



# **Enhanced 911 Advisory Committee**

**Annual Legislative Update  
2020**

## COVER LETTER

DATE: January, 2021

TO: The Senate Energy, Environment & Telecommunications Committee  
The House Public Safety Committee

Cc: Washington State Senators and Representatives

FROM: The Enhanced 911 Advisory Committee (AC)  
Keith Flewelling, AC Chair, Executive Director, Thurston 911 Communications  
Richard Kirton, AC Vice Chair, Director, Kitsap 911  
Adam Wasserman, State Enhanced 911 Coordinator, Washington Military Department

SUBJECT: 2020 REPORT TO THE LEGISLATURE, E911 ADVISORY COMMITTEE

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RCW 38.52.532 requires, “On an annual basis, the enhanced 911 advisory committee must provide an update on the status of enhanced 911 service in the state to the appropriate committees in the legislature. The update must include progress by counties towards creating greater efficiencies in enhanced 911 operations including, but not limited to, regionalization of facilities, centralization of equipment, and statewide purchasing.” This is the annual E911 Advisory Committee Legislative Report to the House Public Safety and Senate Energy, Environment & Telecommunications Committees.

The 2020 E911 Advisory Committee Report will be much different than in years past; the Washington Military Department was tasked by the Legislature, pursuant to: Section 145, Chapter 6, Laws of 2019, Regular Session (Engrossed Substitute House Bill 1109), to compile a 911 Cost Study and return it to the Legislature before the end of 2020. The 911 Cost Study has been completed and delivered to the Legislature for consideration. Much of the information usually contained in the E911 Advisory Committee Annual Report to the Legislature is contained in the Cost Study report so we will not duplicate it in this report and may reference the Cost Study report if necessary. In addition to completing the Cost Study in 2020, we are pleased to present this annual report that highlights significant progress toward meeting key emergency services goals.

The 911 systems have proven once again in 2020, amid the COVID-19 pandemic, their essential value as the first link in the public safety response chain.

Thank you for your interest in and support of this vital work.

Attachment

cc: The Honorable Governor Jay Inslee

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TTY/TDD users should contact the Washington Relay Service at 711 or 1-800-833-6388.

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## **INTRODUCTION**

This 2020 summary report to the Legislature is submitted by the Enhanced 911(E911) Advisory Committee pursuant to RCW 38.52.532. The Washington State E911 Advisory Committee was created to advise and assist the State Enhanced 911 Coordinator in coordinating and facilitating the implementation and operation of Enhanced 9-1-1 throughout the state.

The Washington Military Department (Department), through its Emergency Management Division, State Enhanced 911 Coordination Office (SECO) and State Enhanced 911 Coordinator, supports and facilitates statewide 911 services. This support includes 911 network maintenance, technical assistance to counties, and fiscal assistance for equipment procurement and operational funding for counties whose local 911 excise tax base inadequately supports 911 services.

The Department has the statutory authority under Revised Code of Washington (RCW) 38.52.510 to assist and facilitate E911 operation throughout the state and the statutory authority under RCW 38.52.540, RCW 38.52.545, and Chapter 118-66 Washington Administrative Code (WAC) to provide funds from the State E911 account to assist the counties to establish and operate E911 services. Per RCW 38.52.520, the State Enhanced 911 Coordination Office must also seek advice and assistance from a broad-based stakeholder group, the Enhanced 911 Advisory Committee.

Priorities established along with the Advisory Committee for the State 911 Program include delivering 911 services in an efficient manner with uniform statewide capabilities. All 39 counties in Washington have implemented E911 services and are now aggressively working toward Next Generation 911 (NG911) compatibility. Tribal organizations coordinate activities with the county(ies) they are located in under the mandate that E911 services be available statewide.

## **STATUS OF NEXT GENERATION 911 SERVICE**

Washington has taken great strides and made significant investments toward statewide Next Generation 911 capability. Beginning in 2009, the state upgraded from analog to digital selective routing, using CenturyLink/Intrado advanced 911 technologies. In 2016, the state entered into a contract with Comtech Telecommunications Systems, Inc (Comtech) for a complete NENA i3 standards-based NG911 Emergency Services IP Network (ESInet) to include Next Generation Core Services (NGCS). The SECO coordinated with all 39 counties to ensure each public safety answering point (PSAP) upgraded call handling systems for compatibility with the new network.

Washington continues to be a leader in NG911 by implementing a system of technologies that will increase the effectiveness, efficiency and resiliency of the statewide 911 system, while streamlining and improving the interoperability between PSAPs and the field First Responders. The state 911 community is committed to taking full advantage of these transformative technologies in providing the vital link between the public and emergency services in the NG911 environment.

At the beginning of 2020, two major steps remained to accomplish Washington's vision of a true statewide NG911 system. First, Washington must complete NG911 compatibility, which hinged on finalizing the transition to the new, fully NG911 capable ESInet. Second, the SECO needed to focus on individual PSAPs and their ability to connect to and utilize NG911 technology. Once a NG911 environment is realized, the 911 community must capitalize on these new technologies to positively impact 911 service delivery.

## 2020 BY THE NUMBERS:

PSAPs in Washington State .....		66
	Primary	51
	Secondary	10
	Backup	3
	Test	2
PSAPs connected to or receiving calls from the state 911 Network (ESInet) .....		66
	County	38
	Local	11
	State	10
	Federal	3
	Tribal	1
	Regional	3
Total volume of voice calls/sessions to 911 for calendar year 2020 .....		4,339,919
	Wireless (3,646,058)	84.0%
	Wireline (372,882)	8.6%
	Voice over Internet Protocol [VoIP] (320,979)	7.4%
PSAPs able to process Text-to-911 sessions .....		39
	Text-to-911 using integrated delivery over the ESInet	7
	Text-to-911 using integrated delivery from the Text Control Center	16
	Text-to-911 using a 3rd Party Application (out-of-band delivery)	16
	Counties scheduled to implement a new Text-to-911 solution in Q1 2021	4

## PROGRESS TOWARD GREATER EFFICIENCIES

### *Federal NG911 Grants*

In 2020, the SECO on behalf of the counties, received an NG911 federal grant of \$2.6M to assist counties and the state in moving toward Next Generation 911. Washington identified prototypes and pilot projects that will test the capabilities and capacity of the NG911 system, as well as improve interoperability between PSAPs and field first responders.

The state 911 community identified four projects for the NG911 grant that address critical elements in our ability to complete the transition to NG911 and take full advantage of its features.

- Project 1: ESInet Transition Project (Network & Core Services)
- Project 2: GIS Upgrades & Contracted Services (Geographic Information Systems)
- Project 3: Multi-County Host/Remote Call Processing Equipment (Centralized Equipment)
- Project 4: Real-time Agency Activity Display and Reporting System (Data Sharing)

### **Project 1 – ESInet Transition Project Completion**

The SECO completed the first phase of the ESInet core buildout and interconnection with the previous network in early 2018. The second phase of cutting 66 PSAPs over to the new ESInet finished on March 7th, 2019. The third phase of transitioning from the West Corporation Automatic Location Information (ALI) database to the new Comtech database was underway at the beginning of the grant period. Upon the completion of the ALI transition the project entered the final phase – moving all Originating Service

Provider connections from the legacy network to the new ESInet. Project delays pushed out the original completion date and required the dual-provisioning and operation of two networks for an extended period. Grant funds were utilized for costs associated with the operation of the NG911 ESInet while it was part of a dual system with the legacy network, and until the legacy network was shutdown and all were operating solely on the NG911 ESInet.

2020 Project Status:

For this reporting period, the state of Washington expended \$2,747,948.99 in state funds for operations of the new ESInet, while operating the legacy network. As of January 31, 2020, the SECO is no longer paying for the legacy network. This was a multi-year project that met with technical, legal, and contractual obstacles. Federal funds were used to pay for the additional expenditures that occurred due to the delays from the legacy provider in the last reporting period. In this reporting period all Originating Service Providers (OSP) connections were moved from the legacy network to the new ESInet. For the purposes of the federal grant, this project is considered complete.

## **Project 2 – GIS Upgrades and Contracted GIS Services**

An important element of NG911 is geospatial call-routing and improved location services. Four counties require GIS upgrades in order to be able to take advantage of the Location Validation Function (LVF) and statewide map that will soon be available in the new ESInet. These counties have been using end-of-life software and hardware systems that lack the fundamental capabilities required to manage GIS data in a NG911 environment. They also require GIS consulting expertise that is not immediately available to them to collect, prepare and maintain the data. Upgrading these systems to current technologies will allow all counties and PSAPs to fully realize the benefits of the LVF when geospatial routing is activated on the new ESInet.

2020 Project Status:

Project 2A: Lincoln County GIS

During this reporting period, Lincoln County signed a contract with GeoComm for NG911 GIS Map Data Update Services and Project Management. GeoComm assisted with GIS layer updates to improve the accuracy of the GIS dataset and to bring the data in compliance with the NG911 data standards issued by the state of Washington. The data layers included road centerline, site/structure address points, and emergency service boundaries. Project implementation was delayed due to COVID-19 response. \$9,720 in federal funds and \$6,480 in local funds were expended.

Project 2B: Whitcom GIS

During this reporting period, Whitcom purchased a GIS workstation including a large format monitor, ESRI ArcGIS workstation software and GIS server software. The equipment was installed and tested. The PSAP selected Motorola/Spillman for geovalidation work and GeoComm was selected as the address point validation contractor using a sole source justification. As part of the project, Whitcom migrated GIS and tabular data from SQL Server Express 10.3 Geodatabase to SQL Server 10.7 Geodatabase, loaded data into ArcGIS to validate address points, and built interface and scripts to process Open Street Map data. Spillman geovalidation went live and GeoComm began work on address point validation. A GIS training plan has been completed. The Spillman mapping upgrade has been delayed due to data collection, technical issues with the practice database, and slow production of new maps. During this period, Whitcom reported expending \$30,469.75 in federal funds and \$20,313.16 in local funds.

## Project 2C: Pend Oreille GIS

Pend Oreille County reports progress over the last year was very productive even with the setbacks due to delays in hiring and COVID-19 response. The county's focus was on creating, improving, and quality checking NG911 GIS data. A new road centerlines layer using recent high-resolution orthogonal and oblique-angle aerial imagery and LIDAR was created. Quality checking this dataset against existing data sets yielded more than 140 errors which could have adversely impacted emergency dispatch and response. The previous datasets had met or exceeded the state NG911 requirements however, through this extensive auditing, incorrect road names, road locations, road designators, missing roads, and other errors were discovered. Pend Oreille County also began digitizing driveways, emergency access roads, and potential impediments to navigation and response. For this reporting period, Pend Oreille expended \$11,937.24 in federal funds and \$7,958.16 in local funds.

## Project 2D: San Juan GIS

San Juan County procured and installed needed GIS software. The final configuration of remote access permissions and system services was delayed due to the COVID-19 response and lack of ability to schedule staff to assist in the configuration. For this reporting period, the county expended \$15,920.10 in federal funds and \$10,613.40 in local funds.

## **Project 3 – Multi-county Host Remote CPE project**

One of the major advantages of the IP-based technology that NG911 provides is the ability to leverage improved interconnectivity to create efficiencies in the 911 system. A seven-county consortium is seeking to establish a host-remote call handling system that would place two (redundant) sets of backroom customer premise equipment (CPE) in geographically diverse locations and utilize the new high-speed ESInet connections to deliver calls to multiple remote PSAPs. This multi-node concept will minimize the number of backroom equipment installations and lower maintenance while allowing enhanced interoperability between the multiple PSAPs. Currently, there is a very limited scale host remote CPE solution in Washington with a small remote PSAP located near one of two hosts. This new project will include a mix of large, medium and small PSAPs that are not in close geographic proximity. The project will also address a major concern of resiliency in Washington where the Cascadia Subduction Zone (CSZ) threatens the western part of the state, including the heavily populated I-5 corridor. By locating one of the backroom hosts outside of the CSZ impact area, it adds significant resilience to the 911 system against this major earthquake threat. This project aligns with Washington's larger goal of seeking efficiencies and leveraging technological improvements to reduce costs associated with the infrastructure and to improve overall redundancy and resiliency.

## 2020 Project Status:

For this reporting period, the NG911 Multi-node Telephone Consortium added RiverCom 911 (PSAP serving Chelan and Douglas counties). The Consortium finalized master agreements between vendor Solacom and the participating parties, planned the technical configuration, system design, cutover schedule, and installed central equipment and workstation equipment at Clark Regional Emergency Services Agency (CRESA), Thurston 911 Communications (TCOMM911) and Wahkiakum County 911. Technical and dispatch operations staff were trained and a successful implementation and cutover to the Solacom system at CRESA, TCOMM911 and Wahkiakum County was completed. Installation at the CRESA backup location was delayed due to discussions between the Consortium, the state, and the vendor. Additional delays in the cutover at RiverCom 911 are due to COVID-19 staffing issues and

changes in operational policies and procedures. For this reporting period, the Consortium expended \$337,497.18 in federal funds and \$224,998.12 in local funds.

#### **Project 4 – Real-time Agency Activity Display and Reporting System**

Visibility and exchange of event information will be even more critical in the NG911 environment because of the potential increase of information readily available. Real-time Agency Activity Display and Reporting (RAADAR) is a unique and economical tool that will achieve the NG911 goal of full and effective regional information exchange between PSAPs, EOCs, police, fire, and medical agencies throughout the state. It is a customized web-based application that displays near-real time active 911 call information, directly linked to any CAD system. It presents 911 calls in progress in a unified format, with associated call details, and customizable content including automatic vehicle location (AVL), real-time radio and more. RAADAR works with any IP-based system in the state and fills an important gap in current services by overcoming technology silos that block information sharing. RAADAR makes an immediate impact with minimal technology cost. Statewide deployment of RAADAR is a big step in sharing of information and coordination of resources at the state, county and local levels. RAADAR was initially tested and implemented in four PSAPs within King County. Grant funding will allow expansion of RAADAR across the state and test its capacity on a much larger scale. RAADAR will serve as a precursor to the Emergency Incident Data Document (EIDD) concept – allowing two or more PSAPs to easily share not only calling party information, but also call details, resource requests and response information to multi-jurisdictional incidents and events.

#### 2020 Project Status:

Northeast King County Regional Public Safety Communication Agency (NORCOM) has made steady progress in the development and outreach for RAADAR. They experienced significant delays in establishing agreements with new agencies due to COVID-19 impacts. As the pandemic continues, agencies are beginning to reevaluate programs and delayed projects. During this reporting period, RAADAR continued to be developed, including new functionality, new reports, improved security, and other needed enhancements. Connectivity to a disaster recovery site was completed, backup of the server was completed, and cost estimates were developed to move RAADAR into a government cloud environment. In addition, NORCOM completed presentations to seven entities, collaborated with WSP on options to move forward to join the project, signed data sharing agreements with three entities, and connected with ValleyCom which includes 22 police and fire agencies. The project charter has been completed. The grant agreement between NORCOM and the State of Washington Military Department was not yet signed in this reporting period so no funds have been requested; however, NORCOM reports \$89,587 in expenditures to be requested in 2021.

#### ***Completion of the Emergency Services IP network (ESInet)***

In July 2020, the SECO and the state's Covered Service Provider for 911, Comtech Telecommunications, Inc., completed the transition of the statewide ESInet from the original ESInet, implemented between 2010 and 2012.

This was the culmination of a four-year effort to provide Next Generation 911 Core Services (NGCS). The NGCS was engineered to utilize and deliver the following:

- a standardized system to be compatible with all PSAPs nationally;
- ability to deliver any call-type (voice, text, data, imagery, etc.) regardless of platform;

- enhanced network reporting, monitoring and troubleshooting to improve situational awareness and operational insight;
- engineered geodiversity of all network connections to assure resilience and reduce single points of failure;
- embedded security precautions, protections and enhancements;
- an ESInet which can support more than just 911 calls; and
- a single statewide system to maximize and simplify the cost to provide 911 service.

This project successfully completed all requirements imposed by the Office of the Chief Information Officer (OCIO) oversight program and achieved all gated funding requirements within scope and on budget.

Because NG911 is an evolving set of standards and capabilities, work remains to be done by the telecommunications providers and PSAP equipment manufacturers. However, this project, and the work of the counties, has positioned Washington to continue to provide its residents and visitors with the best 911 service possible.

### ***State E911 Coordination Office Training Program***

In late 2019, the State E911 Coordinator Office (SECO) implemented the new 911 Training Program to resume delivery of core certification courses for 911 telecommunicators. PSAPs throughout the state responded positively by hosting classes and registering their staff to attend. In early 2020, COVID-19 created an almost immediate impact on how training and education was delivered. Program staff addressed the need to modify the frequency, size, design and delivery of the essential training courses. Instructors were resilient and resourceful by changing the way they position themselves in the classroom, maintaining social distancing and adhering to recommended Personal Protective Equipment (PPE) and Non-Pharmaceutical Intervention (NPI) protocols. As a result, the program successfully delivered 17 separate in-person Telecommunicator 1, Telecommunicator 2, Certified Training Officer (CTO), and Instructor Workshop courses in 2020, totaling 528 classroom instructional hours to 144 telecommunicators throughout the state.

Additional program advancements included a new continuing education website for telecommunicators using the Nuvola Academy on-line training platform. Courses including Crisis Intervention Team Training for 911 and Initial Training for Deaf and Hard of Hearing Callers, which were previously offered only in a classroom environment, are now available to all PSAP staff on-line. Since the initial launch on December 1<sup>st</sup> 2019, 21 PSAPs have signed up and enrolled 498 active users. The platform offers the opportunity to expand access to online training to other classifications in the 911 profession. The catalog of course offerings is planned to expand to include topics on stress management, TTY/TDD, call handling for missing and exploited children and suicidal callers, CTO refresher training, and courses in leadership and supervision.

## **FINANCIAL STATUS OF NEXT GENERATION 911 SERVICE**

The Washington Military Department was tasked by the Legislature, pursuant to: Section 145, Chapter 6, Laws of 2019, Regular Session (Engrossed Substitute House Bill 1109), to compile a 911 Cost Study and return it to the Legislature before the end of 2020. The 911 Cost Study was completed and delivered to the Legislature for consideration on December 21, 2020.

The 911 Cost Study contains historical, current-status, detailed and summary financial information about the Washington State 911 system. We encourage and direct interested readers to the Cost Study for this information.

## ONGOING CHALLENGES

### ***Cybersecurity Protection:***

2020 saw increased cyber activity targeting governmental organizations at the local level. In February, Jefferson County experienced hacking that impacted its emergency alerting system. Eleven other local governmental agencies experienced hacking activity that included one or more vectors including ransomware, phishing, malware and data breaches. Seventeen educational or healthcare systems also were targeted using various vectors<sup>1</sup>. The 911 system, however was able to leverage systemic security measures and protocols to remain unimpacted. This does not mean there is no more work to be performed, rather the baseline security established within the PSAPs and ECCs as well as engineered into the ESInet are working for current attack vectors, and serve as a good starting point for improved security measures going forward.

One of the most significant potential vectors that needs to be addressed within the 911 network ecosystem is the threat associated with the SolarWinds breach. The possibility of malicious code existing in network devices that has not been activated makes identifying and correcting this vulnerability all the more difficult.

As a community, we continue to invest in cybersecurity training for all levels of users, from telecommunicators to directors. 2020 also saw adoption of a data security agreement between the SECO and PSAPs connected to the ESInet – which ensures that network devices passing data across the ESInet will be sufficiently hardened and patched on a regular basis to potentially avoid advanced persistent threats.

### ***Public Safety Telecommunicator Staffing:***

Statewide, nearly all 911 centers continue to experience challenges with both recruitment and retention of qualified applicants and personnel due to the nature of the work. Shift work is a necessity to properly staff a center 24x7 which has an impact on the work/life balance for employees who struggle to balance their personal time around different shifts, extended shifts, and frequent schedule changes. This has only been exacerbated with the pandemic. COVID-19 exposures have required additional staff to quarantine which means less staff to cover shifts. 911 centers have worked diligently to educate staff, reduce foot traffic in and out of the centers, regularly clean work areas, and ensure employees self-monitor their health every day. Even with the best plans, COVID-19 has dramatically impacted staffing levels in all Washington PSAPs.

The nature of the work is mentally and emotionally taxing for many. Although employees receive extensive training to manage high risk calls and emergencies of all types, the magnitude of the incidents creates stress, coping issues, grief and other forms of post-traumatic stress. Public safety telecommunicators are very much a class of caring, empathetic people who generally want to give back to their community. Through 2020 they saw more violence, riots, protests, COVID-19 exposures, and injury and/or death to coworkers (dispatch, police and fire staff) and they kept going because of their dedication to the work and their communities. It does not come without a cost to mental health.

Many PSAPs across the state are recruiting from within the same pool of applicants. This means there are not enough qualified applicants applying and agencies are competing with each other to get the few applicants hired before someone else successfully moves them through their hiring process. Additionally, the background check, agency requirements, psychological evaluations, and limitations for hiring reduce the number of qualified applicants for these positions. The hiring process is time consuming with capability testing, interviews,

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<sup>1</sup> Based on reporting from Seculore Solutions (<https://www.seculore.com/cyber-attacks-washington>)

background investigations, polygraphs in many agencies, psychological exams, as well as hearing, vision and other medical assessments. If the process takes too long, applicants may move on to other job opportunities before a final offer of employment can be made. PSAPs have worked hard to streamline their hiring processes but due to the nature of the work, the process will always contain multiple steps that are time intensive.

Retention is also an ongoing issue in PSAPs across the state and nation. Once an applicant is hired, they are subject to a long, formalized training process (6-18 months) that sets them up to succeed at processing emergency calls, providing medical instruction, and managing multiple agency responses using multiple radio frequencies. Telecommunicators are typically required to use several computer applications to initiate and manage services for law enforcement, fire and medical. Not everyone can manage the fast paced workload or the diversity and stress of the work. The learning process is challenging. For those who successfully complete their training, retention issues derive from work/life balance issues; employees want and need time to be with their friends and families, have consistent and predictable work hours, and competitive pay. These positions often don't align with those needs for many employees. In most cases, vacant positions requires overtime from existing staff which also reduces their work/life balance and increases the risks of burnout, exhaustion and the liabilities that may come with it.

2020 compounded all of these challenging staffing issues. When compiling this report, each PSAP manager and county 911 coordinator stressed the importance of the need for these essential employees to staff their centers. The 911 community in Washington continues to improve by increasing recruitment in new and innovative ways, refining hiring processes, and providing ongoing assessment of training programs to ensure employees are given all of the necessary tools, training and support to succeed as well as the support they need for appropriate work/life balance while still meeting the demands of the job.

## **NEXT STEPS**

### ***New Regional Efforts***

In 2021, 10-15 counties will enter into discussions with the intent of understanding opportunities and challenges associated with developing a small-scale, private public safety cloud for the purpose of 911 call handling. The concept will allow multiple PSAPs to share hardware by leveraging high-speed data connections and virtual private networks to create secure paths for 911 traffic to pass. Historically, each PSAP has been required to purchase, install and maintain operational and networking equipment that far exceeds the capacity required. With the proliferation of high-speed data networks, this equipment can now be centralized in a single location but engineered to enable geo-diverse connectivity ensuring reliable uptime and high-availability configurations.

### ***NGCS***

As the ESInet and NGCS evolve and mature, PSAPs will begin migrating services onto those networks that previously used different communications methodologies to reach telecommunicators. Of particular benefit is the integrated delivery of text-to-911 using the ESInet and NGCS. The project will allow these messages to be transported over the same network connections and equipment 911 calls use to reach a PSAP. The benefit is realized through a more efficient call processing workflow – meaning telecommunicators no longer have to use multiple computers and keyboards to process requests for service, thus saving time and providing help faster.

Another goal in the evolution of the ESInet and NGCS is the implementation of geospatial call routing. This function will route 911 calls for service to the appropriate PSAP by evaluating, in real-time, the caller's location and comparing that location to a GIS map to determine the PSAP that is responsible for that area. The benefit of

this feature will be realized in reduced transfers of callers between PSAPs due to ‘default routing’ which does not account for the caller’s actual location. Geospatial routing will initially be implemented for wireless calls, and once proven reliable, will be activated for wireline and VoIP callers as well. Lastly, once fully activated for all call types, PSAPs and counties will be able to reduce the amount of time and energy they invest in 911 data systems, by using the underlying GIS data to replace the Master Street Address Guide function that was implemented in the late 1990’s supporting Enhanced 911 services.

Another significant down-stream benefit of a fully digital ESInet and NGCS will be the statewide activation of a web-based tool that will allow PSAPs to dynamically reroute calls based on real-time conditions inside the PSAP. This functionality will allow 911 officials to pre-plan for call routing conditions. If a PSAP needs to go offline for emergency maintenance, calls can be redirected to other PSAPs based on the caller’s location; or a temporary rerouting policy can be activated for special events – thus allowing callers inside a geographic boundary to be routed to a call center specifically staffed for the event. This tool, in addition to allowing for dynamic alternative routing of calls, will also allow PSAP leaders to visualize network activity and status, enhancing real-time situational awareness.

## **CONCLUSION**

The 911 community of professionals in the state of Washington are resilient and resourceful. This was especially evident during this year of the COVID-19 pandemic. Even with the added burden of managing this essential service and the personnel required to deliver the service of supporting law enforcement, fire and EMS, the 911 system in the state is functioning well and teams are making progress implementing the strategic goals. The State 911 Advisory Committee is hopeful this annual report, in conjunction with the *911 Cost Study Report to the Legislature*, will highlight the essential services provided and the assistance needed to continue maintenance and progression of the system.