheduled drills using interoperable communication
- 57% of COGs and Tribes reported participating in a multi-agency exercise
- 74% of COGs and Tribes reported participating in an exercise or event that employed mobile communications assets as part of the exercise
- 50% of COGs and Tribes reported that training and exercises had used a broadband application for information sharing
- 50% of COGs and Tribes report agencies are using broadband applications,
- 54% of COGS and Tribes reported agencies are using broadband applications daily
- 33% of COGs and Tribes have designated a Communications Unit point of contact
- 83% of COGs and Tribes have not updated assets and equipment in the CASM database

### **Communications Coordination**

- 48% of COGs and Tribes reported that they had updated their Regional SOP

### **Technology and Infrastructure**

- 100% of COGs and Tribes report that P-25 standards are being adopted for communications infrastructure and subscriber equipment
  - 65% report that 90-100% of their agencies use P-25 equipment
  - 26% report that 50-90% of their agencies use P-25 equipment
  - 9% report that 25%-50% of their agencies use P-25 equipment

- 96% of COGs and Tribes report that P-25 radios have been programmed in compliance with the TSICP
  - 57% report that 90-100% of their agencies have programmed radios to the TSICP
  - 35% report that 50-90% of their agencies have programmed radios to the TSICP
  - 4% report that 25%-50% of their agencies programmed radios to the TSICP
  - 4% report that less than 25% of their agencies programmed radios to the TSICP
- COGs and Tribes Regional Interoperability Level
  - 22% report that the region is at a Level 5
  - 13% report that the region is at a Level 4
  - 57% report that the region is at a Level 3
  - 9% report that the region is at a Level 2
- COGs and Tribes report that many agencies have executed the TSICP MOU
  - 26% report that 75-100% of their agencies have executed the MOU
  - 30% report that 50-75% of their agencies have executed the MOU
  - 13% report that 25-50% of their agencies have executed the MOU
  - 30% report that less than 25% of their agencies have executed the MOU

## **Cybersecurity**

- COGs and Tribes report that only a few agencies are conducting Cybersecurity Threat Assessments
  - 17% report that 75-100% of their agencies have done assessments
  - 17% report that 50-75% of their agencies have done assessments
  - 26% report that 25-50% of their agencies have done assessments
  - 39% report that less than 25% of their agencies have done assessments
- COGs and Tribes indicate that Land Mobile Radio, Broadband Applications, 9-1-1/CAD, Alerts and Warnings, and IT Infrastructure are technologies included in cybersecurity threat assessments.
- COGs and Tribes report less success in the development of Cybersecurity Incident Action Plans
  - 13% report that 75-100% of their agencies have developed plans
  - 9% report that 50-75% of their agencies have developed plans
  - 22% report that 25-50% of their agencies have developed plans
  - 57% report that less than 25% of their agencies have developed plans



## **2022 Capability Gaps reported during the COG and Tribe Focus Group survey:**

Funding remains the number one gap indicated in the Focus Group survey.

- Coverage gaps indicated additional tower sites are needed in most COGs
- 16 COGs and Tribes reported agencies lack sufficient funds to purchase P25 infrastructure such as towers, repeaters, connectivity, and generators.
- Consistent funding is needed to replace P25 subscriber equipment adequately.
- Projects, including equipment for VFDs and Rural EMS agencies, lack funding.
- PSAPs require funding for console and radio upgrades

### Cybersecurity

- Agencies are not conducting Cyber Threat Assessments nor developing Cyber Incident Action Plans.

### Training and Exercises

- Funding for regional exercises and training is needed.
- RICPs need to be updated

### Maintenance and Operations Costs

- If M&O costs for system maintenance and associated personnel are covered by grant funds, then the COGs allocation is depleted, leaving no funds for equipment upgrades or replacements.

### Regional Radio Systems

- Funding for monthly user fees is required for joining and operating most region/county systems. There is resistance to joining existing systems because of the monthly user costs.
- In some cases, cities have decided to purchase their own core system and bypass the existing regional system or plan to connect to other Regional Radio Systems, causing core equipment redundancies and funding inefficiencies.
- One COG reports that the region has no real infrastructure to support a shared radio system. Every agency has its individual systems; all are end-of-life and barely functioning.
- The ability for agencies to communicate interoperably using broadband information-sharing applications is a growing gap.
- Implementing a Federated Identity, Credentialing, and Access Management (ICAM) system to enable data interoperability is a gap, not only in Texas but nationwide