



Independence Police Department

Jerry Harrison Chief of Police

811 W. Laurel

Independence, Kansas 67301

General Office (620)332-1700 Fax (620)332-1703



To: City Manager Kelly Passauer & KACP Region II Representative, Chief R. Spinks

From: Chief Harrison

RE: 911 Outage Report

The purpose of this memo is to share, as best I can, information regarding the 911 outage we experienced on 11-29-2020. Chief Spinks is receiving this email so he may include the body of the memo in the KACP RII quarterly newsletter that he will issue in January. Bob, please limit your publication to the sections below and omit this paragraph and internal routing information above.

911 South Host Outage Explained

I serve on the Kansas 911 Coordinating Council as a voting member, representing the KACP. My goals are to represent the concerns of all Kansas police chiefs who manage a PSAP, to ensure that the council operates within the confines of the 911 Act, and ensure that the council continues to provide an effective emergency communication system that serves the citizens of Kansas well. Anyone who has concerns with the 911 system is welcomed to contact me and I will make sure your voice is heard or your question is answered. If you are having issues regarding 911, I will do my best to connect you with the resource you need to fix the problem.

KS NG911 Structure

Before I begin it is important to address correct terminology. You will see the term “outage” used in this report. This is the term used by Scott Ekberg, Administrator for the 911 Coordinating Council. This event was truly not an outage, it was an interruption in service. The difference is an outage implies the entire system crashed when in reality only one component malfunctioned, the system was still operational, just not at full capacity. I will continue to use the term “outage” for brevity.

On 11-29-2020, the entire South Host of the KS NG911 System experienced an outage. The outage was first reported by Sedgwick County at 1:37 pm and lasted a total of about three hours and 10 minutes. The South Host PSAPs were initially notified of the outage at 1:50 pm and continued receiving updates from the resolution center until 7:37 pm. Keep in mind that I am not an expert on the technical side of NG911 and, currently, the cause and corrective actions are unknown. What follows is my best effort to explain the system and what occurred, at least as much as is known at the present. KS NG911 is made up of the following components:

- Call handling equipment
 - North Host (Topeka)
 - South Host (Wichita)
 - Your PSAP’s workstations and softphones
- PSAP Network
 - Connects the PSAPs to their host
 - VPN backed up by Firstnet LTE



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- ESInet Network
 - Routes the calls to the appropriate PSAP
- Rapid Deploy Network
 - Maps the call for the PSAP
- ECaTS
 - Call logging system
 - Provides reports of statistics for your call handling system
- Rapid Deploy and ECaTS are connected to the NG911 system through the internet and a firewall
- All other components are connected through VPN and cloud systems providing multiple redundancies, or optional routes

South Host Outage-What is known

It is undetermined at this time what caused the outage, upon receipt of the root cause analysis, mitigation will be underway. Based on an evaluation of individual 911 call reports, our 911 contractors were able to determine that the PSAP network, ESInet, ECaTS, and Rapid Deploy were all unaffected by the outage. The South Host server and each of the South Host PSAPs' softphones (console/headset) and workstations (computer system that displays 911 call information and mapping location) did not function at their full capability. The systems that provide information to the call handling system were functioning but PSAPs could not receive the information because the call handling system did not share the information.

My limited ability to explain this is to equate it to cell phone service. The cell tower may be broadcasting my call (sending a signal telling your phone to ring) and my caller ID to you but, if your phone is not working properly, it will not display my number and your phone will not alert you that I am calling.

We know the call routing system was working because of the ring times in many of the call reports. When the caller called 911, the call was routed to the proper South Host PSAP and, nine rings later, the routing system applied the rollover agreement settings and routed it to the secondary PSAP, based on the rollover agreement. PSAPs that were down and showed down avoided the nine-ring delay and went straight to their backup. For example, Allen County's primary backup is Anderson County, which is on the north host. Allen was "down" and showed offline, so 911 calls rang immediately to Anderson with no delay. Traditionally, we all selected a nearby South Host PSAP as our back-up. Because the entire South Host was down, this PSAP also did not answer for nine rings. However, 18 rings later, the call was appropriately routed to the tertiary PSAP, traditionally on the South Host. Also, nine more rings, or a total of 27 rings later, the call was routed to your North Host PSAP.

If the caller hung up at any point, whatever PSAP the call was currently ringing at would receive an abandoned 911 call. This happened frequently, as you can expect. If the caller again dialed 911, the process started anew at the primary PSAP, as the system is designed to do.

If the caller was patient enough to be routed to your North Host PSAP, the caller ID and location information from the telephone company was displayed, allowing that PSAP to contact you via the method selected in your agreement. Because all of these things occurred, the



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contractors were able to narrow the problem to the South Host server and the workstations and softphones. Had other elements of the system malfunctioned, none of this information would be available.

Suggested Actions

I sent a brief survey to all of the PSAPs I represent. What follows is information I felt was important to share, based on what has been reported to me by our contractors and the responses I received from the surveys.

PSAPs may want to consider reducing the number of rings that trigger a rollover event. This will shorten the time that it takes a call to be rerouted to each of the rollover PSAPs that you have an agreement with. You may also want to consider routing to a North Host PSAP earlier in your rollover process.

Think about the method of notification in your rollover agreement. If you opted to have your rollover PSAP notify you primarily by phone, you may not have gotten a phone call during the early part of the outage. At IPD we lost our business lines along with our 911. If we had opted to use phone calls as our primary means of communication in the agreement we would not have gotten the calls because it was quite some time before the phone techs were able to reroute calls to our admin lines. It may be a better option to have your rollover PSAP notify you over a designated KSICS talk-group. IPD has a dedicated cell phone as back-up that serves other purposes. If you have a similar arrangement you could designate that cell number as the primary means of notification.

Some PSAPs reported that they did not receive notifications and updates from the resolution center during the outage. This is probably because they opted to receive notifications from the resolution center over the phone. PSAPs may want to consider receiving notifications via email, text, or cell phone to prevent this from reoccurring. Our PSAP received several continuing updates throughout and after the event via email. Several of our staff were kept updated because we selected multiple people to be notified.

Once calls were routed from NG911 to department admin lines. PSAPs reported that their phones did not ring and they had to watch for the desk phone to light-up so they were aware there was a call. You may want to train your dispatchers on this fact.

I have discussed this outage individually with a state representative who the governor appointed to the council. There are other representatives and senators on the council. If you desire to express an opinion on this event, I encourage you to look at the 911 Coordinating Council's website to obtain their names and contact information. Based on their reactions, I am confident that our concerns as PSAP directors are being heard. The council has asked for a full investigation and report into the matter. We need answers to prevent this from reoccurring.

Make sure you have dispatchers participating in the regularly hosted PSAP Frontline Dispatcher roundtables that are being held virtually. The next one is Tuesday, January 26th, at 8 pm. Directors and supervisors are welcome to attend the bi-weekly administrator roundtable on alternating Wednesdays at 10:00 am. Contact Lori Criqui (lori.criqui@kansas911.org) or Kathy Kuentler (Kathy.kuentler@gardencityks.us) for more information on the roundtable meetings. Angela Murphy is the South Host PSAP Liaison to the 911 Coordinating Council. Many of you



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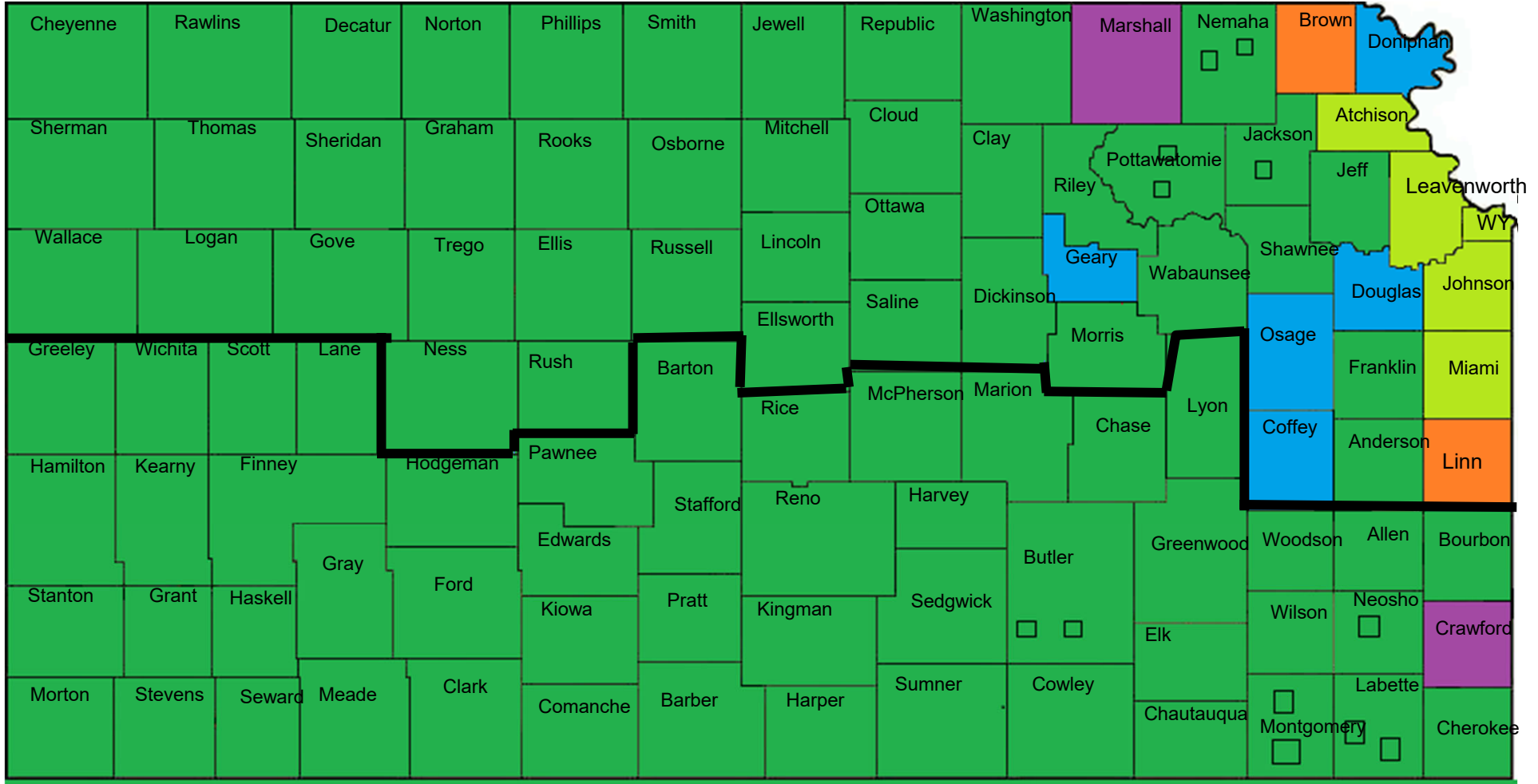
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will know her from her former role as Director of Allen County 911 or her service on our region's Homeland Security Council. You are welcome to contact me if you are not satisfied with any 911 related issue but she is your primary contact and reports to the council. She possesses more knowledge on all matters dispatch and 911 related and can provide you a better answer than I can. If she cannot, call me and we will work together to help you. Angela can be contacted at 620-365-9570 or via email at angela.murphy@kansas911.org.

Two more things to consider. First, PSAPs that do not have their agreements in place are not giving the system instructions on where to route overflow calls. Those calls are most likely abandoned. It is important that you get your agreements in place and submitted to the council. Second, PSAPS need to coordinate on a regional level as well. One thing our contractors discovered during this process is that several PSAPs are routing their overflow to the same PSAP. The council discovered that one PSAP is the primary overflow dispatch for six PSAPs in their region. PSAP managers need to pay attention to how many agreements they are accepting. It does not serve public safety if your PSAP cannot handle the overflow call volume you are agreeing to. I would suggest managers limit the number of PSAPs they agree to serve as primary backup to the number of calls they can effectively handle on top of the calls they normally receive.

NG911 Status Map – 10/01/2020



- = Live on System
- = In Queue
- = Interest Indicated – No SOR
- = Other System Utilized
- = MARC PSAPs

