Connecticut

Statewide Communication Interoperability Plan (SCIP)

October 2014

EXECUTIVE SUMMARY

The Connecticut Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The SCIP is a critical mid-range (three-year) strategic planning tool to help Connecticut prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

The purpose of the Connecticut SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.
- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.
- Serve as a guide to engage the right stakeholders to prioritize activities and ensure the Statewide Interoperability Executive Committee (SIEC) is on target to meet the SCIP's goals and initiatives

The following are Connecticut's Vision and Mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Vision: By 2018, provide for communications infrastructure, procedures, and education that will allow for timely, efficient, and cost effective statewide interoperability (voice, video, and data) for all public safety and other partners (e.g., Federal, State, regional, local, tribal nations, private sector, and non-governmental organizations).

Mission: Provide for statewide telecommunications infrastructure procedures and education that allow timely, efficient, and cost effective communications (voice, video, and data) for all public safety and other public agencies (Federal, State, regional, local, and tribal) to serve as an alert system and provide support to agencies involved in incidents and events that require multijurisdictional and multidisciplinary response.

The following strategic goals represent the priorities for delivering Connecticut's vision for interoperable and emergency communications.

- Governance :
    - Update scope, make-up, and definition of the intra-state regional Emergency Support Function (ESF) 2 committees.
    - Update and enhance Inter-State and Intra-State regional coordination on operable and interoperable communications activities and efforts.
    - Continue presence on national committees (e.g., Public Safety Advisory Committee [PSAC], Northeast States Emergency Consortium [NESEC], Regional Emergency Communications Coordination Working Groups [RECCWGs], National Emergency Management Association [NEMA],

National Council of Statewide Interoperability Coordinators [NCSWIC], SAFECOM).

- Standard Operating Procedures (SOPs) :
    - Build on established SOPs to include non-traditional public safety response partners (e.g., utilities, non-governmental organizations [NGOs]) in initial notification of an incident or event.
    - Document agreements (e.g., Emergency Management Assistance Compact [EMAC], memoranda of understanding [MOUs], memoranda of agreement [MOAs]) to utilize Communications Unit Leader (COML)/Communications Unit Technician (COMT) resources across regions and/or States.
    - Create interoperable communications mission-ready mutual aid packages for inter- State and intra-State resource sharing.
    - Create interoperable communications and broadband SOPs that are regularly updated and stored in a centralized repository that enables sharing across regions and municipalities.
- Technology :
    - Leverage existing voice, video, and data communications networks to enhance coverage and capabilities.
    - Document and coordinate use of best practices for redundancy/resiliency of existing public safety answering points (PSAP's).
    - Promote migration to the statewide Project 25 (P25) system, as appropriate.
    - Establish a roadmap for migration to the Nationwide Public Safety Broadband Network (NPSBN).
    - Support State Threat and Hazard Identification and Risk Assessment (THIRA) efforts to complete cyber risk and security assessments for existing systems and make appropriate improvements.
    - Identify and enhance the integration and use of data sharing and common operating systems (e.g., WebEOC) used for emergency and disaster response.
- Training and Exercises :
    - Incorporate a specific communications component (e.g., COML/COMT personnel, strategic technology reserve equipment, and communications objectives) into all training, exercises, and planned events.
    - Enhance end user training on national, State, and regional interoperability systems.

  - Provide additional education programs for Auxiliary Communication (AUXCOMM) personnel (e.g., Amateur Radio Emergency Services [ARES], Radio Amateur Civil Emergency Services [RACES]).
  - Conduct training on SOPs and availability of mutual aid resources.

- Usage :
  - Ensure efficient use of Communications Unit (COMU) and other subject matter experts (SMEs) in the field during real-world incidents, events, and exercises.
  - Establish and maintain a schedule for the systematic testing and use of interoperable systems, strategic technology reserve (STR)/cache equipment, and channels or talk groups.
- Outreach and Information Sharing :
  - Develop a daily statewide status update for communications (e.g., weather, ongoing incidents, location, and availability of deployable communications resources).
  - Implement a formal, comprehensive outreach and information sharing program to inform decision makers of the State's SCIP and developments in the interoperable and emergency communications environment.
  - Develop an outreach plan for the State to engage and encourage local and tribal participation to ensure their public safety needs are adequately represented during the First Responder Network Authority (FirstNet) consultation process.
- Life Cycle Funding :
  - Implement a life cycle funding plan that takes into account all interoperable communications systems and equipment, the interoperability program, and the core elements of establishing and maintaining interoperable and emergency communications in the State.

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1. INTRODUCTION

The Connecticut Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The SCIP is a three-year strategic planning tool to help Connecticut prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. This document contains the following planning components:

- Introduction – Provides the context necessary to understand what the SCIP is and how it was developed.
- Purpose – Explains the purpose/function(s) of the SCIP in Connecticut.
- State's Interoperable and Emergency Communications Overview – Provides an overview of the State's current and future emergency communications environment and defines ownership of the SCIP.
- Vision and Mission – Articulates the State's three-year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.
- Strategic Goals and Initiatives – Outlines the strategic goals and initiatives aligned with the three-year vision and mission of the SCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOPs), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.
- Implementation – Describes the process to evaluate the success of the SCIP and to conduct SCIP reviews to ensure it is up-to-date and aligned with the changing internal and external environment.
- Reference Materials – Includes resources that provide additional background information on the SCIP or interoperable and emergency communications in Connecticut or directly support the SCIP.

Figure 1 provides additional information about how these components of the SCIP interrelate to develop a comprehensive plan for improving interoperable and emergency communications.

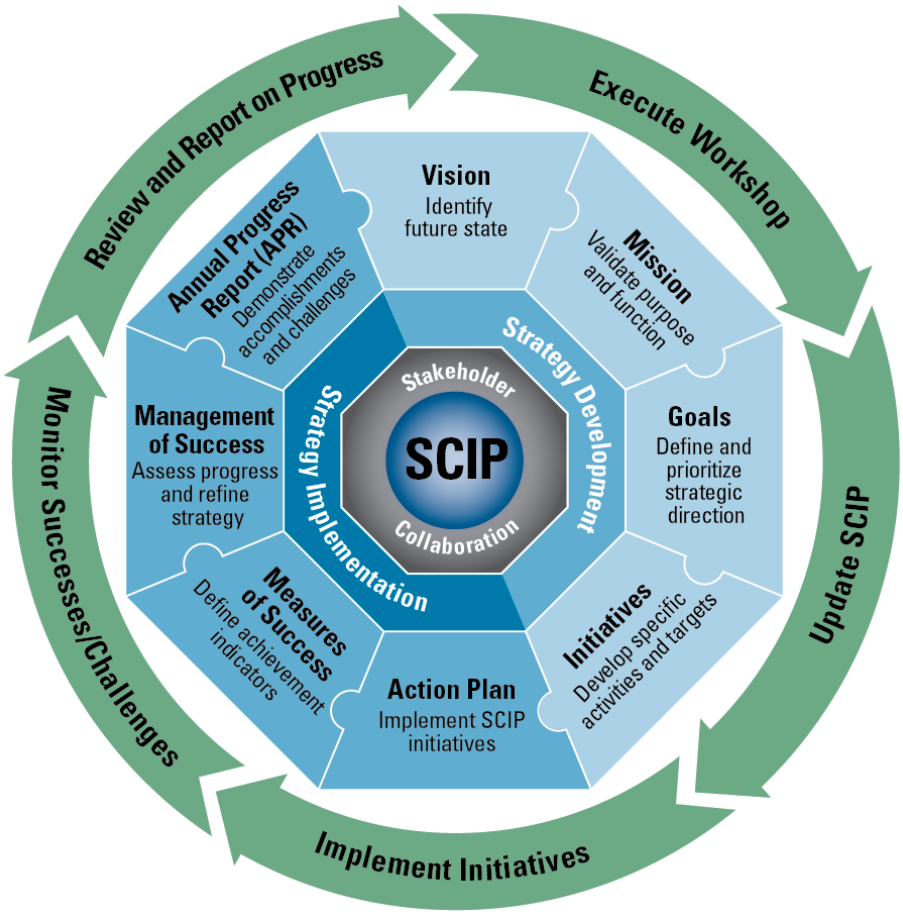

Figure 1: SCIP Strategic Plan and Implementation Components

The Connecticut SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. Connecticut has taken significant steps towards enhancing interoperable and emergency communications, including:

- **Enhancing interoperable communications between agencies.** Connecticut installed a Project 25 (P25) switch for statewide use; built the Connecticut Public Safety Data Network (PSDN), an ultra-high-speed fiber optic data network for approximately 400 public safety and government facilities for public safety services statewide; and continued to build out and enhance the Connecticut Statewide Radio Network, an 800 megahertz (MHz) system for interoperable communications for State and local users.
- **Enhancing on-scene communications and building communications resiliency in the State.** Connecticut Department of Emergency Services and Public Protection, Division of Emergency Management and Homeland Security (DESPP/DEMHS) distributed six mobile communications vehicles throughout the State to provide voice, video, and data. The State also created a Strategic Technology Reserve (STR), comprised of two mobile towers and an equipment cache, to provide resiliency and surge capacity.

- **Assisting the five Division of Emergency Management and Homeland Security (DEMHS) Planning & Preparedness Regions in their interoperability efforts.** State and Federal funding supported communications interoperability efforts in all five regions, including build-out of a region-wide 700 MHz system and procurement of mobile assets and other associated equipment.
- **Providing regular communications training.** Connecticut provided targeted training (e.g., P25 controller training, narrowbanding training); Communications Unit Leader (COML)/Communications Unit Technician (COMT)/Auxiliary Communications (AUXCOMM) training and workshops; developed a statewide credentialing system for COML/COMT certification; and implemented a statewide Telecommunication Emergency Response Taskforce (TERT) training program and framework.
- **Demonstrating interoperable communications capabilities through exercises and real-world incident response** (e.g., tested during the Annual Governors Emergency Planning and Preparedness initiative (EPPI) Statewide Exercise' Hurricanes Sandy and Irene, train derailments, large events and the Sandy Hook Elementary School Shooting).

However, more remains to be done to achieve Connecticut's vision. It is also important to note that this work is part of a continuous cycle as Connecticut will always need to adapt to evolving technologies, operational tactics, and changes to key individuals. In the next three years, Connecticut will encounter challenges relating to operability, interoperability, geography, aging equipment/systems, emerging technologies, changing project champions, and sustainable funding.

Wireless voice and data technology is evolving rapidly and efforts are underway to determine how to leverage these new technologies to meet the needs of public safety. For example, the enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (the Act), specifically Title VI, related to Public Safety Communications, authorizes the deployment of the Nationwide Public Safety Broadband Network (NPSBN). The NPSBN is intended to be a wireless, interoperable nationwide communications network that will allow members of the public safety community to securely and reliably gain and share information with their counterparts in other locations and agencies. New policies and initiatives such as the NPSBN present additional changes and considerations for future planning efforts and require an informed strategic vision to properly account for these changes. Figure 2 illustrates a public safety communications evolution by describing the long-term transition toward a desired converged future.

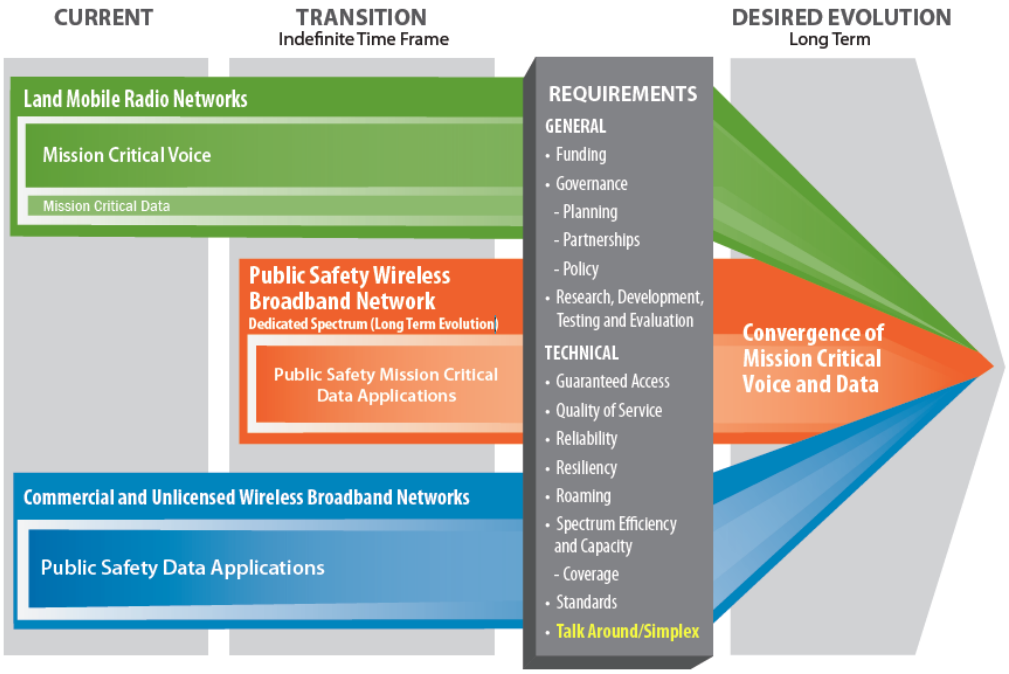

Figure 2: Public Safety Communications Evolution

Integrating capabilities such as broadband provide an unparalleled opportunity for the future of interoperable communications in Connecticut. It may result in a secure path for information-sharing initiatives, PSAPs, and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) voice systems in the foreseeable future due to implementation factors associated with planning, deployment, technology, and cost. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for broadband initiatives prior to any implementation.

There is no defined timeline for the deployment of the NPSBN; however, Connecticut will keep up-to-date with the planning and build-out of the NPSBN in the near and long term in coordination with the First Responder Network Authority (FirstNet). FirstNet is the independent authority within the National Telecommunications and Information Administration (NTIA) and is responsible for developing the NPSBN, which will be a single, nationwide, interoperable public safety broadband network. The network build-out will require continuing education and commitment at all levels of government and across public safety disciplines to document network requirements and identify existing resources and assets that could potentially be used in the build-out of the network. It will also be necessary to develop and maintain strategic partnerships with a variety of stakeholder agencies and organizations at the national, State, regional, local, and tribal levels and design effective policy and governance structures that address new and emerging interoperable and emergency communications technologies. During this process, investments in LMR will continue to be necessary and in the near term, wireless data systems or commercial broadband will complement LMR. More information on the role of these two technologies in interoperable and emergency

communications is available in the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Public Safety Communications Evolution brochure.[1]

In the short term, Connecticut will conduct data collection activities as part of the requirements of the State and Local Implementation Grant Program (SLIGP). The State has identified the Statewide Interoperability Coordinator (SWIC) as the single point of contact for broadband efforts, and the Connecticut Public Safety State Interoperability Executive Committee (CPSSIEC, abbreviated SIEC for the purpose of this document) Broadband Working Group will work to answer data calls and provide information as requested by FirstNet.

Additionally, achieving sustainable funding in the current fiscal climate is a priority for Connecticut. As State and Federal grant funding diminishes, States need to identify alternative funding sources to continue improving interoperable and emergency communications for voice, video, and data systems. The key funding priorities for Connecticut include sustainment of existing training and systems while planning for enhancement of existing and emerging technologies. More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in OEC's System Life Cycle Planning Guide.[2]

The Interoperability Continuum, developed by SAFECOM and shown in Figure 3, serves as a framework to address all of these challenges and continue improving operable/interoperable and emergency communications. It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications.

[1] OEC's Public Safety Communications Evolution brochure is available here: http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf
[2] OEC's System Life Cycle Planning Guide is available here: http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf

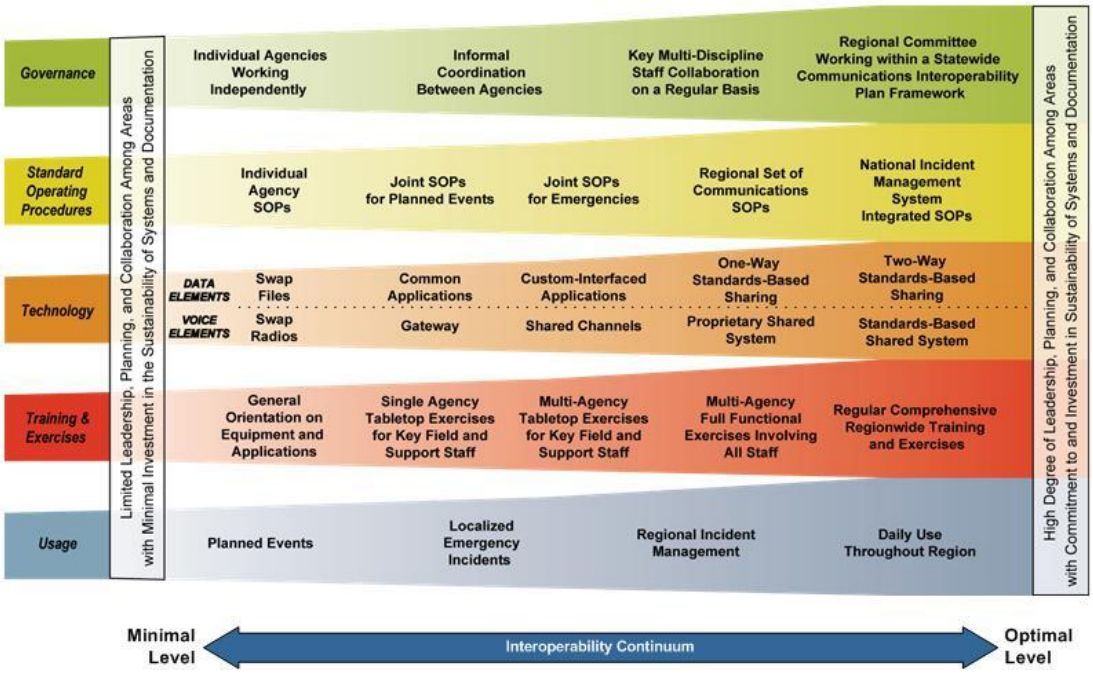

Figure 3: The Interoperability Continuum

The Continuum identifies five critical success elements that must be addressed to achieve a successful interoperable communications solution:

- Governance – Collaborative decision-making process that supports interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of Connecticut's efforts to address communications interoperability.
- Standard Operating Procedures – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.
- Technology – Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.
- Training and Exercises – Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.
- Usage – Familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.

More information on the Interoperability Continuum is available in OEC's Interoperability Continuum brochure.[3] The following sections will further describe how the SCIP will be

[3] OEC's Interoperability Continuum is available here: http://www.safecomprogram.gov/oecguidancedocuments/continuum/Default.aspx

used in Connecticut and Connecticut*'s* plans to enhance interoperable and emergency communications.

2. PURPOSE

The purpose of the Connecticut SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.
- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.
- Serve as a guide to engage the right stakeholders to prioritize activities and ensure the SIEC is on target to meet the SCIP's goals and initiatives

The development and execution of the SCIP assists Connecticut with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive 8 (PPD-8)[4] National Preparedness Goal for Operational Communications.[5]

In addition to this SCIP, Connecticut will develop an Annual Progress Report (APR) that will be shared with OEC and other stakeholders to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the SCIP. More information on the SCIP APR is available in Section 6.4.

This SCIP is owned and managed by the Deputy Commissioner of the Division of Emergency Management and Homeland Security through the SIEC and the SWIC. Final adoption of the SCIP is recommended by the SEIC to the Deputy Commissioner of DESPP/DEMHS who vote to approve the SCIP during a regularly occurring SIEC meeting. The SWIC is responsible for ensuring that this plan is implemented and maintained statewide.

3. STATE'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Connecticut serves as the primary geographic gateway between New England and the Metropolitan New York areas, and has developed a high level of communications technology to address the distinct challenges it faces. Governance of the interoperable and emergency communications environment in the State includes the five DEMHS Emergency Planning Regions the basis of these are the 169 municipalities, and two tribal nations each with various government and non-governmental organization (NGO)

[4] PPD-8 was signed in 2011 and is comprised of six elements: a National Preparedness Goal, the National Preparedness System, National Planning Frameworks and Federal Interagency Operational Plan, an annual National Preparedness Report, and ongoing national efforts to build and sustain preparedness. PPD-8 defines a series of national preparedness elements and emphasizes the need for the whole community to work together to achieve the National Preparedness Goal. http://www.dhs.gov/presidential-policy-directive-8-national-preparedness.

[5] National Preparedness Goal – Mitigation and Response Mission Area Capabilities and Preliminary Targets – Operational Communications: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

1. Ensure the capacity to communicate with the emergency response community and the affected populations and establish interoperable voice and data communications between Federal, State, and local first responders.
2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and transition to recovery.

response partners. Municipalities are autonomous and coordinate through the Planning Regions. To oversee statewide efforts among the regions, the SIEC was formally established by the Department of Emergency Management and Homeland Security (DEMHS) now a Division of the Department of Emergency services and Public Protection (DESPP). Under Titles 28 and 29 of the Connecticut General Statutes DESPP is responsible for providing a coordinated, integrated program for the protection of life and property and for statewide emergency management and homeland security. Conn. Gen Statutes 29-1r. The Commissioner of DESPP delegates emergency management and homeland security authority to the Deputy Commissioner of DESPP responsible for DEMHS. Under Conn.Gen.Statutes. 281a(b) DEMHS is responsible for, among other things "coordinating" and as may be necessary consolidating homeland security communications and communications systems of the state government with state and local personnel , agencies and authorities, the general public and the private sector.

The SIEC meets monthly and recently updated its membership to ensure statewide inclusivity and accurate representation. The SIEC's Technical Committee meets regularly to carry out various communications interoperability efforts. The State is also involved in collaboration and coordination with the Federal Emergency Management Agency (FEMA) Regions I and II, participating in joint training and exercises and working toward inter-State interoperability. However, this can result in discrepancies with interoperability methods used during internal statewide events, as certain parts of the State align more closely with either FEMA Region I or Region II and their respective efforts and systems.

In terms of technology, existing communications systems in Connecticut vary widely from very high frequency (VHF) low band to more sophisticated digitally trunked systems. The State has a robust 800 MHz infrastructure with a microwave backbone that is utilized by many of the municipalities. Primary public safety communications systems in Connecticut include:

- ***Connecticut Statewide Police Emergency Radio Network (CS-PERN)***, an 800 MHz system for interoperable communications for local and State users.
- ***Public Safety Data Network (PSDN)***, an ultra-high-speed fiber optic data network for approximately 400 public safety government applications and services statewide.
- ***8CALL90/8-TAC Interoperability Mutual Aid Radio System***, a statewide 800 MHz conventional radio system designated for command and control radio communications at multi-agency and/or multi-jurisdictional incidents.
- ***State Tactical On-Scene Channel System (STOCS)***, a system of Ultra high Frequency (UHF), VHF high band, and 800 MHz frequencies combined into five interoperability channel groups.
- ***Statewide Coordinated Medical Emergency Dispatch (CMED)***, a 25-year-old UHF system utilized by all Emergency Medical Services (EMS) personnel and hospitals to relay patient critical care information.

- ***Connecticut State Fire Chiefs System and Connecticut State County Fire Systems***, available for regional fire communications centers and local fire services, respectively, as well as the State Fire Coordinator system. The conventional channel systems were installed in the 1950s, are supported by the Connecticut Fire Chiefs Association's Technical Advisory Committee and funded by State legislature for maintenance.

Sustainment of these systems is a major focus in Connecticut, which achieved significant expansion of capabilities among the systems in the past few years. Sustainment of training and exercises is also of high priority to prevent loss of institutional knowledge and to increase usage and familiarity with new and/or upgraded systems and equipment. The lack of county governance structures and the autonomous nature of the municipalities make coordination of sustainment challenging. The State will continue to employ strong regional and State interoperability governance to ensure efficiency of efforts and maximization of resources.

In addition to sustaining existing systems and training, Connecticut will initiate SLIGP efforts in preparation for build-out of the NPSBN. Connecticut's interoperable and emergency communications efforts over the next three years will focus highly on the required data collection and other NPSBN planning activities, under guidance of the new SIEC Broadband Working Group, with the goal of implementing the network.

4. VISION AND MISSION

The Vision and Mission section describes the Connecticut vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Connecticut Interoperable and Emergency Communications Vision:

By 2018, provide for communications infrastructure, procedures, and education that will allow for timely, efficient, and cost effective statewide interoperability (voice, video, and data) for all public safety and other partners (e.g., Federal, State, regional, local, tribal, private sector, and non-governmental organizations).

Connecticut Interoperable and Emergency Communications Mission:

Provide for statewide telecommunications infrastructure procedures and education that allow timely, efficient, and cost effective communications (voice, video, and data) for all public safety and other public agencies (Federal, State, regional, local, and tribal) to serve as an alert system and provide support to agencies involved in incidents and events that require multijurisdictional and multidisciplinary response.

5. STRATEGIC GOALS AND INITIATIVES

The Strategic Goals and Initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and emergency communications. The goals and initiatives are grouped into seven sections, including Governance, SOPs, Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

5.1 Governance

The Governance section of the SCIP outlines the future direction of the Connecticut governance structure for interoperable and emergency communications. The Connecticut SIEC is a subcommittee of the DEMHS Advisory Council as established by the DESPP Commissioner. It is formally recognized by Executive Order and meets monthly to coordinate interoperability issues within the State. The SIEC's primary purpose is to provide recommendations to the Deputy Commissioner of DEMHS and to the Advisory Council with regard to sharing real-time voice, video, and data information with authorized first responders and other critical components of the emergency management and public safety community. The SIEC recently updated its membership to ensure statewide inclusivity and accurate representation. It also invites non-voting members of the stakeholder community to participate in meetings. Its Technical Committee meets regularly to carry out various communications interoperability efforts. The newly established SIEC Broadband Working Group will coordinate data gathering, planning, build-out, and implementation efforts for the NPSBN.

Regional emergency management in the State is coordinated through five DEMHS Regional Emergency Planning Teams (REPTS) and five DEMHS Regional offices. The regional offices serve as a structure for multi-agency, multi-jurisdictional, multi-level collaboration within each intra-State region. They are the primary interface with local officials in each of the 169 towns and two Tribal Nations in Connecticut, a strategy that has been successful in coordinating the activities of the municipalities in the State. Connecticut also plans to enhance stakeholder understanding of the Regional Emergency Support Function (RESF) 2 committees and to enhance RESF 2 Committees' scope for coordinating intra-State regional efforts.

Table 1 outlines Connecticut's goals and initiatives related to governance.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1.	Update scope, make-up, and definition of intra-state Regional RESF 2 committees	1.1 Leverage existing Federal guidelines and State Response Framework to review RESF 2 job description, in Regional Emergency	SWIC	January 2016

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		Support Plans and revise and update as appropriate.		
		1.2 Communicate revised RESF 2 job description to Regional Emergency Planning Teams (REPTs)	SWIC, DEMHS	February 2016
		1.3 Promote adoption of ESF 2 job description within each REPT	DEMHS/SWIC	March 2016
2.	Update and enhance inter- and intra-State regional coordination on operable and interoperable communications activities and efforts	2.1 Update SIEC list serve to ensure RESF 2 committees are included in distribution of meeting minutes	SWIC	December 2015
		2.2 Ensure all regions are represented at SIEC meetings	Regional POCs or designee(s)	January 2016, quarterly thereafter
		2.3 Maintain communications with FEMA Regions I and II and their respective States	DEMHS, SWIC, Representatives on FEMA Regional Committees (RECCWG), Representatives on national DHS and FEMA Communications working groups, including IPAWS, FirstNet. FCC Representatives to Regional Frequency Groups in FCC Region 8 and 19.	December 2015, annually thereafter
3.	Continue presence on national committees (e.g., Public Safety Advisory Committee [PSAC], Northeast States Emergency Consortium [NESEC], Regional Emergency Communications Coordination Working Groups [RECCWGs],	3.1 Identify target national committees on which to participate for communications issues.	SIEC	January 2016
		3.2 Identify personnel to participate on national committees for communications issues.	SIEC	January 2016, annual review of attendance
		3.3 Communicate information from national committees to the	SIEC	January 2016, annual review of information

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	National Emergency Management Agency [NEMA], National Council of Statewide Interoperability Coordinators [NCSWIC], SAFECOM)	regions for communications issues.		sharing

5.2 Standard Operating Procedures (SOPs)

The SOPs section of the SCIP identifies the framework and processes for developing and managing SOPs statewide. SOP implementation and documentation varies throughout the State. Under the statutory mission to provide a coordinated, integrated program DESPP/DEMHS works to coordinate local, regional and state SOP's. In an effort to support standardization, development, and usage of SOPs statewide, Connecticut recently developed SOP templates for statewide use and held a workshop for stakeholders to develop SOPs. However, challenges in establishing consistent documentation and usage of SOPs statewide remain due to municipal autonomy. The State plans to develop mutual aid agreements and mission-ready mutual aid packages to share resources across municipal and regional boundaries. Stakeholders have also identified the need for a common repository of SOPs to serve as a knowledge base and sharing platform. This repository will serve as the basis for conducting regular reviews of statewide SOPs and performing gap analyses to determine SOP updates and new SOP development, as needed.

Table 2 outlines Connecticut's goals and initiatives for SOPs.

Table 2: Standard Operating Procedures Goals and Initiatives

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
4.	Build on established SOPs to include non-traditional public safety response partners (e.g., utilities, NGOs) in initial notification of an incident or event	4.1 Develop State and regional lists of non-traditional public safety response partners or secondary end users to include in pre-notification (e.g., utilities, NGOs)	SIEC, Regional ESF 2 leads	September 2015
		4.2 Develop relationships with identified non-traditional public safety response partners (e.g., utilities, NGOs)	SIEC, Regional ESF 2 leads	December 2015

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		4.3 Identify pre-notification methods (e.g., list serves)	SIEC, Regional ESF 2 leads	June 2016
		4.4 Update established SOPs for pre-notification	Regional ESF 2 leads and non-traditional response partners	October 2017
5.	Document agreements (e.g., Emergency Management Assistance Compact [EMAC], memoranda of understanding [MOUs], memoranda of agreement [MOAs]) to utilize COML/COMT resources across regions and/or States	5.1 Collaborate with mutual aid partners to develop agreements for sharing communications resources	DEMHS, DESPP	June 2015
		5.2 Leverage existing mutual aid programs through DEMHS and DESPP	DEMHS, DESPP	June 2015
		5.3 Identify existing communications resources within the State via regional Tactical Interoperable Communications Plans (TICPs)	SIEC, REPTs	April 2015
		5.4 Conduct Incident Command System (ICS) resource typing and costs for deployable communications resources	DEMHS, CTS	October 2017
6.	Create interoperable communications mission-ready mutual aid packages for inter- and intra-State resource sharing	6.1 Develop a statewide list of communications resources (see Initiatives 5.3 and 5.4)	DEMHS, CTS, REPT's	July 2015
		6.2 Review and update list(s) of available deployable communications resources	SIEC, REPTs	July 2015, annually each July thereafter
7.	Create interoperable communications and broadband SOPs that are regularly updated and stored in a centralized repository that enables sharing across regions and municipalities	7.1 Identify existing interoperable communications and broadband SOPs and conduct gap analysis	SIEC, REPTs	December 2015
		7.2 Develop new SOPs based on identified gaps and in accordance with grant guidance	SIEC, REPTs	July 2017
		7.3 Review SOPs for State and National Response Frameworks (SRF/NRF) and	SIEC, REPTs	July 2017

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		National Incident Management System (NIMS) compliance and update as needed		
		7.4 Create a repository/knowledge base for sharing SOPs, lessons learned, and other materials to retain institutional knowledge across regions and municipalities	SIEC, REPTs	August 2017

5.3 Technology

The Technology section of the SCIP outlines Connecticut's plan to maintain and upgrade existing technology; the roadmap to identify, develop, and implement new and emerging technology solutions; and the approach to survey and disseminate information on current and future technology solutions to ensure user needs are met. Connecticut has developed robust communications infrastructure by building ample tower sites and fiber and microwave backhaul capabilities to connect systems. Primary public safety communications systems in Connecticut include:

- ***CS-PERN***, an 800 MHz system for interoperable communications for local and State users.
- ***PSDN***, an ultra-high-speed fiber optic data network for approximately 400 public safety government applications and services statewide.
- ***8CALL90/8-TACInteroperability Mutual Aid Radio System***, a statewide 800 MHz conventional radio system designated for command and control radio communications at multi-agency and/or multi-jurisdictional incidents.
- ***STOCS***, a system of UHF, VHF high band, and 800 MHz frequencies combined into five interoperability channel groups.
- ***CMED***, a 25-year-old UHF system utilized by all EMS personnel and hospitals to relay patient critical care information.
- ***Connecticut State Fire Chiefs System and Connecticut State County Fire Systems***, available for regional fire communications centers and local fire services, respectively, as well as the State Fire Coordinator system. The conventional channel systems were installed in the 1950s, are supported by the Connecticut Fire Chiefs Association's Technical Advisory Committee and funded by State legislature for maintenance.

In addition to maintaining the existing systems, Connecticut will participate in early build-out of the NPSBN through the funding opportunity offered by SLIGP. Technology

efforts in the next three years will focus highly on the data collection, build-out, and implementation of the broadband network to enhance the existing interoperable and emergency communications in the State.

Since Connecticut's public safety communications landscape is robust, its challenges lie in sustaining systems and coordinating upgrades among neighboring cities in the State's autonomous environment to ensure continuity of interoperability. In the next three years, the State will focus on leveraging existing networks to enhance operable and interoperable communications; leveraging best practices to enhance PSAP resiliency; migrating systems, as appropriate, to P25 technology; and expanding the use of data sharing tools to achieve a common operating picture among first responders before, during, and after an incident. These efforts will continue to be coordinated by the SIEC and the five Intra-State DEMHS regions to ensure municipalities plan and implement communications technology improvements collaboratively.

Table 3 outlines Connecticut's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
8.	Leverage existing voice, video, and data communications networks to enhance coverage and capabilities	8.1 Promote the use of the Conventional Channel Gateway (CCGW)	SIEC	December 2015
		8.2 Identify existing communications networks and limitations via regional TICPs	SIEC, Regional ESFs	January 2015
		8.3 Update regional TICPs with communications networks information as needed and submit to the SIEC	SIEC, Regional ESFs	June 2015, annually each June thereafter
		8.4 Conduct review of updated regional TICPs	SIEC	August 2015, annually each August thereafter
9.	Document and coordinate use of best practices for redundancy/resiliency of existing PSAPs	9.1 Develop an emergency communications architecture best practices document for PSAPs, leveraging national standards	SIEC Technical Committee, 911 Commission, Division of Statewide Emergency Telecommunications (DSET)	October 2017
10.	Promote migration to the statewide P25 system, as	10.1 Enhance understanding of statewide P25 capabilities	SIEC Technical Committee	June 2015
		10.2 Conduct a user needs	DESPP/	December 2015,

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	appropriate	assessment for statewide P25 technology	Connecticut Telecommunications System (CTS)	ongoing based on request
		10.3 Develop a template for integrating existing resources into the statewide P25 system	DESPP/CTS	December 2015
11.	Establish a roadmap for migration to the NPSBN	11.1 Develop a plan to conduct a user needs assessment for broadband technology	SIEC Broadband Working Group	January 2015
		11.2 Enhance understanding of mobile broadband capabilities	SIEC Broadband Working Group	January 2016
		11.3 Review the technology roadmap with key decision makers to identify next steps	SIEC Broadband Working Group	January 2016
		11.4 Develop a plan to conduct an inventory of existing infrastructure that may support broadband technology	SIEC Broadband Working Group	June 2016
		11.5 Develop a roadmap for integrating data and video communications	SIEC Broadband Working Group	June 2016
12.	Support State Threat and Hazard Identification and Risk Assessment (THIRA) efforts to complete cyber risk and security assessments for existing systems and make appropriate improvements	12.1 Ensure integration of ESF 2 functions in ongoing THIRA efforts	DEMHS	[Coincides with THIRA deadline]
13.	Identify and enhance the integration and use of data sharing and common operating systems (e.g., WebEOC) used for emergency and	13.1 Identify existing data systems and data format compatibility among those systems	SIEC (Broadband Working Group), PSDN Governance Committee, DAS/BEST, Office of Policy and Management (OPM)	March 2015

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	disaster response	13.2 Standardize data reporting format	SIEC (Broadband Working Group), PSDN Governance Committee, DAS/BEST, OPM	September 2015
		13.3 Develop plan to integrate data connection and sharing among existing systems	SIEC (Broadband Working Group), PSDN Governance Committee, DAS/BEST, OPM	March 2016

5.4 Training and Exercises

The Training and Exercises section of the SCIP explains Connecticut's approach to ensure that emergency responders are familiar with interoperable and emergency communications equipment and procedures and are better prepared for responding to real-world events. The DESPP/ DEMHS maintains a statewide calendar of training and exercises on its Website. The State provides regular COML/COMT/AUXCOMM training classes and has a formal COML/COMT credentialing system. The regions conduct training sessions and hold "Tech Days"—workshops designed for COML/COMTs along with a communications exercise to provide the opportunity to have workbooks signed for formal credentialing. The State also provides targeted training on relevant communications topics, such as narrowbanding and P25 controller training. In addition, Region 5 created a series of DVDs to train local agency personnel.

Despite the various training courses already occurring in the State, maintenance of institutional knowledge is a concern for Connecticut. The State plans to incorporate communications components into existing training and exercises and continue to provide regular training opportunities for first responders and other partners across the State. These opportunities will ensure familiarity with operable and interoperable communications systems and equipment as well as plans, policies, and procedures. Specific end user training on national, State, and regional interoperability systems and SOPs and incorporation of AUXCOMM resources will further strengthen interoperable and emergency communications statewide.

Table 4 outlines Connecticut's goals and initiatives for training and exercises.

Table 4: Training and Exercises Goals and Initiatives

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
14.	Incorporate a specific communications component (e.g., COML/COMT personnel, STR equipment, communications objectives) into all training, exercises, and planned events	14.1 Conduct outreach to various training and professional organizations in the State to enhance education and training programs for Communications Unit (COMU) personnel and align with ESF 2 job description education (see Goal 1)	DEMHS, SIEC	February 2016
		14.2 Align communications training with Federal initiatives	DEMHS, SIEC	February 2016
		14.3 Identify training and exercise opportunities, including those on the statewide multi-year training and exercise calendar, to leverage existing opportunities to integrate communications components	DEMHS, SIEC	July 2016
15.	Enhance end user training on national, State, and regional interoperability systems	15.1 Update the NIMS implementation plan to ensure ICS training (e.g., ICS 704) for multi-disciplinary personnel to ensure understanding of available communications resources (COML/COMT/COMU/AUXCOMM)	DEMHS	January 2016
		15.2 Update the existing training program to include training on communications fundamentals and provide to agencies involved in multi-disciplinary response—managers and field personnel—to ensure a clear understanding of communications assets (e.g. fiber network availability)	SIEC, Professional Associations	June 2016
		15.3 Identify professional associations and/or other training associations and promote incorporation of updated training on communications fundamentals	SIEC	June 2015

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
16.	Provide additional education programs for AUXCOMM personnel (e.g., Amateur Radio Emergency Services [ARES], Radio Amateur Civil Emergency Services [RACES])	16.1 Identify AUXCOMM personnel, resources, capabilities, and gaps	Statewide ARES Representative to the SIEC	November 2015
		16.2 Develop a training program to address identified gaps	Statewide ARES Representative to the SIEC	January 2015
17.	Conduct training on SOPs and availability of mutual aid resources	17.1 Upon completion of SOPs (see Goals 5-7), develop and schedule a training program for mutual aid (leverage TICPs, Connecticut Interoperability Field Operations Guide [CTIFOG])	SIEC	October 2017

5.5 Usage

The Usage section of the SCIP outlines efforts to ensure responders adopt and familiarize themselves with interoperable and emergency communications technologies, systems, and operating procedures in the State. Regular usage ensures the maintenance and establishment of interoperability in case of an incident. Connecticut responded to several real-world events in the past few years, including Hurricane Irene, Superstorm Sandy and the October 2011 Nor'Easter, the Sandy Hook Elementary School Shooting, and several severe winter storms. Though devastating, these incidents provided opportunities for Connecticut responders and resources to be used regularly. To ensure continued efficient and effective usage during future real-world events, Connecticut plans to enhance the use of COMU and other Subject Matter Experts (SMEs) during training and incident response. The State also plans to maintain a schedule for periodic testing of cache equipment and other interoperability tools (e.g., talkgroups) to ensure familiarity during future response to incidents.

Table 5 outlines Connecticut's goals and initiatives for usage.

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
18.	Ensure efficient use of COMU and other SMEs	18.1 Based on RESF 2 job description, identify SMEs	REPTs, DEMHS Regional	June 2016

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	in the field during real-world incidents, events, and exercises	and establish regional lists of COMU resources	Coordinators	
		18.2 Promote awareness of SMEs via COMU training program (see Initiative 15.1)	REPTs, COMUs, Professional Associations, SIEC	July 2016, annually each July thereafter
		18.3 Review deployment procedures for COMU and other SME personnel to ensure maximization of resources	SIEC	July 2016, annually each July thereafter
19.	Establish and maintain a schedule for the systematic testing and use of interoperable systems, STR/cache equipment, and channels or talk groups	19.1 Identify resources that require testing and frequency of testing	DEMHS, CTS, DSET, Regional RESF 2's	December 2015
		19.2 Develop and publish a testing schedule and align with existing testing, as applicable	DEMHS, CTS, DSET, Regional RESF 2's	January 2015

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines Connecticut's approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common emergency communications initiatives. Each of the DEMHS Planning and Preparedness Regions has a RESF 2 Chairperson and a Regional Representative to the SEIC , through which members of the public safety community and others provide feedback concerning communications interoperability efforts.

Connecticut is formalizing its outreach and information sharing strategy based on its State Response Framework (SRF). The SRF provides the framework for emergency operations both before and during any incident which requires the activation of local or State EOC's as well as day to day request for services between local municipalities the State and Federal Government.

These efforts will include the development of daily communications status updates, will include non-traditional response partners (e.g. utilities and NGOs), better engage tribal and local representatives, and enhance the DESPP/DEMHS website as a resource for statewide interoperable and emergency communications information. The State also plans to enhance understanding about its interoperable and emergency communications governance structure, particularly the RESF 2 committees.

Table 6 outlines Connecticut*'s* goals and initiatives for outreach and information sharing.

Table 6: Outreach and Information Sharing Goals and Initiatives

Outreach and Information Sharing Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
20.	Develop a daily statewide status update for communications (e.g., weather, ongoing incidents, location and availability of deployable communications resources) (via the Connecticut Intelligence Center [CTIC] bulletin or other vehicle)	20.1 Leverage and expand upon existing list serves to develop a comprehensive contact list and applicable information for daily updates	DEMHS, CTS, CFA, POST, DSET	June 2015
		20.2 Establish a DESPP/ DEMHS "watch desk" to provide "real time" updates to stakeholders	DESPP/DEMHS	October 2017
21.	Implement a formal, comprehensive outreach and information sharing program to inform decision makers of the State's SCIP and developments in the interoperable and emergency communications environment	21.1 Identify appropriate stakeholders for outreach about statewide communications operability and interoperability efforts (e.g. professional associations, agencies, other partners)	SIEC, REPTs	June 2015
		21.2 Conduct education about the role and capabilities of ESF 2 (see Initiative 1.2)	SWIC, DEMHS	June 2015
		21.3 Increase stakeholder buy-in for interoperable communications	SIEC, REPTs	December 2015, annually each December thereafter
		21.4 Include a site map to clarify DESPP website navigation for enhanced use as a go-to source for interoperable communications and other public safety information	DESPP Computer Services.	January 2017
22.	Develop an outreach plan for the State to engage and encourage local and tribal participation to ensure their public safety needs are adequately	22.1 Identify local and tribal POCs to include in the consultation process with FirstNet by leveraging existing stakeholder lists	SIEC Broadband Working Group	December 2014
		22.2 Identify non-traditional public safety stakeholders to	SIEC Broadband Working Group	December 2014

Outreach and Information Sharing Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	represented during the FirstNet consultation process	include in the consultation process with FirstNet by leveraging existing stakeholder lists		
		22.3 Conduct stakeholder forums to gather feedback regarding user needs for broadband	SIEC Broadband Working Group	April 2015

5.7 Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines Connecticut's plan to fund existing and future interoperable and emergency communications priorities. The State's efforts to build sufficient interoperability into its systems have been largely successful, particularly in serving Connecticut's geographic location between metropolitan New York City and New England. Funding for the next three years will focus on sustainment of these systems and efforts, including necessary training, maintenance, and upgrades. Funding will also focus on training to ensure institutional knowledge is passed on to new generations of first responders and to members of the community who support public safety communications-related efforts. Funding for SLIGP efforts and upgrades to the PSDN may provide opportunities to accomplish broader funding goals, such as outreach and information sharing.

Table 7 outlines Connecticut's goals and initiatives for life cycle funding.

Table 7: Life Cycle Funding Goals and Initiatives

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
23.	Implement a life cycle funding plan that takes into account all interoperable communications systems and equipment, the interoperability program, and the core elements of establishing and maintaining interoperable and emergency	23.1 Identify the life cycle and funding requirements of major systems and equipment to demonstrate long-term budget requirements to fiscal decision makers	SWIC	December 2015
		23.2 Establish a Life Cycle Funding Committee of the SIEC to explore long-term funding options (e.g. donations to public safety organizations, repurposing of	SIEC	April 2016

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
	communications in the State	decommissioned private sector equipment)		
		23.3 Present the business case for sustaining interoperable and emergency communications systems to municipal, State, and Federal legislators via the SCIP and its high level of stakeholder support, as well as other applicable mechanisms	SIEC, REPTs	June 2016, annually each June thereafter
		23.4 Leverage stakeholder groups (e.g. professional associations) to present the business case for sustaining interoperable and emergency communications systems to legislators	SIEC	June 2016, annually each June thereafter

6. IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process Connecticut will use to determine a plan to execute the initiatives in the SCIP. The SIEC and the SWIC oversee the action planning process, which occurs each year during the SCIP strategic plan review. During this time, the SIEC discusses necessary updates to the SCIP based on ongoing monitoring and modifying of steps necessary to implement the State's strategic plan for interoperable and emergency communications. The SIEC informs its action planning process with information from status updates during the governing body's monthly meetings to determine the path forward for completing SCIP goals and initiatives.

6.2 Measures of Success

The Measures of Success section of the SCIP defines the measures that Connecticut will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Measures of success are used to meaningfully assess the outcomes and impacts of program functions and processes in meeting strategic goals. Table 8 outlines these measures for Connecticut. More information on how these measures are managed is included in Section 6.3.

Table 8: SCIP Measures of Success

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
1.	Update scope, make-up, and definition of intra-state regional ESF 2 committees	RESF 2 committees are functioning successfully in Connecticut, but not all stakeholders or REPTs understand the job function and planning purpose of the committees	By 2016, all RESF 2 committees are regular (80% of meetings) participants in their respective REPTs and 70% of all training and exercises	June 2016	DEMHS
2.	Update and enhance inter- and intra-State regional coordination on operable and interoperable communications activities and efforts	Inconsistent participation at intra-State regional meetings and monthly SIEC meetings	100% participation by all five DEMHS Planning & Preparedness Regions and ESF 2 committees at monthly SIEC meetings. Updated membership/distribution lists for intra-State regions and inter-State regions	December 2015	Regional POCs to the SIEC
3.	Continue presence on national committees (e.g., PSAC, NESEC, RECCWG, NEMA, NCSWIC, SAFECOM)	Connecticut has presence on several national committees including, but not limited to, PSAC, NESEC, RECCWG, NEMA, NCSWIC, SAFECOM	Connecticut State presence on 100% of targeted national committees identified and twice annual updates, at a minimum, to the SIEC on national committee information	January 2015	SIEC

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
4.	Build on established SOPs to include non-traditional public safety response partners (e.g., utilities, NGOs) in initial notification of an event	Traditional first responders have established pre-notification and notification SOPs for an unfolding incident, but do not typically include non-traditional public safety response partners	Comprehensive contact list of traditional and non-traditional response partners for pre-notification of an incident is used in 100% of all real-world incidents	June 2016	SIEC, Regional RESF 2 leads
5.	Document agreements (e.g., EMAC, MOUs, MOAs) to utilize COML/COMT resources across regions and/or States	Development of mutual aid agreements is currently in progress for EMAC, but further mutual aid agreements could be made between municipalities, regions, and other States	Formalized mutual aid agreements (and/or agreement templates to expedite ad-hoc mutual aid agreements) are used in 60% of real-world incidents in which additional resources are necessary	October 2015	DEMHS
6.	Create interoperable communications mission-ready mutual aid packages for inter- and intra-State resource sharing	Documentation of communications resources varies across Connecticut, and mission-ready mutual aid packages do not exist for all municipalities, regions, and with other States	Annual update of a list of a secure, statewide, ICS-typed communications resources	October 2017	DEMHS
7.	Create interoperable communications and broadband SOPs that are regularly updated and stored in a centralized repository that enables sharing across regions and municipalities	Various SOPs exist for interoperable communications, but need to be updated generally and to include SOPs for broadband. There is currently one single statewide repository for sharing SOPs	Interoperable communications SOPs are updated every two years, at minimum, and uploaded to a common repository	August 2016	SIEC, REPTs
8.	Leverage existing voice, video, and data communications networks to enhance	Major metropolitan areas and others are linked into the State's "system of systems" for	90% of the State has access to and knows proper use of statewide "system of	August 2015, annually each August	SIEC

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
	coverage and capabilities	interoperability, but further coverage, capabilities, and training is needed	systems" for interoperable communication		
9.	Document and coordinate use of best practices for redundancy/resiliency of existing PSAPs	No single set of best practices has been made available to PSAPs statewide	Emergency communications architecture best practices document for PSAPs is posted to DEMHS website	October 2017	SIEC Technical Committee
10.	Promote migration to the statewide P25 system, as appropriate	Limited understanding of the statewide P25 system has resulted in limited migration	Migrate 50% of identified systems that want to join the statewide P25 system	October 2017	SIEC Technical Committee
11.	Establish a roadmap for migration to the NPSBN	Received initial SLIGP funding for planning for the NPSBN	By 2017, implementation and testing of the NPSBN in Connecticut	October 2017	SIEC Broadband Working Group
12.	Support State THIRA efforts to complete cyber risk and security assessments for existing systems and make appropriate improvements	Ensure integration of ESF 2 functions in ongoing THIRA efforts	100% completion of THIRA, to include ESF 2 functions	Coincides with THIRA deadline	DEMHS
13.	Identify and enhance the integration and use of data sharing and common operating systems (e.g., WebEOC) used for emergency and disaster response	Data sharing and common operating systems are used to varying degrees by various agencies and response partners in the State	Implementation of WebEOC and/or other data sharing systems statewide in 70% of real-world incidents	July 2016	SIEC
14.	Incorporate a specific communications component (e.g., COML/COMT personnel, strategic technology reserve equipment, communications	Communications is specifically included in approximately 50% of all training and exercises	100% of all training and exercises in Connecticut include a specific communications component	February 2016	DEMHS

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
	objectives) into all training, exercises, and planned events				
15.	Enhance end user training on national, State, and regional interoperability systems	Few incident commanders fully understand all interoperable and emergency resources	60% of all end users and response partners have taken ICS 704	January 2016	DEMHS
16.	Provide additional education programs for AUXCOMM personnel (e.g., ARES, RACES)	Stakeholders do not understand the full scope or how to best utilize AUXCOMM resources	AUXCOMM personnel are incorporated into 50% of training and exercises and real-world events, as needed	June 2016	Statewide ARES Representative to the SIEC
17.	Conduct training on SOPs and availability of mutual aid resources	Various SOPs exist for interoperable communications, but require updates. New SOPs for broadband are also needed. There is no single statewide repository for sharing SOPs	Interoperable communications SOPs are updated every two years, at minimum, and uploaded to a common repository	October 2017	SIEC
18.	Ensure efficient use of COMU and other SMEs in the field during real-world incidents, events, and exercises	Communications experts are underutilized in real-world incident response	90% of real-world incidents will include a staffed, formally certified COML/COMT or other SME position	July 2016	SIEC
19.	Establish and maintain a schedule for the systematic testing and use of interoperable systems, STR/cache equipment, and channels or talk groups	STR and other cache equipment is tested to varying degrees and frequencies	STR and other cache equipment is successfully deployed without major issues in 70% real-world deployments, as reviewed in incident After Action Reports (AARs)	January 2016	DESPP, RESF 2s
20.	Develop a daily statewide status update for	Communications resources status updates are sent	Consistent daily dissemination of a statewide status	December 2015	DESPP

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
	communications (e.g., weather, ongoing incidents, location and availability of deployable communications resources) (via the CTIC bulletin or other vehicle)	infrequently to traditional first responders	update for communications to traditional and non-traditional response partners, as appropriate		
21.	Implement a formal, comprehensive outreach and information sharing program to inform decision makers of the State's SCIP and developments in the interoperable and emergency communications environment	Occasional miscommunications occur among intra-State regions, but general information sharing is strong and should be continued.	Feedback from the State and from intra-State regions during monthly SIEC meetings is consistently disseminated to other regions and down to the municipal level , as well as to State decision-makers	December 2015	SIEC, REPTs
22.	Develop an outreach plan for the State to engage and encourage local and tribal participation to ensure their public safety needs are adequately represented during the FirstNet consultation process	Received initial SLIGP funding for planning for the NPSBN	By 2017, implementation and test the NPSBN in Connecticut	October 2017	SIEC Broadband Working Group
23.	Implement a life cycle funding plan that takes into account all interoperable systems and equipment, the interoperability program, and the core elements of establishing and	Decreased funding for emergency communications has altered previous budgets	Identify a long-term funding plan for all major systems in the State	December 2017	SWIC

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target	Measure Completion Date	Owner or Source
	maintaining interoperable and emergency communications in the State				

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method Connecticut will follow to add, update and refine the measures of success. At each monthly meeting, the SIEC reserves time to provide status updates on SCIP goals and initiatives. The SIEC will continue this process and include measures of success to determine if the intended impacts of the strategic goals are achieved. Measures of success owners will present the measures at SIEC meetings, as appropriate; if unavailable to attend, owners will communicate updates to the SWIC to share with the SIEC. Status update information will be reviewed by the SIEC to determine if any further action is necessary, either to enhance the impacts or to sustain their successes.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process Connecticut will use to conduct reviews of the SCIP to ensure it is up to date and aligned with the changing internal and external interoperable and emergency communications environment as well as to track and report progress against the defined initiatives and measures of success. The SIEC reviews the status SCIP goals and initiatives monthly and may make ad-hoc, minor updates to the SCIP. On an annual basis, the SCIP will be reviewed and approved by the SIEC. This review will coincide biannually with the State's fiscal cycle. Concurrent to the annual review of the SCIP, the SWIC will compile statewide interoperable and emergency communications updates to develop the APR, which will be used as a tool to demonstrate challenges and accomplishments to State and Federal decision makers as well as other relevant stakeholders.

7. REFERENCE MATERIALS

The Reference Materials section outlines resources that contribute additional background information on the SCIP and interoperable and emergency communications in Connecticut. Table 9 includes the links to these reference materials.

Table 9: SCIP Reference Materials

Title	Description	Source/Location
Connecticut Interoperability Field Operations Guide (CTIFOG)	*[Insert resource description]*	*[Insert hyperlink or embedded document]*
Connecticut Public Safety State Interoperability Executive Committee (CPSSIEC) Monthly Meeting Minutes	*Record of the actions of the States Communications Interoperability governing body.*	http://www.ct.gov/demhs/cwp/view.asp?a=1923&q=287890
Connecticut State Response Framework (SRF)	The purpose of the State Response Framework (the Framework or the SRF) is to describe the interaction of state government with local, federal and tribal governments, nongovernmental response organizations and other private sector partners, the media, and the public in implementing emergency response and recovery functions in times of crisis.	http://www.ct.gov/demhs/lib/demhs/srf_v_4_1.pdf
Regional Tactical Interoperable Communications Plans (TICPs)	*[Insert resource description]*	*[Insert hyperlink or embedded document]*
Emergency Communications and Warning Appendix.	This purpose of this Appendix is to detail how emergency information will be relayed to the public and emergency response partners in the State prior to, during and after an emergency.	

APPENDIX A: MAJOR SYSTEMS

Table A-1 lists major interoperable and emergency communications systems in the State of Connecticut.

Table A-1: Major Systems, Updates, and New Systems

Major Systems Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
Shared Statewide System	Connecticut Statewide Police Emergency Radio Network (CS-PERN)	Connecticut State Police	800MHz Non-P25 Motorola Digital Conventional Not Encrypted Other: _____ Primary Usage: Voice Number of Sites:		State Local	Existing System
Shared Statewide System	Public Safety Data Network (PSDN)		Choose frequency P25 Compatible Choose make Digital Choose trunked/conventional Choose encryption level Other: Ultra-high-speed fiber optic	400+ agencies and/or applications and services	State Local	Existing System

Major Systems Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			Primary Usage: Data Number of Sites:			
Shared Statewide System	8CALL90/8-TACInteroperability Mutual Aid Radio System		800MHz P25 Compatible Motorola Digital Conventional Not Encrypted Other: _____ Primary Usage: Voice Number of Sites:28		State Local	Existing System
Shared Statewide System	State Tactical On-Scene Channel System (STOCS)		VHF (High Band): 150MHz to 170MHz UHF (Upper High Band): 450MHz to 470MHz 800MHz P25 Compatible Kenwood Analog Conventional		State Local	Existing System

Major Systems Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
			Not Encrypted Other: _____			
			Primary Usage: Voice			
			Number of Sites: Portable Cross Band Repeaters 100 units			
Shared Statewide System	Statewide Coordinated Medical Emergency Dispatch (CMED)		UHF (Upper High Band): 450MHz to 470MHz Non-P25 Other Analog Conventional Not Encrypted Other: _____		State Local	Existing System
			Primary Usage: Voice			
			Number of Sites:			
State Agency(ies) System Multi-JurisdictionalSystem	Connecticut State Fire Chiefs System and Connecticut State County Fire		VHF (Low Band): 30MHz to 50MHz Non-P25 Other		State Local	Existing System

Major Systems Information						
System Type	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
	Systems		Analog Conventional Not Encrypted Other: _____			
			Primary Usage: Voice			
			Number of Sites:			

APPENDIX B: LIST OF ACRONYMS

AAR	After Action Report
APR	Annual Progress Report
ARES	Amateur Radio Emergency Services
AUXCOMM	Auxiliary Communications
CMED	Statewide Coordinated Medical Emergency Dispatch
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
CPSSIEC	Connecticut Public Safety State Interoperability Executive Committee
CS-PERN	Connecticut Statewide Police Emergency Radio Network
CTIC	Connecticut Intelligence Center
CTIFOG	Connecticut Interoperability Field Operations Guide
CTS	Connecticut Telecommunications System
DEMHS	Division of Emergency Management and Homeland Security
DESPP	Department of Emergency Services and Public Protection
DHS	U.S. Department of Homeland Security
DSET	Division of Statewide Emergency Telecommunications
EMAC	Emergency Management Assistance Compact
ESF 2	Emergency Support Function 2 (Communications)
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FirstNet	First Responder Network Authority
MHz	Megahertz
LMR	Land Mobile Radio
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NCSWIC	National Council of Statewide Interoperability Coordinators
NECP	National Emergency Communications Plan
NEMA	National Emergency Management Association
NESEC	Northeast States Emergency Consortium

NG911	Next Generation 911
NGO	Non-Governmental Organization
NIMS	National Incident Management System
NPSBN	Nationwide Public Safety Broadband Network
NRF	National Response Framework
NTIA	National Telecommunications and Information Administration
OEC	Office of Emergency Communications
P25	Project 25
PPD	Presidential Policy Directive
PSAC	Public Safety Advisory Committee
PSAP	Public Safety Answering Point
PSDN	Public Safety Data Network
RACES	Radio Amateur Civil Emergency Services
RECCWG	Regional Emergency Communications Coordination Working Group
REPT	Regional Emergency Planning Team
RESF	Regional Emergency Support Function
SCIP	Statewide Communication Interoperability Plan
SIEC	State Interoperability Executive Committee
SLIGP	State and Local Implementation Grant Program
SME	Subject Matter Expert
SOP	Standard Operating Procedure
STOCS	State Tactical On-Scene Channel System
SRF	State Response Framework
SWIC	Statewide Interoperability Coordinator
TERT	Telecommunication Emergency Response Taskforce
THIRA	Threat and Hazard Identification and Risk Assessment
TICP	Tactical Interoperable Communications Plan
VHF	Very High Frequency
UHF	Ultra High Frequency