



STATE OF UTAH

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KADE R. MINCHEY, CIA, CFE
AUDITOR GENERAL

May 17, 2021

Report No: ILR 2021-B

Subject: Six-Month Follow-Up of 911 Call Answer Times for VECC and Salt Lake City 911

Audit report #2020-06, *An In-Depth Follow-Up of 911 Audits and Review of 911 Staffing*, was presented to the Legislative Audit Subcommittee in August 2020. That report showed significant deficiencies in the 911 emergency call answer times at Salt Lake Valley Emergency Communication Center (VECC), Utah's largest public safety answering point (PSAP). The report also showed past call answering deficiencies at the Salt Lake City 911 PSAP.

In response to these call answering deficiencies, the Legislative Audit Subcommittee unanimously adopted a motion for us to revisit the call answering performance for both VECC and Salt Lake City 911 in 6 months and again in 12 months. This limited review represents our 6-month update in response to the committee's motion. In light of the updated performance numbers here, we reaffirm our original audit recommendation that the Board of Trustees for VECC direct management to bring the center's call answering performance in line with the national standards referenced in *Utah Code* 63H-7a-304.5.

National Standards Are Reflected in Utah Statute

The National Emergency Number Association (NENA) establishes two key targets for how quickly emergency calls should be answered.

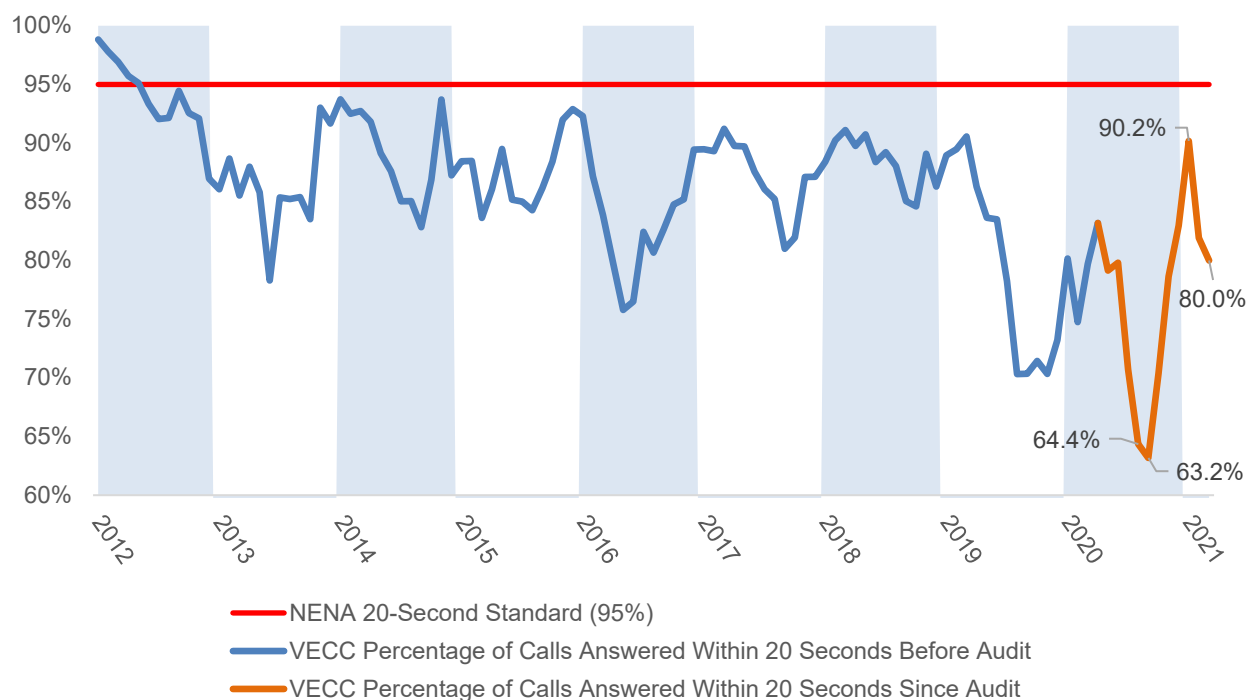
- 90 percent of emergency calls shall be answered within 15 seconds.
- 95 percent of emergency calls should be answered within 20 seconds.

These call answering standards were also adopted in statute in *Utah Code* 63H-7a-304.5 as one of the conditions for receiving certain 911 funding from the Utah Communications Authority (UCA). The focus of our analysis in report #2020-06 and in this limited review is on NENA's 20-second standard.

VECC is Still Underperforming Relative to Call Answering Standards

Our original analysis of monthly 911 call answering at VECC ran through April 2020. In response to the Audit Subcommittee's motion, we updated this analysis through March of 2021. Figure 1 shows VECC's call answering performance against NENA's 20-second 911 call answering standard.

Figure 1 Since April 2020, VECC's 20-Second Call Answering Performance Has Ranged Significantly. In September 2020, VECC answered 63.2 percent of its 911 calls within 20 seconds. This number increased to 90.2 percent for January 2021.



Source: Auditor analysis of ECATS 911 call answering data

In September 2020, VECC's worst month for call answering, the incoming 911 call data clearly reflects the impact of two natural disasters.¹ The decrease in call answering performance in September 2020 can also be seen for Salt Lake City 911 (SLC911) in Figure 2. That said, SLC911 was still able to maintain its monthly performance above the national benchmark while VECC was not.

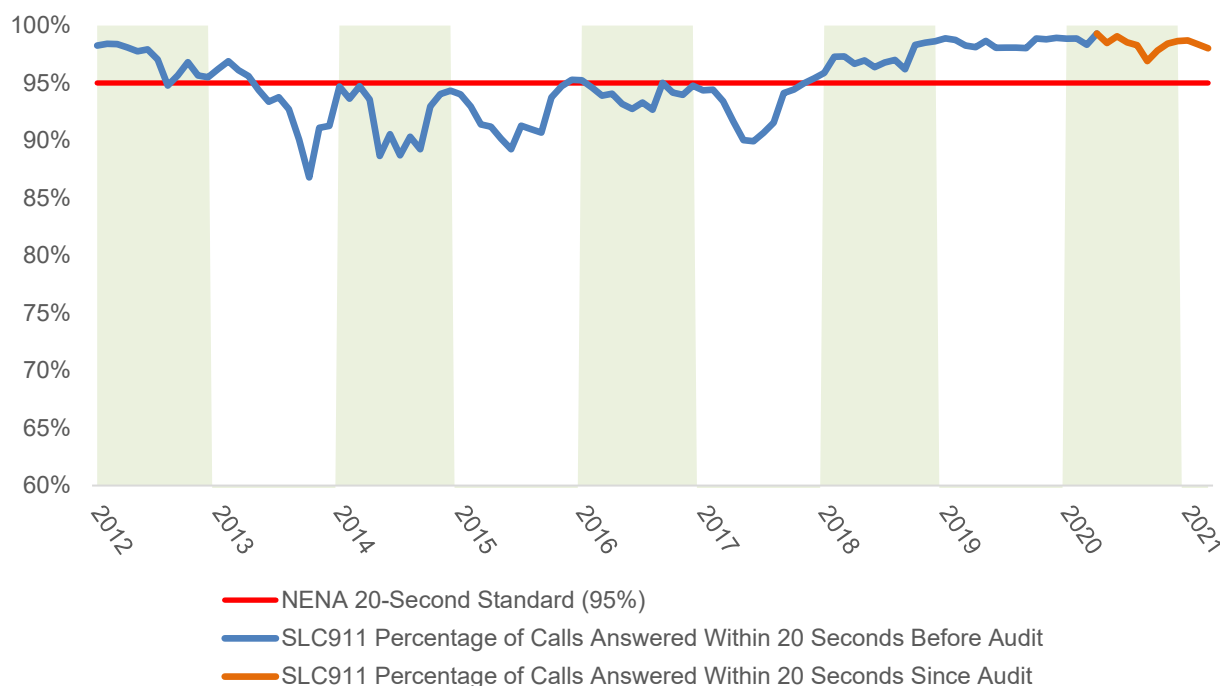
¹ The incoming call data for both VECC and SLC911 shows a large amount of call activity and a corresponding drop in answer times on September 8, 2020, the day of an extreme wind event. VECC also saw a sharp increase in calls on September 22, 2020. We believe that corresponds with the Neff Canyon fire that was highly visible from Salt Lake County and, we believe, likely generated several 911 calls as people reported seeing smoke.

VECC leadership reports significant efforts and initiatives to try to improve the center's operational performance. While we acknowledge the efforts of VECC, we restate our audit recommendation from audit report #2020-06 that the Board of Trustees for VECC direct management to bring the center's call answering performance in line with the national standards referenced in *Utah Code* 63H-7a-304.5.

Salt Lake City 911 Continues to Satisfy The National Call Answering Standard

Audit report #2020-06 shows that Salt Lake City 911 (SLC911) was out of compliance with NENA's 20-second call answering standard for 32 of 60 months from 2015-2019.² The report notes, however, that SLC911 had made improvements—consistently meeting the 20-second NENA standard from December 2017 through the end of our analysis in December 2019. Figure 2 shows that this performance has continued through 2020 and Q1 of 2021.

Figure 2 SLC911 Has Continued to Exceed the NENA 20-Second Call Answering Standard. Prior to 2018, SLC911 frequently fell short of the 95% answer percentage.



Source: Auditor analysis of ECATS 911 call answering data

² See report #2020-06, Figure 3.1, p. 17

SLC911's 20-second call answering performance ranged from a low of 96.9 percent in September 2020 to a high of 99.1 percent in June 2020. In addition, all other Utah PSAPs have continued to satisfy the NENA 20-second call answering standard through this updated time period.

In 2020, A Higher Portion of 911 Callers Waited in VECC's Automated Call Queue Compared to 2019

Audit report #2020-06 also detailed our concerns with the high number of emergency 911 callers who are placed in VECC's automated call queue. When no call takers are available at VECC to answer emergency calls, the queue system automatically places emergency callers on hold where they hear a pre-recorded message telling them to wait for assistance.

Our 2020 audit report showed the amount of time emergency callers waited in VECC's call queue in calendar year 2019. For this report, we were able to update our analysis to show these details for calendar year 2020. Figure 3 shows that a larger portion of emergency callers waited in VECC's call queue in 2020 when compared to 2019.

Figure 3 In 2020, A Higher Portion of 911 Callers Waited in VECC's Automated Call Queue Compared to 2019. As stated in report #2020-06, the delay in emergency response reflected here is simply unacceptable.

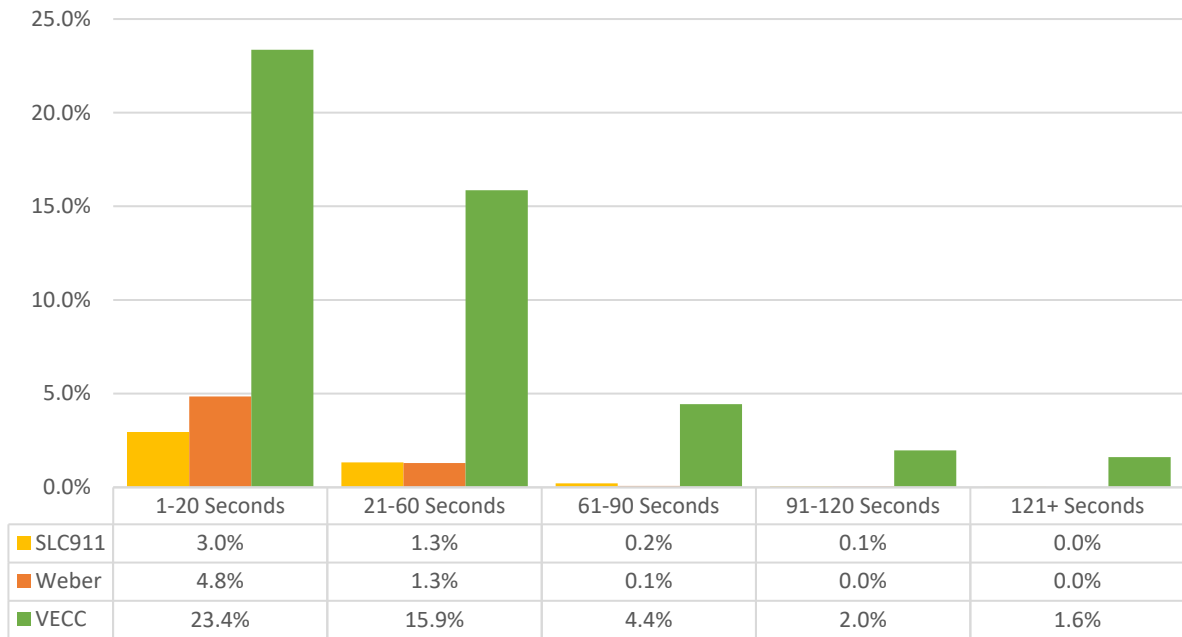
Time Range	Percent of 911 Calls in VECC Queue		Change
	2019	2020	
1-20 Seconds	21.5%	23.4%	+1.9%
21-60 Seconds	13.1%	15.9%	+2.8%
61-90 Seconds	3.5%	4.4%	+0.9%
91-120 Seconds	1.5%	2.0%	+0.5%
121+ Seconds	1.2%	1.6%	+0.4%
TOTAL	40.7%	47.2%	+6.5%

Source: Auditor analysis of ECaTS 911 call answering data. As in our original audit report, abandoned 911 calls have been included in this analysis because the data appears to show callers who choose to hang up while they are waiting in the call queue.

In total, Figure 3 shows that an additional 6.5 percent of VECC's emergency callers waited in the automated call queue in 2020 when compared to 2019. In audit report #2020-06, we showed that 17,562 emergency callers waited for more than 60 seconds in VECC's call queue in 2019. That number grew to 23,397 in 2020—an increase of 5,835 emergency callers.

To better benchmark VECC's queue usage, we also compared it to some of Utah's other large PSAPs. Figure 4 shows that the other PSAPs that make use of automated call distribution systems use them far less than VECC.

Figure 4 Compared to Other PSAPs, VECC Uses its Automated Call Queue Far More. VECC, Weber 911, and SLC911 use the same automated call system.



Source: Auditor analysis of ECaTS 911 call answering data.

As with its call answering performance, VECC's use of its automated call queue differs in a significantly negative way compared to its peers. This further supports our recommendation from audit report #2020-06 that the Board of Trustees for VECC direct management to bring the center's call answering performance in line with national standards.

Recommendation

1. We restate our audit recommendation from audit report #2020-06, *An In-Depth Follow-Up of 911 Audits and Review of 911 Staffing* that the Board of Trustees for VECC direct management to bring the center's call answering performance in line with the national standards referenced in *Utah Code* 63H-7a-304.5.

For further questions or inquiries, please contact Brian Dean at 801-326-1730 (bdean@le.utah.gov) or Jake Dinsdale at 801-755-7322 (jdinsdale@le.utah.gov).

Agency Responses



SALT LAKE VALLEY EMERGENCY COMMUNICATIONS

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May 5, 2021

Kade Minchey, CIA, CFE
Auditor General
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315 House Building
Salt Lake City, UT 84114-5315

Mr. Minchey,

As stated in our response back in July 2020, Salt Lake Valley Emergency Communications Center (VECC) appreciates the focus that the legislative auditors have provided and continue to provide on our service delivery to our communities and taxpayers. We recognized and acknowledged the weaknesses that were presented, and we continue to take significant action to remedy our shortcomings outlined in the audit.

VECC BOARD OF TRUSTEES: Dan Petersen (UFA Fire Chief), Trustee Chair

The Board of Trustees wishes to restate its commitment to the improvement of VECC and its success shaping VECC into a high reliability operation focusing on quality internal and external customer service. Director Ruf proposes strategic initiatives to the Board to allow the organization to secure the resources necessary to adopt and support the initiatives required to meet this vision. Specific actions taken to date:

- **January 2020**: Hired a new Executive Director with over 30 years' experience in successfully leading complex communications centers as the CEO.
- **June 17, 2020**: Adopted a budget with a member fee increase of 12% , with the exception of UPD, to provide the new director with the resources necessary to stabilize the employee ranks, evaluate the center and find efficiencies to improve the level of service.
- **September 16, 2020**: Adopted interim performance standards that could be achieved within existing budget with the expectation that a budget will be prepared for FY21/22 to meet the national standards.
- **December 16, 2020**: Established pay incentives for the Executive Director to achieve the adopted performance standards, including the center's call answering performance.
- **March 17, 2021**: Executive Director presented tentative budget, recommended by Board Finance Committee, that provides an overall member fee increase of 15% for law enforcement and 11.5% for fire agencies that will provide the resources necessary to meet current standards, including the national standards referenced in Utah Code 63H-7a-304.5.

VECC EXECUTIVE DIRECTOR: Scott W. Ruf

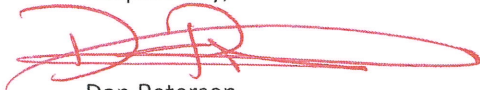
Since the summer/fall of 2020 VECC has seen gradual improvement in our call answering times and answering calls in 20 seconds or less from the upper 60-low 70 percent of the time to the mid to upper 80s percent. It is our goal to continue to improve as we work towards the standard of 95% of the 911 calls answered in 20 seconds or less. Changes in the schedule and staffing model have allowed for a more stable workforce and reduced VECC's attrition rates from a high of almost 48% last year to approx. 10-12% today. Since September 2020 VECC has hired and trained an additional twenty-four (24) 9-1-1 call-takers and implemented a 9-1-1 call-taker cover shift to accommodate the higher call volume periods of the day/evening.

We continue to work towards the completion of the Salt Lake County Countywide Common CAD Project which will have all the police and fire agencies on the same CAD platform making the receiving, triaging, and processing of 9-1-1 calls more efficient getting help to people quicker. On September 28, 2020, all the fire/EMS agencies VECC serves transitioned to the new CAD with the remaining police departments coming onboard soon after. South Jordan PD in December 2020, Murray PD in March 2021, West Jordan PD on June 1, 2021 followed by South Salt Lake PD late summer/early fall 2021 and West Valley PD November/December 2021. The University of Utah is joining the project and will migrate over following West Valley PD in early 2022. Additionally, we are completing a CAD-to-CAD Aggregator that will allow for any PSAP in and around the region which will assist eliminating 9-1-1 transfers thus making the call processing more efficient. This is specifically important in our relationship with DPS/UHP here in Salt Lake County.

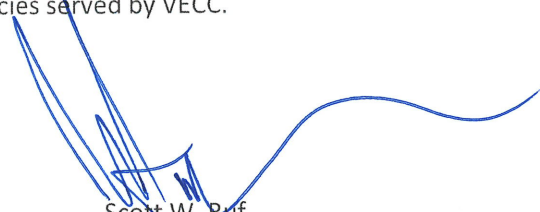
While we complete the Common CAD project, we are also eagerly awaiting the completion and deployment of the State's new NG911 Phone System and ESInet. This new system will allow for more efficient managing and balancing of incoming emergency and non-emergency calls, provide for the focusing on 9-1-1 calls and how they are routed and handled not only here at VECC but in the Salt Lake Valley region.

VECC is totally committed to continue to improve our performance remaining focused on call-taker and dispatcher training, continual hiring to maintain staffing levels, and the implementation and leveraging of technology so that we continue to move VECC forward in delivering the high-quality public safety services to the citizens and agencies served by VECC.

Respectfully,



Dan Petersen
Chairman, VECC Board of Trustees
Fire Chief / CEO, Unified Fire Authority



Scott W. Ruf
Executive Director
Salt Lake Valley Emergency Communications Center



May 27, 2021

Legislative Audit Committee:

In January 2020, The Salt Lake City 911 Communications Bureau was fully staffed with 85 dispatchers, ten supervisors, and four administrators. We, like the rest of the country, were monitoring the emergence and spread of the SARS-CoV-2 (COVID-19). By March, we were beginning to form a pandemic emergency response plan for the dispatch center. Then, on March 18, 2020, Utah experienced a magnitude 5.7 earthquake. Thousands of calls from citizens requesting assistance or information came into SLC911 that day and for several days afterwards. Our dispatchers experienced the initial earthquake and multiple aftershocks while they were at work and they continued to serve the public at work instead of leaving to check on their own properties and families.

When COVID-19 hit Utah, SLC911 dispatchers were unable to work from home. They came to work every day and worked in the close quarters of the dispatch center. The technicalities of dispatch (i.e. talking on telephones and over radios) made wearing masks difficult. They showed steadfast dedication to the citizens and first responders of Salt Lake City and Sandy City while dealing with the uncertainty and stress brought on by the pandemic. In order to mitigate the call volume and pandemic-related absentee rate, SLC911 administrators took over the supervisory duties of all supervisors and the supervisors acted as full-time dispatchers. They took phone calls and radio channels on a full-time basis.

On May 30, 2020, Salt Lake City was the epicenter of violent civil unrest. The main target of those rioting and causing massive destruction of property was the Public Safety Building, in which the SLC911 dispatch center is housed. The dispatchers on duty that day were trapped in the dispatch center as windows were broken and rioters tried to gain access to the building. The dispatch center was finally evacuated by the Utah National Guard just before midnight. Some of the dispatchers had been locked down in the building for nearly 17 hours. The civil unrest continued for the summer with dispatchers in uniform subjected to daily verbal abuse and threats on the phone and physical threats if they left the building in uniform.

On the morning of September 8, 2020, Utah—and specifically the Salt Lake City area—was struck by hurricane-force winds. Again, the dispatch center was overwhelmed with calls for help from citizens and dispatchers answered those calls, sometimes without knowing the status of their own homes. Some dispatchers came in from home to help. Administrators acted as call-takers, as well.

Although SLC911 began the year fully staffed, by the end of the year, the dispatch center lost 27 employees, with 15 reporting mental health issues as the reason they had to leave SLC911. Public safety dispatch is never an easy job, but the challenges faced by the SLC911 Communications Bureau in 2020 were unprecedented. Our call volume increased by 10,000



calls over the previous year, as well, due to the number of large incidents we dealt with. We are proud of the way the employees of SLC911 responded and continued to provide a high level of customer service.

Respectfully,

A handwritten signature in blue ink that reads "Elyse Haggerty".

Elyse Haggerty
Interim Director
Salt Lake City 911 Communications Bureau