

WASHINGTON STATEWIDE COMMUNICATIONS INTEROPERABILITY PLAN



DECEMBER 2019

Developed by the Washington State Interoperability Executive Committee
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LETTER FROM THE STATEWIDE INTEROPERABILITY COORDINATOR

Greetings,

I am pleased to provide to you the 2019 Washington Statewide Communication Interoperability Plan (SCIP). This SCIP represents Washington's continuous commitment to improving emergency communications interoperability and supporting our public safety practitioners throughout the state. In addition, an updated SCIP is required for Department of Homeland Security (DHS) grant guidelines.

Representatives from Washington's State Interoperability Executive Committee (SIEC) and its Advisory Work Group collaborated to update the SCIP with actionable and measurable goals and objectives with champions. These goals and objectives focus on Governance, Technology, and Sustainability Funding, and are designed to support our state in planning for new technologies and navigating the ever-changing emergency communications ecosystem.

As we continue to enhance interoperability, we must remain dedicated to improving our ability to communicate among disciplines and across jurisdictional boundaries. With help from public safety practitioners statewide, we will work to achieve the goals set forth in this SCIP and become a nationwide model for statewide interoperability.

Sincerely,

Jose Zuniga
Acting Washington Statewide Interoperability Coordinator

INTRODUCTION



The Washington Statewide Communications Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary strategic plan to enhance interoperable and emergency communications over the next one to three years. This document contains the following planning components:

- Introduction – Provides the context necessary to understand what the SCIP is and how it was developed.
- Interoperable and Emergency Communications Overview – Provides an overview of Washington’s current and future emergency communications environment.
- Vision and Mission – Articulates Washington’s one-to-three-year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.
- Goals and Objectives – Outlines the goals and objectives aligned with the vision and mission of the SCIP as they pertain to Governance, Technology, and Funding.
- Implementation Plan – Describes Washington’s plan to implement, maintain, and update the SCIP and enable continued evolution of and progress toward Washington’s interoperability goals.

The Emergency Communications Ecosystem consists of many inter-related components and functions, including communications for incident response operations, notifications and alerts and warnings, requests for assistance and reporting, and public information exchange. The primary functions are depicted in the newly released 2019 National Emergency Communications Plan (NECP)¹.

The Interoperability Continuum, developed by the Department of Homeland Security’s SAFECOM program and shown in Figure 1, serves as a framework to address challenges and continue improving operable/interoperable and public safety communications. It is designed to assist public safety agencies and policy makers with planning and implementing interoperability solutions for communications across

¹ [2019 National Emergency Communications Plan](#)

technologies. More information on the Interoperability Continuum is available in the Interoperability Continuum brochure.²

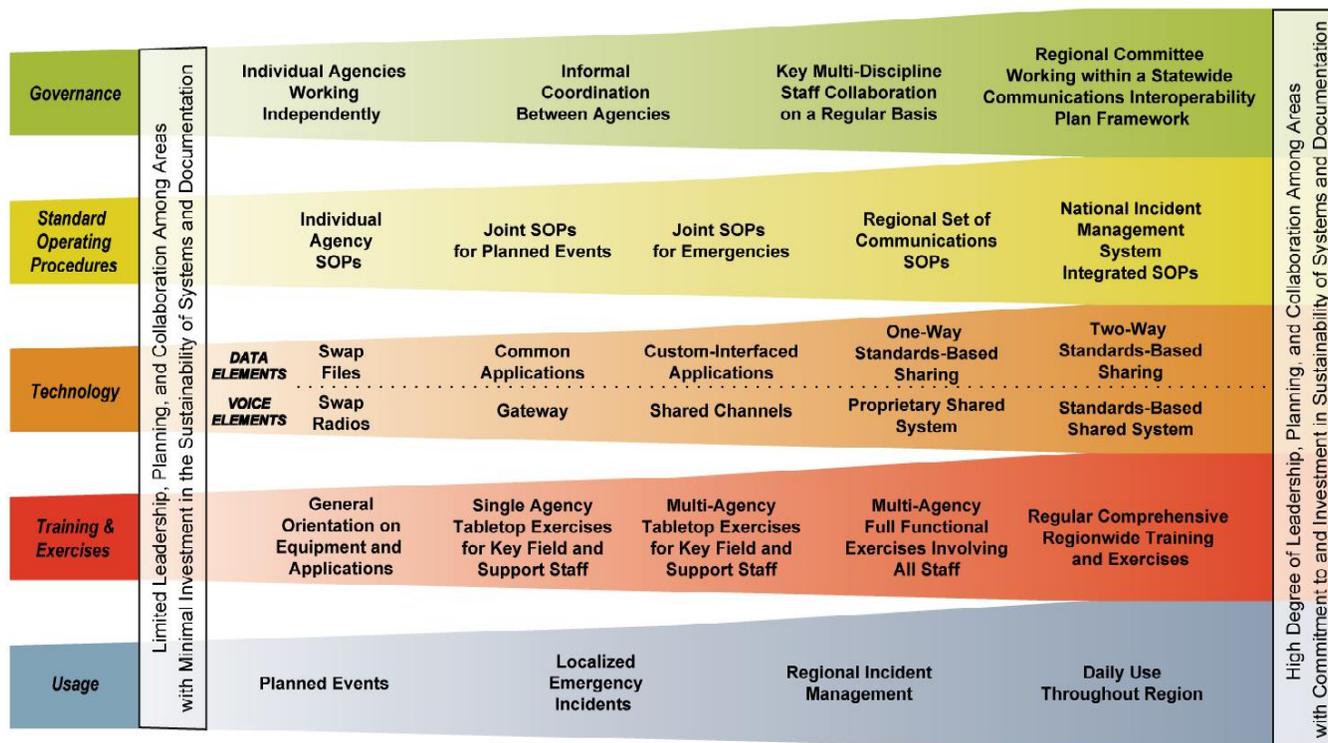


Figure 1: SAFECOM Interoperability Continuum

INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Interoperability is the ability of emergency response providers and relevant government officials to communicate across jurisdictions, disciplines, and levels of government as needed and as authorized.³ Reliable, timely communications among public safety responders and between public safety agencies and citizens is critical to effectively carry out public safety missions, and in many cases, saving lives.

Traditional voice capabilities, such as land mobile radio (LMR) and landline 9-1-1 services have long been and continue to be critical tools for communications. However, the advancement of internet protocol (IP) based technologies in public safety, has increased the type and amount of information responders receive, the tools they communicate with, and complexity of new and interdependent systems. New technologies increase the need for coordination across public safety disciplines, communications functions, and levels of government to ensure emergency communications capabilities are interoperable, reliable, and secure.

An example of this evolution is the First Responder Network Authority’s (FirstNet) implementation of the Nationwide Public Safety Broadband Network (NPSBN). In Washington State, the OneNet program was created to develop a comprehensive design for FirstNet and is now under the direction of the Washington Military Department. The program is tasked with the priority to supplement existing

² [SAFECOM Interoperability Continuum brochure](#)

³ [2019 National Emergency Communications Plan](#)

wireless data capabilities with improved spectrum, broadband capabilities, and the means to move and transfer data as never before.⁴

Similarly, the transition of public-safety answering points (PSAPs) to Next Generation 9-1-1 (NG9-1-1) technology will enhance sharing of critical information in real-time using multimedia—such as pictures, video, and text — among citizens, PSAP operators, dispatch, and first responders. While the benefits of NG9-1-1 are tremendous, interfacing sometimes disparate and non-governed systems along with governance, standard operating procedures and training are necessary to fully realize these benefits and ensure the security of information are all key elements to successful implementation.

VISION AND MISSION

This section describes Washington’s vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide:

Vision:

A practical and comprehensive approach to emergency communications and information sharing that allows all first responders and stakeholders to communicate and share data on demand, in real-time, as needed, and as authorized.

Mission:

The SCIP defines and promotes a statewide strategy enabling interoperable public safety communications in the interest of the safety and protection of life and property throughout the State of Washington.

GOVERNANCE

State Interoperability Executive Committee

The Washington SIEC is established by the state legislature in the Revised Code of Washington to promote interoperability of wireless radio communications systems.⁵ The SIEC is housed in the Office of the Chief Information Officer and is comprised of 22 voting members representing state and local agencies, and nongovernmental entities. While there is broad representation on the SIEC, the committee’s efforts are only directed to state agencies. With the development of emerging technology, there is increasingly more opportunities for the SIEC to expand their influence outside of wireless radio communications.

⁴ [Washington OneNet](#)

⁵ [Washington State Legislature \(RCW 43.105.331\)](#)

Under the SIEC there are three sub-groups: Governance Subcommittee, SIEC Advisory Workgroup (SAW), and SWIC Subcommittee. The SWIC coordinates statewide interoperability with emergency communications leaders across all levels of government and provides input to the SIEC. The SWIC position in Washington is a considered a part-time, collateral duty.

Governance of statewide Enhanced 9-1-1 (E9-1-1), alerts and warnings (A&W), Emergency Support Function #2: Communications (ESF#2), and the FirstNet Single Point of Contact (SPOC), are all overseen by the WA Military Department.⁶

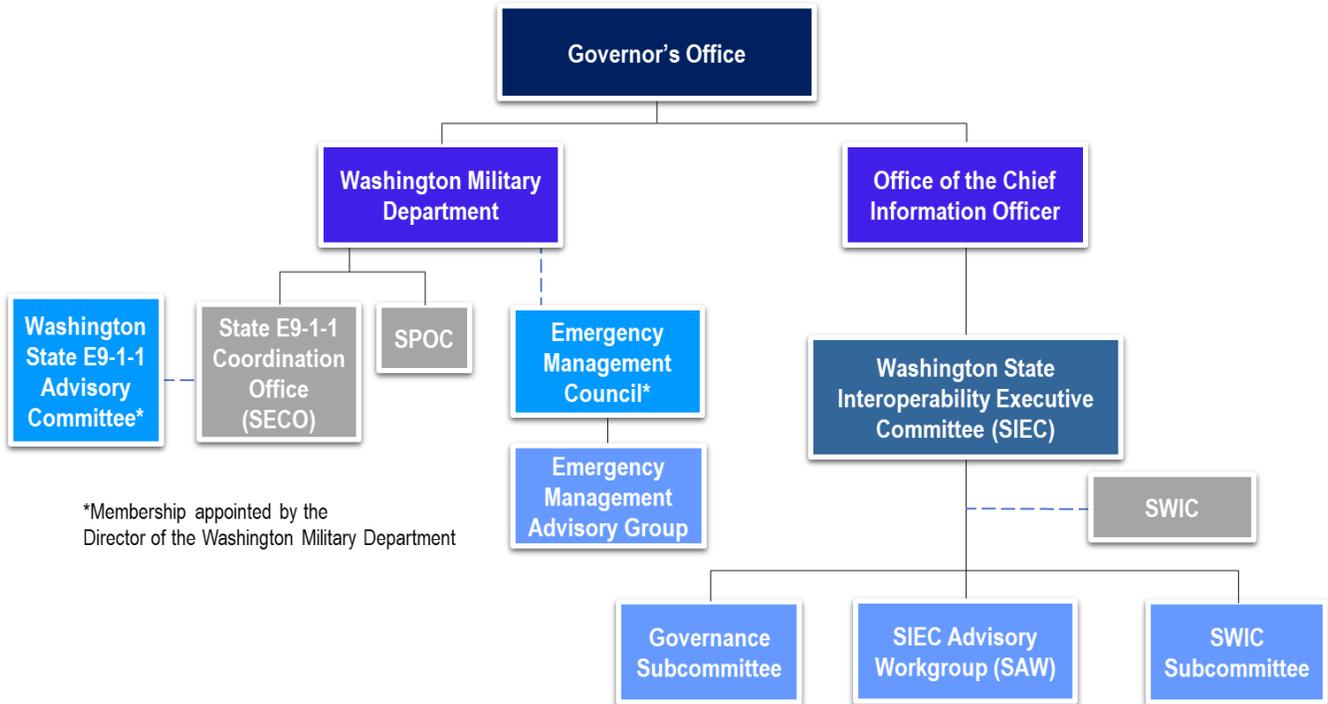


Figure 2: Emergency Communications Governance in Washington

The following table outlines goals and objectives related to Governance:

Governance	
Goals	Objectives
1. Review and update State Interoperability Executive Committee (SIEC) roles and responsibilities	1.1 Research opportunities for regional and/or discipline representation (i.e. regional working groups)
	1.2 Add Tribal and Association of Public-Safety Communications Officials (APCO) representation as formalized voting members of the SIEC

⁶ [Washington State Comprehensive Emergency Management Plan: ESF# 2](#)

	1.3 Define expectations for voting members
	1.4 Establish SIEC as the central repository and clearinghouse for communications-related materials
	1.5 Request funds for staffing support and positions from State Legislature
2. Identify champions for interoperable data and voice communications	2.1 Develop talking points and reference materials to share with potential champions (including information from after action reports)
	2.2 Annually evaluate outreach materials to reflect current communications ecosystem
	2.3 Promote the SIEC's role and value
3. Coordinated communications planning among bordering States and Canada	3.1 Identify and partner with current collaboration efforts (e.g., Canada-United States Communications Interoperability Workshop Group [CANUS CWG], Beyond Border Action Plan, annual meetings between Washington and British Columbia, Canadian Interoperability Task Group, Pacific Northwest Emergency Management Agreement [PNEMA])
	3.2 Coordinate with neighboring States (i.e., Portland-Vancouver UASI)
4. Create Statewide Interoperable Communications Field Operations Guide (FOG)	4.1 Collect data from public safety agencies in the State for inclusion in the FOG
	4.2 Collect data to develop an interoperable resource map
	4.3 Develop inventory of existing interoperable communications resources (CASM)

TECHNOLOGY

Land Mobile Radio

Washington operates a variety of mission critical voice and data communications systems that are managed by various agencies based on their business needs, each with disparate Very High Frequency (VHF), Ultra High Frequency (UHF), 700/800 Megahertz (MHz), and data systems.

As such, stakeholders have identified the need to develop a system of interoperability across dissimilar mission critical voice systems. For state agencies, the SIEC is currently promoting an ongoing evaluation and endorsement of interoperable LMR technology when upgrading or replacing radio systems in the state. To support the management of statewide communications assets, the SIEC is exploring the use of the Communication Assets Survey and Mapping (CASM) tool. This would aid in leveraging public safety data and voice communications to promote sharing and increase interoperability opportunities.

Mobile Broadband

The State of Washington is actively engaged in improving interoperability across applications and exploring Mission Critical Push-To-Talk (PTT) communications options. While there is currently sporadic, informal broadband work within agencies, stakeholders are advocating for the development of a central platform for connecting mission critical PTT with usage policy and standards.

9-1-1

The Washington State E9-1-1 Coordination Office (SECO), which operates under the Emergency Management Division of the Washington Military Department, is overseen by the State Enhanced 9-1-1 Coordinator with advice and assistance from a State E9-1-1 Advisory Committee as needed. To improve current operations, Washington PSAPs are striving to provide full redundancy/interoperability statewide.

To address long-term 9-1-1 needs, the Washington State E9-1-1 Coordination Office has made progress in implementing NG9-1-1 standards across the state since 2008. The SECO with the advice and assistance of the State Enhanced 9-1-1 Advisory Committee is working to achieve true NG9-1-1 capability statewide. Currently, all primary PSAPs are or have the capability to be Internet Protocol (IP) connected and are providing some NG9-1-1 capabilities. The PSAPs are connected by a statewide transitional Emergency Services IP Network (ESInet) which uses NENA NG9-1-1 i3 Standards-based Next Generation Core Services (NGCS). Some NG9-1-1 capabilities will require additional equipment upgrades at the PSAPs and will require the originating network services providers to begin providing NG9-1-1 services which are currently out of scope.

Alerts and Warnings

Alerts and Warnings are managed by various agencies within the state. Cities, counties, and agencies use different software to manage their alerts and warnings, and their policies and procedures are not coordinated across agencies.

The following table outlines goals and objectives related to Technology:

Technology	
Goals	Objectives
5. Expand the use of the CASM tool for cataloging and managing interoperable communications assets and resources	5.1 Collect data for state agencies
	5.2 Maintain data for state agencies
6. Ongoing evaluation and endorsement of interoperable Land Mobile Radio (LMR) technology when upgrading or replacing radio systems	6.1 Provide education and outreach to relevant stakeholders regarding LMR technology updates
7. Promote awareness to public safety personnel regarding the testing and exercise of LMR, public safety broadband, and 9-1-1/NG9-1-1	7.1 Promote communication testing and exercises to local, county, and state stakeholders
	7.2 Promote interoperable communications training opportunities to local, county, and state stakeholders
	7.3 Share and review after-action reports
8. Enhance and simplify interoperability across dissimilar mission critical voice systems	8.1 Regular testing of interoperable solutions
	8.2 Determine interoperability standard
	8.3 Review and maintain Washington Statewide Field Operation Guide (WAFOG)
	8.4 Utilize WAFOG for emergency communications trainings and exercises

FUNDING SUSTAINABILITY

Stakeholders in Washington are eager to secure sustainable funding to support SIEC operations and the establishment of a full-time SWIC. To support sustainable funding efforts, best practice will be to maximize information sharing to reduce duplication efforts and ensure interoperability without negatively impacting operations.

The following table outlines goals and objectives related to Funding Sustainability:

Funding Sustainability	
Goals	Objectives
9. Shared public safety communications resources that increase efficient costs and decrease redundant costs	9.1 Identify business needs and catalogue public safety LMR and data systems in use in the State
	9.2 Promote the sharing of public safety communications resources
10. Utilize Emergency Management Division (EMD) grant office for public safety communications investment awareness and funding management	10.1 Seek platform to identify and track grant opportunities
	10.2 Assist all agencies with communications investment guidance and programmatic grant compliance

IMPLEMENTATION PLAN

These SCIP goals and objectives are intended to support the dissemination of best practices across Washington and can be amended as relevant stakeholders see fit. Each objective has a timeline with a targeted initial completion date, and one or multiple owners that will be responsible for overseeing and coordinating its completion. Accomplishing goals and objectives will require the support and cooperation from numerous individuals, groups, or agencies. ECD has a catalog of technical assistance service offerings available to assist in implementation of the SCIP.⁷ Requests for assistance are to be coordinated through the SWIC.

Goals	Objectives	Timelines	Owners
1. Review and update State Interoperability Executive Committee (SIEC) roles and responsibilities	1.1 Research opportunities for regional and/or discipline representation (i.e. regional working groups)	August 2022	SIEC
	1.2 Add Tribal and Association of Public-Safety Communications Officials (APCO) representation as formalized voting members of the SIEC	August 2022	SIEC
	1.3 Define expectations for voting members	August 2022	SIEC
	1.4 Establish SIEC as the central repository and clearinghouse for communications-related materials	August 2022	SIEC
	1.5 Request funds for staffing support and positions from State Legislature	August 2022	SIEC
2. Identify champions for interoperable data and voice communications	2.1 Develop talking points and reference materials to share with potential champions (including information from after action reports)	Ongoing	SWIC/SPOC
	2.2 Annually evaluate outreach materials to reflect current communications ecosystem	Ongoing	SWIC/SPOC
	2.3 Promote the SIEC's role and value	Ongoing	SWIC/SPOC

⁷ [FY2020 Technical Assistance Catalog](#)

Goals	Objectives	Timelines	Owners
<p>3. Coordinated communications planning among bordering States and Canada</p>	<p>3.1 Identify and partner with current collaboration efforts (e.g., Canada-United States Communications Interoperability Workshop Group [CANUS CWG], Beyond Border Action Plan, annual meetings between Washington and British Columbia, Canadian Interoperability Task Group, Pacific Northwest Emergency Management Agreement [PNEMA])</p>	<p>Ongoing</p>	<p>SWIC, Emergency Management Division</p>
	<p>3.2 Coordinate with neighboring States (i.e., Portland-Vancouver UASI)</p>	<p>Ongoing</p>	<p>SWIC, Emergency Management Division</p>
<p>4. Create Statewide Interoperable Communications Field Operations Guide (FOG)</p>	<p>4.1 Collect data from public safety agencies in the State for inclusion in the FOG</p>	<p>June 2020</p>	<p>SWIC, SAW Group, SIEC, WA Military Department</p>
	<p>4.2 Collect data to develop an interoperable resource map</p>	<p>June 2020</p>	<p>SWIC, SAW Group, SIEC, WA Military Department</p>
	<p>4.3 Develop inventory of existing interoperable communications resources (CASM)</p>	<p>June 2020</p>	<p>SWIC, SAW Group, SIEC, WA Military Department</p>
<p>5. Expand the use of the CASM tool for cataloging and managing interoperable communications assets and resources</p>	<p>5.1 Collect data for state agencies</p>	<p>June 2020</p>	<p>SWIC, SAW group</p>
	<p>5.2 Maintain data for state agencies</p>	<p>Ongoing</p>	<p>SWIC, SAW group</p>
<p>6. Ongoing evaluation and endorsement of interoperable Land Mobile Radio (LMR) technology when upgrading or</p>	<p>6.1 Provide education and outreach to relevant stakeholders regarding LMR technology updates</p>	<p>Ongoing</p>	<p>SIEC</p>

Goals	Objectives	Timelines	Owners
replacing radio systems			
7. Promote awareness to public safety personnel regarding the testing and exercise of LMR, public safety broadband, and 9-1-1/NG9-1-1	7.1 Promote communication testing and exercises to local, county, and state stakeholders	Ongoing	SWIC, WA Military Department
	7.2 Promote interoperable communications training opportunities to local, county, and state stakeholders	Ongoing	SWIC, WA Military Department
	7.3 Share and review after-action reports	Ongoing	SWIC, WA Military Department
8. Enhance and simplify interoperability across dissimilar mission critical voice systems	8.1 Regular testing of interoperable solutions	Ongoing	SIEC
	8.2 Determine interoperability standard	Ongoing	SIEC
	8.3 Review and maintain Washington Statewide Field Operation Guide (WAFOG)	Ongoing	SIEC, SWIC
	8.4 Utilize WAFOG for emergency communications trainings and exercises	Ongoing	WA Military Department EMD, SWIC, County/Local EOCs, Homeland Security Regions, PSAPs
9. Shared public safety communications resources that increase efficient costs and decrease redundant costs	9.1 Identify business needs and catalogue public safety LMR and data systems in use in the State	Ongoing	SIEC
	9.1 Promote the sharing of public safety communications resources	Ongoing	SIEC
	10.1 Seek platform to identify and track grant opportunities	Ongoing	SWIC/SPOC, SIEC

Goals	Objectives	Timelines	Owners
10. Utilize EMD grant office for public safety communications investment awareness and funding management	10.2 Assist all agencies with communications investment guidance and programmatic grant compliance	Ongoing	SWIC/SPOC

APPENDIX A: STATE INTEROPERABILITY MARKERS

In FY2019 CISA began supporting states and territories in baselining progress against 25 interoperability markers. This tool was developed by looking at best practices along the SAFECOM continuum to highlight emergency communications strengths and gaps, support measurement of 2019 NECP implementation, and provide a framework for developing SCIP goals. Below is Washington’s initial assessment of their progress against the interoperability markers.

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
Governance	1	State-level governing body established (e.g., SIEC, SIGB). Governance framework is in place to sustain all emergency communications	Governing body does not exist, or exists and role has not been formalized by legislative or executive actions	Governing body role established through an executive order	Governing body role established through a state law	
	2	SIGB/SIEC participation. Statewide governance body is comprised of members who represent all components of the emergency communications ecosystem.	Initial (1-2) Governance body participation includes: <input type="checkbox"/> Communications Champion/SWIC <input type="checkbox"/> LMR <input type="checkbox"/> Broadband/LTE <input type="checkbox"/> 9-1-1 <input type="checkbox"/> Alerts, Warnings and Notifications	Defined (3-4) Governance body participation includes: <input checked="" type="checkbox"/> Communications Champion/SWIC <input checked="" type="checkbox"/> LMR <input checked="" type="checkbox"/> Broadband/LTE <input checked="" type="checkbox"/> 9-1-1 <input type="checkbox"/> Alerts, Warnings and Notifications	Optimized (5) Governance body participation includes: <input type="checkbox"/> Communications Champion/SWIC <input type="checkbox"/> LMR <input type="checkbox"/> Broadband/LTE <input type="checkbox"/> 9-1-1 <input type="checkbox"/> Alerts, Warnings and Notifications	Separate Governing Body for 9-1-1. A&W authority scattered throughout Federal and State agencies. See link to WECCWG A&W presentation.
	3	SWIC established. Full-time SWIC is in place to promote broad and sustained participation in emergency communications.	SWIC does not exist	Full-time SWIC with collateral duties	Full-time SWIC established through executive order or state law	SWIC position is currently vacant. Acting SWIC is head of the SWIC Subcommittee.
	4	SWIC Duty Percentage. SWIC spends 100% of time on SWIC-focused job duties	SWIC spends >1, <50% of time on SWIC-focused job duties	SWIC spends >50, <90% of time on SWIC-focused job duties	SWIC spends >90% of time on SWIC-focused job duties	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
	5	SCIP refresh. SCIP is a living document that continues to be executed in a timely manner. Updated SCIPs are reviewed and approved by SIGB/SIEC.	No SCIP OR SCIP older than 3 years	SCIP updated within last 2 years	SCIP updated in last 2 years and progress made on >50% of goals	SCIP update currently underway
	6	SCIP strategic goal percentage. SCIP goals are primarily strategic to improve long term emergency communications ecosystem (LMR, LTE, 911, A&W) and future technology transitions (5G, IoT, UAS, etc.). (Strategic and non-strategic goals are completely different; strategy -- path from here to the destination; it is unlike tactics which you can "touch"; cannot "touch" strategy)	<50% are strategic goals in SCIP	>50%<90% are strategic goals in SCIP	>90% are strategic goals in SCIP	
	7	Integrated emergency communication grant coordination. Designed to ensure state / territory is tracking and optimizing grant proposals, and there is strategic visibility how grant money is being spent.	No explicit approach or only informal emergency communications grant coordination between localities, agencies, SAA and/or the SWIC within a state / territory	SWIC and/or SIGB provides guidance to agencies and localities for emergency communications grant funding but does not review proposals or make recommendations	SWIC and/or SIGB provides guidance to agencies and localities for emergency communications grant funding and reviews grant proposals for alignment with the SCIP. SWIC and/or SIGB provides recommendations to the SAA	
	8	Communications Unit process. Communications Unit	No Communications Unit process at present	Communications Unit process planned or	Communications Unit process implemented and active	COMU Planning & Policies

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		process present in state / territory to facilitate emergency communications capabilities. Check the boxes of which Communications positions are currently covered within your process: <input checked="" type="checkbox"/> COML <input checked="" type="checkbox"/> COMT <input checked="" type="checkbox"/> ITSL <input type="checkbox"/> RADO <input type="checkbox"/> INCM <input type="checkbox"/> INTD <input checked="" type="checkbox"/> AUXCOM <input checked="" type="checkbox"/> TERT		designed (but not implemented)		workshop was held
SOP/SOGs	9	Interagency communication. Established and applied interagency communications policies, procedures and guidelines.	Some interoperable communications SOPs/SOGs exist within the area and steps have been taken to institute these interoperability procedures among some agencies	Interoperable communications SOPs/SOGs are formalized and in use by agencies within the area. Despite minor issues, SOPs/SOGs are successfully used during responses and/or exercises	Interoperable communications SOPs/SOGs within the area are formalized and regularly reviewed. Additionally, NIMS procedures are well established among agencies and disciplines. All needed procedures are effectively utilized during responses and/or exercises.	
	10	TICP (or equivalent) developed. Tactical Interoperable Communications Plans (TICPs) established and periodically updated to	Regional or statewide TICP in place	Statewide or Regional TICP(s) updated within past 2-5 years	Statewide or Regional TICP(s) updated within past 2 years	TA in progress

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
		include all public safety communications systems available				
	11	Field Operations Guides (FOGs) developed. FOGs established for a state or territory and periodically updated to include all public safety communications systems available	Regional or statewide FOG in place	Statewide or Regional FOG(s) updated within past 2-5 years	Statewide or Regional FOG(s) updated within past 2 years	TA in progress
	12	Alerts & Warnings. State or Territory has Implemented an effective A&W program to include Policy, Procedures and Protocol measured through the following characteristics: (1) Effective documentation process to inform and control message origination and distribution (2) Coordination of alerting plans and procedures with neighboring jurisdictions (3) Operators and alert originators receive periodic training (4) Message origination, distribution, and correction procedures in place	<49% of originating authorities have all of the four A&W characteristics	>50%<74% of originating authorities have all of the four A&W characteristics	>75%<100% of originating authorities have all of the four A&W characteristics	Alerts and Warnings are managed by various agencies within the state

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
Technology	13	<p>Radio programming. Radios programmed for National/Federal, SLTT interoperability channels and channel nomenclature consistency across a state / territory.</p>	<p><49% of radios are programed for interoperability and consistency</p>	<p>>50%<74% of radios are programed for interoperability and consistency</p>	<p>>75%<100% of radios are programed for interoperability and consistency</p>	<p>System of systems NPSTC is the standard for nomenclature consistency across the state</p>
	14	<p>Cybersecurity Assessment Awareness. Cybersecurity assessment awareness. (Public safety communications networks are defined as covering: LMR, LTE, 911, and A&W)</p>	<p>Public safety communications network owners are aware of cybersecurity assessment availability and value (check yes or no for each option)</p> <p><input type="checkbox"/> LMR <input type="checkbox"/> LTE <input type="checkbox"/> 9-1-1/CAD <input type="checkbox"/> A&W</p>	<p>Initial plus, conducted assessment, conducted risk assessment. (check yes or no for each option)</p> <p><input checked="" type="checkbox"/> LMR <input type="checkbox"/> LTE <input checked="" type="checkbox"/> 9-1-1/CAD <input checked="" type="checkbox"/> A&W</p>	<p>Defined plus, Availability of Cyber Incident Response Plan (check yes or no for each option)</p> <p><input type="checkbox"/> LMR <input type="checkbox"/> LTE <input type="checkbox"/> 9-1-1/CAD <input type="checkbox"/> A&W</p>	
	15	<p>NG911 implementation. NG911 implementation underway to serve state / territory population.</p>	<p>Working to establish NG911 governance through state/territorial plan.</p> <ul style="list-style-type: none"> • Developing GIS to be able to support NG911 call routing. • Planning or implementing ESInet and Next Generation Core Services (NGCS). • Planning to or have updated PSAP equipment to handle basic NG911 service offerings. 	<p>More than 75% of PSAPs and Population Served have:</p> <ul style="list-style-type: none"> • NG911 governance established through state/territorial plan. • GIS developed and able to support NG911 call routing. • Planning or implementing ESInet and Next Generation Core Services (NGCS). • PSAP equipment updated to handle 	<p>More than 90% of PSAPs and Population Served have:</p> <ul style="list-style-type: none"> • NG911 governance established through state/territorial plan. • GIS developed and supporting NG911 call routing. • Operational Emergency Services IP Network (ESInet)/Next Generation Core Services (NGCS). • PSAP equipment updated and handling basic NG911 service offerings. 	<p>ESInet has been built out and PSAPs are connecting to it</p>

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
				basic NG911 service offerings.		
	16	<p>Data operability / interoperability. Ability of agencies within a region to exchange data on demand, and needed, and as authorized. Examples of systems would be:</p> <ul style="list-style-type: none"> - CAD to CAD - Chat - GIS - Critical Incident Management Tool (- Web EOC) 	Agencies are able to share data only by email. Systems are not touching or talking.	Systems are able to touch but with limited capabilities. One-way information sharing.	Full system to system integration. Able to fully consume and manipulate data.	
	17	<p>Future Technology/Organizational Learning. SIEC/SIGB is tracking, evaluating, implementing future technology (checklist)</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> LMR to LTE Integration <input checked="" type="checkbox"/> 5G <input checked="" type="checkbox"/> IoT (cameras) <input checked="" type="checkbox"/> UAV (Smart Vehicles) <input checked="" type="checkbox"/> UAS (Drones) <input checked="" type="checkbox"/> Body Cameras <input type="checkbox"/> Public Alerting Software <input checked="" type="checkbox"/> Sensors <input type="checkbox"/> Autonomous Vehicles <input type="checkbox"/> MCPTT Apps <input type="checkbox"/> Wearables <input type="checkbox"/> Machine Learning/Artificial Intelligence/Analytics <input checked="" type="checkbox"/> Geolocation <input checked="" type="checkbox"/> GIS <input type="checkbox"/> Situational Awareness Apps-common operating picture applications (i.e. Force Tracking, Chat Applications, Common Operations Applications) <input type="checkbox"/> HetNets/Mesh Networks/Software Defined Networks <input type="checkbox"/> Acoustic Signaling (Shot Spotter) <input checked="" type="checkbox"/> ESInet <input type="checkbox"/> 'The Next Narrowbanding' 			

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
			☐ Smart Cities			
Training & Exercises	18	<p>Communications Exercise objectives. Specific emergency communications objectives are incorporated into applicable exercises Federal / state / territory-wide</p>	Regular engagement with State Training and Exercise coordinators	Promote addition of emergency communications objectives in state/county/regional level exercises (target Emergency Management community). Including providing tools, templates, etc.	Initial and Defined plus mechanism in place to incorporate and measure communications objectives into state/county/regional level exercises	
	19	<p>Trained Communications Unit responders. Communications Unit personnel are listed in a tracking database (e.g. NQS One Responder, CASM, etc.) and available for assignment/response.</p>	<49% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	>50%<74% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	>75%<100% of public safety agencies within a state / territory have access to Communications Unit personnel who are listed in a tracking database and available for assignment/response	
Usage	20	<p>Communications Usage Best Practices/Lessons Learned. Capability exists within jurisdiction to share best practices/lessons learned (positive and/or negative) across all lanes of the Interoperability Continuum related to all components of the emergency communications ecosystem</p>	Best practices/lessons learned intake mechanism established. Create Communications AAR template to collect best practices	Initial plus review mechanism established	Defined plus distribution mechanism established	

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
Outreach	21	<p>WPS subscription. WPS penetration across state / territory compared to maximum potential</p>	<p><9% subscription rate of potentially eligible participants who signed up WPS across a state / territory</p>	<p>>10%<49% subscription rate of potentially eligible participants who signed up for WPS a state / territory</p>	<p>>50%<100% subscription rate of potentially eligible participants who signed up for WPS across a state / territory</p>	
	22	<p>Outreach. Outreach mechanisms in place to share information across state</p>	<p>SWIC electronic communication (e.g. SWIC email, newsletter, social media, etc.) distributed to relevant stakeholders on regular basis</p>	<p>Initial plus web presence containing information about emergency communications interoperability, SCIP, trainings, etc.</p>	<p>Defined plus in-person/webinar conference/meeting attendance strategy and resources to execute</p>	<p>Link to SIEC website: https://ocio.wa.gov/boards-and-committees/state-interoperability-executive-committee-siec-0</p>
Lifecycle	23	<p>Sustainment assessment. Identify interoperable component system sustainment needs;(e.g. communications infrastructure, equipment, programs, management) that need sustainment funding.</p> <p>(Component systems are emergency communications elements that are necessary to enable communications, whether owned or leased - state systems only)</p>	<p>< 49% of component systems assessed to identify sustainment needs</p>	<p>>50%<74% of component systems assessed to identify sustainment needs</p>	<p>>75%<100% of component systems assessed to identify sustainment needs</p>	<p>Needs have been identified but funding is a challenge</p>

Interoperability Continuum	Marker #	Best Practices / Performance Markers	Initial	Defined	Optimized	Comment
	24	<p>Risk identification. Identify risks for emergency communications components.</p> <p>(Component systems are emergency communications elements that are necessary to enable communications, whether owned or leased. Risk Identification and planning is in line with having a communications COOP Plan)</p>	< 49% of component systems have risks assessed through a standard template for all technology components	>50%<74% of component systems have risks assessed through a standard template for all technology components	>75%<100% of component systems have risks assessed through a standard template for all technology components	
All Lanes	25	<p>Cross Border / Interstate (State to State) Emergency Communications. Established capabilities to enable emergency communications across all components of the ecosystem.</p>	<p>Initial: Little to no established:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Governance <input type="checkbox"/> SOPs/MOUs <input type="checkbox"/> Technology <input type="checkbox"/> Training/Exercises <input type="checkbox"/> Usage 	<p>Defined: Documented/established across some lanes of the Continuum:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Governance <input type="checkbox"/> SOPs/MOUs <input checked="" type="checkbox"/> Technology <input checked="" type="checkbox"/> Training/Exercises <input checked="" type="checkbox"/> Usage 	<p>Optimized: Documented/established across all lanes of the Continuum:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Governance <input type="checkbox"/> SOPs/MOUs <input type="checkbox"/> Technology <input type="checkbox"/> Training/Exercises <input type="checkbox"/> Usage 	

APPENDIX B: LIST OF ACRONYMS

APCO	Association of Public-Safety Communications Officials
A&W	Alerts and Warnings
CANUS CWG	Canada-United States Communications Interoperability Workshop Group
CASM	Communication Assets Survey and Mapping
CISA	Cybersecurity and Infrastructure Security Agency
E9-1-1	Enhanced 9-1-1
EAS	Emergency Alert System
ECD	Emergency Communications Division
EMD	Emergency Management Division
ESF#2	Emergency Support Function #2
FOG	Field Operations Guide
FirstNet	First Responder Network Authority
IP	Internet Protocol
LMR	Land Mobile Radio
NECP	National Emergency Communications Plan
NG9-1-1	Next Generation 9-1-1
NPSBN	National Public Safety Broadband Network
MHz	Megahertz
PNEMA	Pacific Northwest Emergency Management Agreement
PSAP	Public Safety Answering Point
PTT	Push-To-Talk
SCIP	Statewide Communication Interoperability Plan
SIEC	State Interoperability Executive Committee
SPOC	Single Point of Contact
SWIC	Statewide Interoperability Coordinator
UASI	Urban Area Security Initiative
UHF	Ultra High Frequency
VHF	Very High Frequency