

NEBRASKA

PUBLIC SERVICE COMMISSION

COMMISSIONERS:

ERIC KAMLER
CHRISTIAN MIRCH
TIM SCHRAM
KEVIN STOCKER
DAN WATERMEIER



November 2, 2023

Sheriff Nick Georgi
Jefferson County
606 3rd Street
Fairbury NE 68352

Dear Sheriff Georgi:

On September 12, 2023, the Nebraska Public Service Commission opened an official investigation into the 911 service outage that occurred on the Lumen network from approximately 7:05 p. m. CDT on August 31, 2023, until mid-morning on September 1, 2023.⁶⁰ The outage disrupted the delivery of 911 calls to numerous PSAPs in Nebraska for several hours.

The purpose of the investigation is to understand the causes and effects of the outage, learn how to prevent future outages, and help minimize the duration and effects of any outages that may occur. In addition, the investigation is looking into whether Lumen met its obligations to provide timely outage notifications and updates to affected PSAPs in Nebraska.

The input of Nebraska PSAPs is very important to the success of this investigation. The Commission needs to determine the full extent to which each Nebraska PSAP was impacted by this outage. Your PSAP's input will be invaluable in confirming the full scope of the outage and will help make the Nebraska 911 service system more reliable, resilient, and secure.

Therefore, please answer each of the following questions, based on how your PSAP was impacted by the 911 service outage that occurred on August 31, 2023, to September 1, 2023.

⁶⁰ *In the Matter of the Nebraska Public Service Commission, on its own motion, conducting an investigation into the 911 service outage that began on August 31, 2023, in areas of Nebraska served by Lumen and its affiliates, App. No. 911-075/PI-248, ORDER OPENING INVESTIGATION (Sept. 12, 20232).*

Thomas W. Golden, Executive Director

Public Service Commission

P.O. Box 94927
300 The Atrium, 1200 N Street
Lincoln, Nebraska 68509

OFFICE 402-471-3101 FAX 402-471-0254
CONSUMER HOTLINE 800-526-0017

psc.nebraska.gov

EXHIBIT
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- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with "None"). *NONE*
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with "Not applicable"). *N/A*
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with "None"). *NONE*
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with "None"). *NONE*
- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Please provide your written responses to the questions above, via return mail or e-mail, by close of business, Friday, November 17, 2023.

Thank you for your help with this important investigation. If you have any questions, please do not hesitate to give me a call.

Sincerely,



Matt Effken
Legal Counsel
Nebraska Public Service Commission
matt.effken@nebraska.gov
402-471-0253

cc: Dave Sankey, State 911 Director

Dietrich, Sallie

From: Nicholas Georgi <Nick.Georgi@jeffersoncountyne.gov>
Sent: Tuesday, November 7, 2023 3:04 PM
To: Effken, Matt
Subject: outage questions
Attachments: Jefferson County LEC_20231107_145041.pdf

You don't often get email from nick.georgi@jeffersoncountyne.gov. [Learn why this is important](#)

Good Afternoon,

Attached is our response as we were not affected by the outage.

Thanks,

Nicholas Georgi | Sheriff

Jefferson County Sheriff's Office | Jefferson County Nebraska

606 3rd Street Fairbury, NE 68352

Office: (402) 729-2284 | Fax: (402) 729-2904

Email: Nick.Georgi@jeffersoncountyne.gov | Website: <https://jeffersoncounty.nebraska.gov>

*****Please Note: My email address has changed*****

Dietrich, Sallie

From: Michelle Hutt <mhutt@johnsoncounty.ne.gov>
Sent: Monday, November 6, 2023 10:09 AM
To: Effken, Matt
Subject: PSAP investigation input
Attachments: Lumen correspondence.pdf

You don't often get email from mhutt@johnsoncounty.ne.gov. [Learn why this is important](#)

Hello Matt,

1. none
2. a call to the PSAP and email to the contact point (myself) came in about the same time
3. none
4. PSAP received an initial phone call informing them of the outage and I received 3 emails regarding the 911 Outage from Lumen
5. see attached

Let me know if you have any additional questions.

Thank you.

Michelle

Michelle Hutt, Office Administrator
Johnson County Sheriff's Office
222 S. 4th Street
PO Box 335
Tecumseh, NE 68450
(402)335-3307 main
(402)335-2737 fax

EXHIBIT
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Initial 911 PSAP Service Disruption Notification

message

911 Outage Report <911.outage.report@lumen.com>

Thu, Aug 31, 2023 at 8:40 PM

Reply-To: 911.outage.report@lumen.com

From: "mhutt@johnsoncountytso-ne.gov" <mhutt@johnsoncountytso-ne.gov>



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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Follow Up 911 PSAP Service Disruption Notification

message

911 Outage Report <911.outage.report@lumen.com>

Thu, Aug 31, 2023 at 9:40 PM

Reply-To: 911.outage.report@lumen.com

From: "mhutt@johnsoncountytso-ne.gov" <mhutt@johnsoncountytso-ne.gov>



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME. THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** 911 PSAP Service Disruption Notification ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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Final 911 PSAP Service Disruption Notification

message

911 Outage Report <911.outage.report@lumen.com>

Fri, Sep 1, 2023 at 8:31 AM

Reply-To: 911.outage.report@lumen.com

From: "mhutt@johnsoncountytso-ne.gov" <mhutt@johnsoncountytso-ne.gov>



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME. THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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From: [Hood, Laurie](#)
To: [Synhorst, Jacki](#)
Cc: [Effken, Matt](#)
Subject: RE: Lumen outage - impact to PSAPs
Date: Sunday, November 12, 2023 4:03:43 PM
Attachments: [Initial 911 PSAP Service Disruption Notification.msg](#)
[Follow Up 911 PSAP Service Disruption Notification.msg](#)
[Final 911 PSAP Service Disruption Notification.msg](#)
[Keith-Hood PSC.docx](#)

Attached is the letter regarding the investigation on Lumen with the August 31st 911 outage. My answers are in red after each question. There are three attachments of the emails received from Lumen. This was the only written communication I received from them.

Thank you,
Laurie

From: Synhorst, Jacki [mailto:jacki.synhorst@nebraska.gov]
Sent: Monday, November 6, 2023 2:58 PM
To: Hood, Laurie <lhood@keithcountyne.gov>
Subject: Lumen outage - impact to PSAPs

Hello,

The NPSC has opened an investigation into the recent Lumen outage, and it is very important that we determine the impact on Nebraska PSAPs. Your input is invaluable to the success of this investigation. Please review and respond to the few questions in the attached letter by November 17.

Thank you!

Sincerely,

Jacki

Jacki Synhorst
State 911 Administrative Assistant
[Nebraska Public Service Commission](#)
402-471-0237
300 The Atrium, 1200 N Street, Lincoln, NE 68508

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

EXHIBIT
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COMMISSIONERS:
ERIC KAMLER
CHRISTIAN MIRCH
TIM SCHRAM
KEVIN STOCKER
DAN WATERMEIER

November 2, 2023

911 Director Laurie Hood
Keith County
501 N Spruce Ste 102
Ogallala NE 69153

Dear 911 Director Hood:

On September 12, 2023, the Nebraska Public Service Commission opened an official investigation into the 911 service outage that occurred on the Lumen network from approximately 7:05 p. m. CDT on August 31, 2023, until mid-morning on September 1, 2023.¹ The outage disrupted the delivery of 911 calls to numerous PSAPs in Nebraska for several hours.

The purpose of the investigation is to understand the causes and effects of the outage, learn how to prevent future outages, and help minimize the duration and effects of any outages that may occur. In addition, the investigation is looking into whether Lumen met its obligations to provide timely outage notifications and updates to affected PSAPs in Nebraska.

The input of Nebraska PSAPs is very important to the success of this investigation. The Commission needs to determine the full extent to which each Nebraska PSAP was impacted by this outage. Your PSAP's input will be invaluable in confirming the full scope of the outage and will help make the Nebraska 911 service system more reliable, resilient, and secure.

Therefore, please answer each of the following questions, based on how your PSAP was impacted by the 911 service outage that occurred on August 31, 2023, to September 1, 2023.

¹ *In the Matter of the Nebraska Public Service Commission, on its own motion, conducting an investigation into the 911 service outage that began on August 31, 2023, in areas of Nebraska served by Lumen and its affiliates*, App. No. 911-075/PI-248, ORDER OPENING INVESTIGATION (Sept. 12, 2023).

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with “None”).
 Keith County 911 was affected by the 911/Landline outage. The 911/landline lines went down around 1938 MDT on August 31 until around 0700 MDT September 1. 911 lines were being re-routed to admin lines, however we could not place outgoing calls on the landlines. This had quite an impact for our agency, since it was the start of the Labor Day Weekend at Lake McConaughy.
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with “Not applicable”).
 At 1936 MDT Communications received a phone call about a catastrophic outage affecting Lincoln County and the Gothenburg Fire Department. (We did not receive a telephone notification about our area.)
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with “None”).
 The impact became apparent around 1938 MDT when we noticed our phone lines were not working. 911 calls were being rerouted to admin lines, however we could not place any outgoing calls. This continued until approximately 0700 MDT Sept 1.
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with “None”).
 The dispatch office did not receive any email notifications refer the outage, they went to the 911 Directors email account, even though it had been previously set up to have them go to our 911 email account.
 1942 MDT Aug 31 received a phone call from Lumen of a service interruption notice
 Email notice – 1943 MDT 8-31-23 Initial 911 PSAP Service Disruption Notification
 Email notice – 1838 MDT 8-31-23 Follow Up 911 PSAP Service Disruption Notification
 2035 MDT Aug 31 received a followup phone call from Lumen
 2059 MDT Aug 31 received phone call to EM Managers concerning state experiencing a wide spread 911 outage.
 Email Notice – 0749 MDT 9-1-23 Final 911 PSAP Service Disruption Notification
- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Thomas W. Golden, Executive Director

Public Service Commission

P.O. Box 94927

300 The Atrium, 1200 N Street

Lincoln, Nebraska 68509

OFFICE 402-471-3101 FAX 402-471-0254

CONSUMER HOTLINE 800-526-0017

psc.nebraska.gov

Copies of Emails attached

Please provide your written responses to the questions above, via return mail or e-mail, by close of business, Friday, November 17, 2023.

Thank you for your help with this important investigation. If you have any questions, please do not hesitate to give me a call.

Sincerely,



Matt Effken
Legal Counsel
Nebraska Public Service Commission
matt.effken@nebraska.gov
402-471-0253

cc: Dave Sankey, State 911 Director

Thomas W. Golden, Executive Director

Public Service Commission

P.O. Box 94927

300 The Atrium, 1200 N Street

Lincoln, Nebraska 68509

OFFICE 402-471-3101 **FAX** 402-471-0254

CONSUMER HOTLINE 800-526-0017

psc.nebraska.gov



From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:43 PM
To: Hood, Laurie
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:38 PM
To: Hood, Laurie
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:29 AM
To: Hood, Laurie
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dietrich, Sallie

From: Heather Kienow <911coordinator@knoxcountyne.gov>
Sent: Tuesday, November 7, 2023 11:26 AM
To: Synhorst, Jacki
Cc: Don Henery
Subject: RE: Lumen outage - impact to PSAPs
Attachments: Follow Up 911 PSAP Service Disruption Notification.pdf; Initial 911 PSAP Service Disruption Notification.pdf; Final 911 PSAP Service Disruption Notification.pdf; Messages (x3) (1).zip; Knox-Kienow.docx

Jacki,

Responses are in red below each section.

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with “None”).

Customers and dispatcher(s) placing test calls reported a beeping or busy tone when calling 911.

- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with “Not applicable”).

Research indicates we first learned of the outage via automated message from Lumen on 8/31/2023 @ 2037.

- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with “None”).

First knowledge of impact was on 8/31/2023 @ 2037 when we received the automated message from Lumen. Our last 911 call received on 8/31/2023 was at 1554. According to our records, there were no other reports of a service disruption between our last 911 call received at 1554 and 2037 when the Lumen automated message came through.

- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with “None”).

Initial automated message from Lumen via telephone on 8/31/2023 @ 2037.

Initial Email notification to Heather Kienow on 8/31/2023 @ 2043.

Follow-up automated message from Lumen via telephone on 8/31/2023 @ 2135.

Follow-up Email notification to Heather Kienow on 8/31/2023 @ 2138.

Final automated message from Lumen via telephone on 9/1/2023 @ 0825.

Final Email notification to Heather Kienow on 9/1/2023 @ 0829.

EXHIBIT 34

- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Initial, follow-up and final automated and Email notifications are attached.

Let me know if you have any questions or I can be of further assistance.

Thank you!

Heather Kienow - 911 Coordinator
Knox Co Sheriff's Office
Ph. 402-288-4261
Fax 402-288-4263
911coordinator@knoxcountyne.gov



From: Synhorst, Jacki <jacki.synhorst@nebraska.gov>
Sent: Monday, November 6, 2023 4:00 PM
To: Heather Kienow <911coordinator@knoxcountyne.gov>
Subject: Lumen outage - impact to PSAPs

Hello,

The NPSC has opened an investigation into the recent Lumen outage, and it is very important that we determine the impact on Nebraska PSAPs. Your input is invaluable to the success of this investigation. Please review and respond to the few questions in the attached letter by November 17.

Thank you!

Sincerely,

Jacki

Jacki Synhorst
State 911 Administrative Assistant
[Nebraska Public Service Commission](http://www.nebraska.gov/public-service-commission)
402-471-0237
300 The Atrium, 1200 N Street, Lincoln, NE 68508

Heather Kienow

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:43 PM
To: Heather Kienow
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

Heather Kienow

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:38 PM
To: Heather Kienow
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify

the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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Heather Kienow

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:29 AM
To: Heather Kienow
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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From: [Jessica Loos](#)
To: [Effken, Matt](#)
Subject: LECC Survey
Date: Sunday, November 19, 2023 3:54:25 PM
Attachments: [image001.png](#)
[MSG00057.WAV](#)

You don't often get email from jloos@lincoln.ne.gov. [Learn why this is important](#)

Good afternoon!

My apologies on the delay to this survey but I did want to convey the experience of the Lincoln Emergency Communications Center as a result of these outages.

- a. August 31 Outage: While the Lumen outage didn't directly affect our ability to receive calls from our community members, the outage did increase our volumes with inquiries, 'checking' that our 911 services were still operational.
- b. I, personally, received multiple calls from peers and frontline telecommunicators. We were not impacted.
- c. None.
- d. Voicemail attached - received on September 1 @ 0828.
- e. See above.

Thank you!

Jessica M Loos, ENP, RPL
911 Communications Coordinator
Lincoln Emergency Communications Center
Lincoln Police Department
575 S 10th St, Lincoln, NE 68508
Cell | 531.249.9955
Office | 402.441.7251
jloos@lincoln.ne.gov



Always Hiring | www.JoinLPD.com

#teamworkmakesthedreamwork

The information in this e-mail may be privileged and confidential, intended only for the use of the addressee(s) above. Any unauthorized use or disclosure of this information is prohibited. If you have received this e-mail by mistake, please delete it and immediately contact the sender.

f.

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EXHIBIT
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intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message.



**McCook Police Department
505 WEST C STREET
PO BOX 1066
McCook, NE 69001
Phone: 308-345-3450
Fax: 308-345-4369**

November 17, 2023

Nebraska Public Service Commission
PO Box 94927
300 The Atrium, 1200 N Street
Lincoln, NE 68509

RE: August 31, 2023, 911 Outage

To Whom It May Concern:

This letter is in response to the official investigation into the 911 service outage that occurred on August 31, 2023. Please see the response to your questions outlined in your letter of November 2, 2023.

- A. The McCook Dispatch Center was impacted in the following ways:
 - 1. We were not able to receive 911 phone calls.
 - 2. Our administrative lines were unreliable. We were not able to call out and incoming calls were intermittent.
- B. At approximately 19:30 dispatch was attempting to place outbound calls to our officers on our administrative lines and was not successful. This is when dispatch discovered our phone lines were not functioning properly.
 - 1. From 19:30 – 22:03 dispatch continued to test inbound and outbound calls on the administrative lines and 911 lines from their personal cell phones.
 - 2. After the Chief of Police and 911 Coordinator were notified the 911 and admin lines were not functioning properly, the dispatcher and 911 Coordinator were able to find Facebook posts from other agencies experiencing the same issues.
- C. August 31, 2023 at approximately 19:30 is when we noticed a problem with the administrative and 911 lines.
 - 1. At least one test 911 call from our dispatch center was placed around 23:30 and that call was routed to a dispatch center in Colorado.

EXHIBIT

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2. One test 911 call our dispatchers made rang into our center through an administrative phone line.
 3. When calling into the administrative line a recorded message stated “my call could not be completed as dialed. When hanging up and calling right back, the call went through.
- D. At 22:03 our dispatch center was notified by a recording from LUMEN that an outage was affecting 911, PSAP, Central office and/or ANI/ALI.
1. We did not receive email notifications through the entire outage.
- E. Our lines were restored by 07:00 on September 1, 2023. There are not any copies of notifications or updates to provide since we did not receive any notices nor updates.

Sincerely,



Jennifer Doucet
911 Coordinator
McCook Police Department
jdoucet@cityofmccook.com
308-345-3450

Dietrich, Sallie

From: cvclerk@gtmc.net
Sent: Monday, November 13, 2023 8:25 AM
To: Effken, Matt
Subject: MID-RIVERS RESPONSE

Follow Up Flag: Follow up
Flag Status: Flagged

[You don't often get email from cvclerk@gtmc.net. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Below are the responses for Mid-Rivers for the Outages which occurred across Nebraska.

- A) none
- B) N/A
- C) none
- D) none

- a) **Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP.**

911 rolled over to our admin lines, we did not have any known emergencies during this time.

- b) **Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP.**

Buffalo County called to check on our 911 system at approx. 19:30 hours.

- c) **Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and duration of such impact(s).**

The outage became apparent at approx. 1930 hours and lasted until approximately 0610 on September 1st.

- d) **Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral.**

We received the 1st notification via email from Lumen at 19:41 on August 31st.

- e) **Please provide a copy of each notification received from Lumen.**
Attached.



Tim Rice <timrice@morrillcountyne.com>

Initial 911 PSAP Service Disruption Notification

1 message

911 Outage Report <911.outage.report@lumen.com>

Thu, Aug 31, 2023 at 7:41 PM

Reply-To: 911.outage.report@lumen.com

To: "timrice@morrillcountyne.com" <timrice@morrillcountyne.com>



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender

11/6/23, 3:57 PM

Morrill County Mail - Initial 911 PSAP Service Disruption Notification

Immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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Tim Rice <timrice@morrillcountyne.com>

Follow Up 911 PSAP Service Disruption Notification

1 message

911 Outage Report <911.outage.report@lumen.com>
Reply-To: 911.outage.report@lumen.com
To: "timrice@morrillcountyne.com" <timrice@morrillcountyne.com>

Thu, Aug 31, 2023 at 8:39 PM



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME. THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com
***** For 911 Reroute Requests Call 800-357-0911 *****

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender

11/6/23, 3:58 PM

Morrill County Mail - Follow Up 911 PSAP Service Disruption Notification

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OFFICE OF THE NEMAHA COUNTY SHERIFF

Sheriff Brent Lottman
1805 N Street Auburn, NE 68305
(402) 274-3139

November 14, 2023

Mr. Matt Effken
Legal Counsel
Nebraska Public Service Commission
300 The Atrium
1200 N Street
Lincoln, NE 68509

RE: Lumen Outage Investigation

Dear Mr. Effken:

Below is the response of the Nemaha County PSAP relating to your letter of November 2, 2023.

- a) None. As Nemaha County was still completely on the Windstream system, we did not experience an outage.
- b) Not applicable; however, the first email from Lumen giving notification of the outage was received at 8:41 p.m. on August 31, 2023. (see attached)
- c) None
- d) None: the three notifications that were received (initial notification, update and resolution) are included.
- e) Three attachments

If you have any additional questions, or if I can be of further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Lottman", is written over a blue horizontal line.

Brent Lottman
Sheriff

EXHIBIT
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Brent Lottman

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:41 PM
To: Brent Lottman
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com
***** For 911 Reroute Requests Call 800-357-0911 *****

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Brent Lottman

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:41 PM
To: Brent Lottman
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com
***** For 911 Reroute Requests Call 800-357-0911 *****

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Brent Lottman

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:31 AM
To: Brent Lottman
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

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From: [Don Miller](#)
To: [Effken, Matt](#)
Subject: 911 outage
Date: Friday, November 17, 2023 3:20:35 PM
Attachments: [2023 911 outage.pdf](#)
[Lumen 1st notice.pdf](#)
[Lumen 2nd notice.pdf](#)
[Lumen 3rd notice.pdf](#)

You don't often get email from dmiller@norfolkne.gov. [Learn why this is important](#)

Matt,

This email is in response to your request dated 11-2-23 and attached for reference.

Our responses are below:

- a. Calls were not coming thru and when 911 was dialed; the caller would receive a busy signal and it would disconnect or nothing at all. Dispatchers used Rapid SOS to monitor when a call was coming in, and then call the person back to make sure we could assist citizens.
- b. On duty dispatchers were notified by an officer that they were trying to call in and the call was not going through. Dispatchers tested the 911 lines and found them to ring busy and then disconnect or nothing at all. They then contacted supervisors as well as Lumen and other phone related companies. Other PSAPs began posting on social media that their systems were down.
- c. Approx. 2039 hours on August 31 to September 1st.
- d. I received 2 email notifications from Lumen of the outage and one email that service had been restored. First email was received on 8-31-23 at 2040 hrs. Second email was received on 8-31-23 at 2138 hrs. The third email was received on 9-1-23 at 0829 hrs. indicating the issue was resolved and it was due to a fiber cut. All 3 are attached for reference.
- e. Attached

EXHIBIT
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From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 20:40
To: Don Miller
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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Don Miller

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 21:38
To: Don Miller
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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Don Miller

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 08:29
To: Don Miller
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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NORTH PLATTE POLICE DEPARTMENT

"To Protect And Serve"

Steve Reeves
Chief of Police

TO: Matt Effken—Nebraska Public Service Commission

FROM: Chief Steve Reeves

DATE: November 9, 2023

RE: 911 SERVICE OUTAGE ON AUGUST 31, 2023

1. The North Platte 911 Center was unable to receive any 911 calls. We received some calls from providers who had their equipment configured to deliver 911 calls to our administrative lines in the event of an outage, such as Verizon. There were others, such as T-Mobile, that we could see plotting on other equipment such as Rapid SOS but the calls were not received in our center. This persisted throughout the night, into the morning hours.
2. I learned of the outage when I received a personnel telephone call from Buffalo County Sheriff Neil Miller.
3. Approximately 8:30 PM on August 31, 2023.
4. No notifications or updates were received from Lumen during the outage nor were we notified when service was restored.

A handwritten signature in black ink, appearing to read "Steve Reeves", written over a horizontal line.

Steve Reeves
Chief of Police

EXHIBIT
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PERKINS COUNTY SHERIFF'S OFFICE



James D. Brueggeman, Sheriff

November 16, 2023

Law Enforcement
Emergency Management
E-911/Communications

200 Lincoln Avenue
P.O. Box 607
Grant, NE 69140

308-352-7500 (Dispatch)
308-352-7501 (Office)
308-352-7502 (Fax)
sheriff@perkinscountyne.org
www.perkinscountyne.org

James D. Brueggeman
Sheriff
Emergency Manager
E-911 Administrator

Matt Effken
Legal Counsel
Nebraska Public Service Commission
300 The Atrium, 1200 N Street
Lincoln, Nebraska 68509

- Transmitted via e-mail to matt.effken@nebraska.gov

In response to your November 2, 2023, letter requesting information about the 911 service outage that occurred on the Lumen network from approximately 7:05 p.m. CDT on August 31, 2023, until mid-morning on September 1, 2023, Perkins County PSAP provides the following information:

Perkins County PSAP could not receive 911 calls on the 911 system equipment during the outage. 911 calls rang our 24x7 number, which was answerable on the 911 system equipment. Incoming non-emergency calls were answerable only on the 911 system equipment but not the backup ShoreTel phone system. Perkins County PSAP could not place outgoing calls from the 911 equipment or the backup ShoreTel phone system making it necessary to use cellular telephones to make outgoing calls.

Perkins County PSAP first learned that the August 31 to September 1 outage was impacting our PSAP upon receipt of a pre-recorded notice message from Lumen delivered to our 24x7 number on August 31 at 7:37 p.m. MT.

The date and time the impacts described above began or became apparent to Perkins County PSAP was August 31 at 7:04 p.m. MT. The oncoming 7:00 p.m. MT night dispatcher made 911 and administrative test calls to determine proper system functionality and discovered the outage at the start of his shift. The outgoing day dispatcher made successful 911 and administrative test calls one hour before the end of his shift on August 31 at 6:00 p.m. MT, leading to the conclusion that the Perkins County PSAP system became non-operational between 6:00 p.m. MT – and 7:04 p.m. MT. The system appeared to function correctly again on September 1 at 3:50 a.m. MT after a test call request by James Almond with the Nebraska Public Service Commission.

The notifications and updates Perkins County PSAP received from Lumen regarding the August 31 to September 1st outage were as follows: August 31 at 7:37 p.m. MT Lumen pre-recorded voice message, 7:41 p.m. MT Lumen e-mail message, 8:38 p.m. MT Lumen e-mail message, 11:50 p.m. MT Intrado Life Safety pre-recorded message, 11:55 p.m. MT Intrado Life Safety pre-recorded message, September 1 at 5:45 a.m. MT Intrado technician non-emergency test call, 7:29 a.m. MT e-mail message.

Attached are copies of the oral and written notifications received for your review.

Respectfully submitted,

A handwritten signature in blue ink that reads "James D. Brueggeman".

Sheriff James D. Brueggeman
E-911 Administrator
Perkins County, Nebraska



EXHIBIT
42

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 7:41 PM
To: James Brueggeman
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:38 PM
To: James Brueggeman
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

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the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 7:29 AM
To: James Brueggeman
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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COMMISSIONERS:
ERIC KAMLER
CHRISTIAN MIRCH
TIM SCHRAM
KEVIN STOCKER
DAN WATERMEIER

November 2, 2023

Emergency Manager Alma Beland
Region 26
402 4th Street
Taylor NE 68879

Dear Emergency Manager Beland:

On September 12, 2023, the Nebraska Public Service Commission opened an official investigation into the 911 service outage that occurred on the Lumen network from approximately 7:05 p. m. CDT on August 31, 2023, until mid-morning on September 1, 2023.¹ The outage disrupted the delivery of 911 calls to numerous PSAPs in Nebraska for several hours.

The purpose of the investigation is to understand the causes and effects of the outage, learn how to prevent future outages, and help minimize the duration and effects of any outages that may occur. In addition, the investigation is looking into whether Lumen met its obligations to provide timely outage notifications and updates to affected PSAPs in Nebraska.

The input of Nebraska PSAPs is very important to the success of this investigation. The Commission needs to determine the full extent to which each Nebraska PSAP was impacted by this outage. Your PSAP's input will be invaluable in confirming the full scope of the outage and will help make the Nebraska 911 service system more reliable, resilient, and secure.

Therefore, please answer each of the following questions, based on how your PSAP was impacted by the 911 service outage that occurred on August 31, 2023, to September 1, 2023.

¹ *In the Matter of the Nebraska Public Service Commission, on its own motion, conducting an investigation into the 911 service outage that began on August 31, 2023, in areas of Nebraska served by Lumen and its affiliates*, App. No. 911-075/PI-248, ORDER OPENING INVESTIGATION (Sept. 12, 2023).

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with “None”).
Region 26 was affected on August 31st by landland outage. The 911 lines did not go down until approximately 3am to 6am on September 1st. (exact time unknown on 911 lines down)
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with “Not applicable”).
Calls from Deputies on the radio that they were not able to reach us by phone. All landlines were down at that time – we kept testing the 911 trunk lines that were still up through the evening of August 31st.
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with “None”).
Time that we were aware of landlines down was appx 8:30pm on August 31st. The 911 trunk lines appeared to have gone down around 3am (maybe earlier) to 6am on September 1st.
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with “None”).
Email Notice – 8/31/2023 8:43 PM Notice we may be impacted.
Email Update – 8/31/2023 9:38 PM Follow Up that Lumen is working on it.
Email Final - 9/1/2023 8:29 AM Notice service had been restored.
And that Lumen repaired a fiber cut.
- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.
Copies of emails attached.

Please provide your written responses to the questions above, via return mail or e-mail, by close of business, Friday, November 17, 2023.

Thank you for your help with this important investigation. If you have any questions, please do not hesitate to give me a call.

Sincerely,

Thomas W. Golden, Executive Director
Public Service Commission

P.O. Box 94927 OFFICE 402-471-3101 FAX 402-471-0254
300 The Atrium, 1200 N Street CONSUMER HOTLINE 800-526-0017
Lincoln, Nebraska 68509

psc.nebraska.gov



Matt Effken
Legal Counsel
Nebraska Public Service Commission
matt.effken@nebraska.gov
402-471-0253

cc: Dave Sankey, State 911 Director

Thomas W. Golden, Executive Director

Public Service Commission

P.O. Box 94927

300 The Atrium, 1200 N Street
Lincoln, Nebraska 68509

OFFICE 402-471-3101 **FAX** 402-471-0254

CONSUMER HOTLINE 800-526-0017

psc.nebraska.gov



From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:38 PM
To: Beland, Alma
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:29 AM
To: Beland, Alma
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:43 PM
To: Beland, Alma
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with "None"). *None*
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with "Not applicable"). *Not applicable*
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with "None"). *None*
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with "None"). *None*
- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Please provide your written responses to the questions above, via return mail or e-mail, by close of business, Friday, November 17, 2023.

Thank you for your help with this important investigation. If you have any questions, please do not hesitate to give me a call.

Sincerely,



Matt Effken
 Legal Counsel
 Nebraska Public Service Commission
matt.effken@nebraska.gov
 402-471-0253

cc: Dave Sankey, State 911 Director



Sarpy County Emergency Communications Department

William J. Muldoon, C.M.C.P.
Director
402-593-2283
wmuldoon@sarpy.gov

November 6, 2023

Matt Effken, Legal Counsel
Nebraska Public Service Commission

RE: 911 Service Outage Investigation, August 31-September 1, 2023

Dear Mr. Effken,

The Sarpy County Emergency Communications Center was impacted by the 911 outage that began approximately 1905 hours August 31 and concluded the following morning, September 1, 2023. The answers to your questions in the order asked:

- a) See attached After Action Report completed by Lead Supervisor Mark Pontefract.
- b) The Center became aware of the outage after a phone call from Douglas County 911 at about 1935 hours Aug 31, asking if our 911 lines were down. Test calls confirmed that they were down although text to 911 and Rapid SOS tools were discovered to be working a short time later.
- c) Loss of 911 phone service sometime after 1905 Aug 31, through about 0800 Sep 1, 2023.
- d) First received at 2041 hours Aug 31, with little information; second at 2138, still with no information; third message at 0830, Sep 1 that "technicians have repaired the fiber cut".
- e) Copies attached.

While not asked, we had at least two medical emergency 911 calls missed due to the outage, one was a cutting (crime) that we received via text to 911 and another a request for a rescue squad that we learned of while returning calls seen on Rapid SOS. Patient care was still delivered in a timely manner.

Local county leadership including our Sarpy County Commissioners have expressed concern that the system is not more resilient as we have invested heavily in 911 radio and telephone system redundancies. The expectation is that our citizens can call 911 and will receive *immediate* assistance in law enforcement, fire, or medical emergencies. Let me know how I can be of further assistance.

Sincerely,


William Muldoon, Director

Cc by email: Sarpy County Administration

**EXHIBIT
45**

NEBRASKA

PUBLIC SERVICE COMMISSION



COMMISSIONERS:
ERIC KAMLER
CHRISTIAN MIRCH
TIM SCHRAM
KEVIN STOCKER
DAN WATERMEIER

November 2, 2023

Director Bill Muldoon
Sarpy County
1210 Golden Gate Dr suite 1300
Papillion NE 68046

Dear Director Muldoon:

On September 12, 2023, the Nebraska Public Service Commission opened an official investigation into the 911 service outage that occurred on the Lumen network from approximately 7:05 p. m. CDT on August 31, 2023, until mid-morning on September 1, 2023.⁸¹ The outage disrupted the delivery of 911 calls to numerous PSAPs in Nebraska for several hours.

The purpose of the investigation is to understand the causes and effects of the outage, learn how to prevent future outages, and help minimize the duration and effects of any outages that may occur. In addition, the investigation is looking into whether Lumen met its obligations to provide timely outage notifications and updates to affected PSAPs in Nebraska.

The input of Nebraska PSAPs is very important to the success of this investigation. The Commission needs to determine the full extent to which each Nebraska PSAP was impacted by this outage. Your PSAP's input will be invaluable in confirming the full scope of the outage and will help make the Nebraska 911 service system more reliable, resilient, and secure.

Therefore, please answer each of the following questions, based on how your PSAP was impacted by the 911 service outage that occurred on August 31, 2023, to September 1, 2023.

⁸¹ *In the Matter of the Nebraska Public Service Commission, on its own motion, conducting an investigation into the 911 service outage that began on August 31, 2023, in areas of Nebraska served by Lumen and its affiliates, App. No. 911-075/PI-248, ORDER OPENING INVESTIGATION (Sept. 12, 2023).*

Thomas W. Colden, Executive Director

Public Service Commission

P.O. Box 94927

OFFICE 402-471-3101 FAX 402-471-0254

300 The Atrium, 1200 N Street

CONSUMER HOTLINE 800-526-0017

Lincoln, Nebraska 68509

psc.nebraska.gov

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with "None").
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with "Not applicable").
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with "None").
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with "None").
- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Please provide your written responses to the questions above, via return mail or e-mail, by close of business, Friday, November 17, 2023.

Thank you for your help with this important investigation. If you have any questions, please do not hesitate to give me a call.

Sincerely,



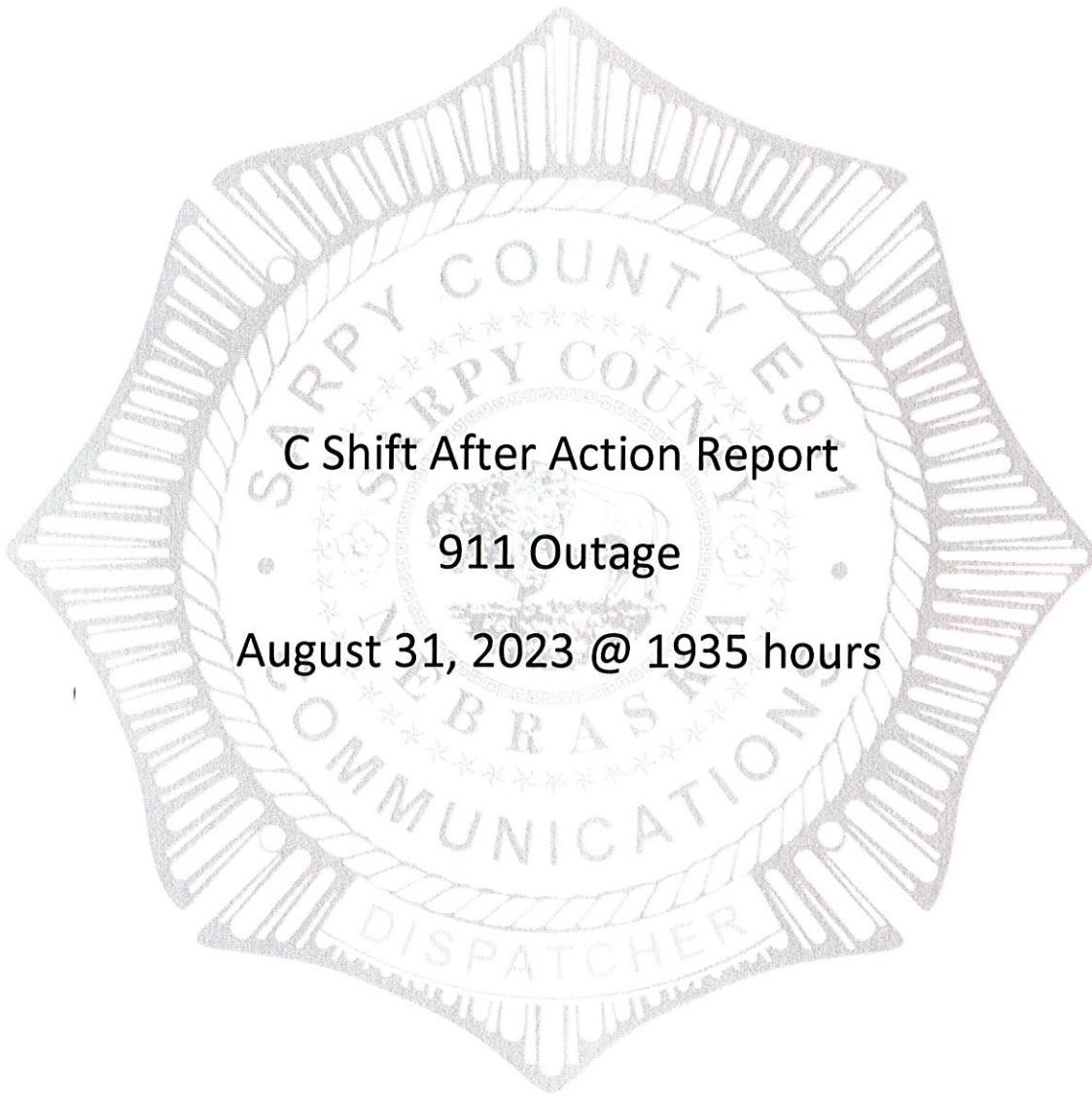
Matt Effken
Legal Counsel
Nebraska Public Service Commission
matt.effken@nebraska.gov
402-471-0253

cc: Dave Sankey, State 911 Director

Thomas W. Golden, Executive Director
Public Service Commission

P.O. Box 94927 OFFICE 402-471-3101 FAX 402-471-0254
300 The Atrium, 1200 N Street CONSUMER HOTLINE 800-526-0017
Lincoln, Nebraska 68509

psc.nebraska.gov



C Shift After Action Report

911 Outage

August 31, 2023 @ 1935 hours

C Shift Dispatch Present

Lead Dispatcher Mark Pontefract - Supervisor
Senior Dispatcher Michelle Begeman – Law East Dispatcher
Dispatcher Patty Conradson – Fire/EMS Dispatcher
Dispatcher Teresa Smith – Law West Dispatcher
Dispatcher Nick Manganaro – Primary Call Taker
Dispatcher Nautica Geislar – Back Up Call Taker
Dispatcher Dallas Keffer – Information Dispatcher
Trainee Courtney Aguilar – Law East Dispatcher
Trainee Kassie Breeling – Primary Call Taker

Additional Personnel Present

Kimberly Kuszak – Telephone Systems and Technology Manager

Synopsis

On August 31, 2023 at approximately 1935 hours, Douglas County 911 called into the Sarpy County Emergency Communications Center inquiring if our 911 lines were down. A test of our 911 lines was completed by calling 911 from cell phones with different providers and from a landline. Every call was met with a fast busy signal. It was at this time C shift discovered that our 911 lines were indeed not operating in addition to Douglas County 911's lines. During the outage, text to 911 was still operating normally. RapidSOS was also still functioning normally during the outage. The outage lasted for the duration of C Shift carrying over into B Shift on September 1, 2023 ending at about 0800 hours.

What did we do well?

Call Takers

- Tested wireless 911 lines with cellular telephones from various providers
- Tested landline/VOIP 911 lines from inside the courthouse
- Continued to answer incoming calls on non-emergency lines and text to 911
- Made phone calls as requested from other dispatchers and supervisor.
- Info was suspended and acting as additional call taker
- Continued to exhibit teamwork
- Staff continued to encourage their co-workers
- Dispatchers were brain-storming ideas to alleviate the problem
- Worked on ways to notify the public
- Utilized available technology (RapidSOS) to call back callers who called 911
- Continued to provide excellent customer service to citizens

Law East

- Noticed that RapidSOS was still working because phone numbers and locations on the map were still appearing from callers calling 911
- Continued normal operations by dispatching incoming calls and handling officer initiated activity
- Answered incoming calls
- Made outgoing calls
- Notified sergeants that 911 is down

Law West

- Continued normal operations by dispatching incoming calls and handling officer initiated activity
- Answered incoming calls
- Made outgoing calls
- Notified sergeants that 911 is down

Information

- Acted as additional call taker
- Suspended non-essential info operations

Fire

- Notified PFC3 and BBAT1 that 911 was down
- Acted as a last resort call taker
- Continued fire/ems dispatch operations
- Helped by making and answering telephone calls as fire/ems call volume would allow

Supervisor

- Notified Telephone Systems and Technology Manager @ approximately 1937 hours
- Assigned staff member to check with surrounding agencies as to their 911 lines status
- Notified Douglas County 911 Supervisor that RapidSOS is working and how Sarpy County 911 was utilizing it
- In communication with Director and Telephone System and Technology Manager
- Notified local media outlets (KETV, WOWT, KM3) after it was determined to be extended outage

- Ensured Twitter was utilized to notify the public
- Informed Sarpy County Communications Manager to assist with notification of public via social media and their media contacts
- Suspended non-essential info operations due to call volume
- Communicated with road patrol sergeants that non-essential info operations are suspended
- Utilized info dispatcher as call taker for new incoming calls on non-emergency lines and texts
- Instructed Primary and Backup call takers to call back all calls that appeared on RapidSOS to verify if an emergency existed
- Stopped answering calls to ensure efficient operations continued, monitor staff assignments and ensured supervisor was readily available to assist staff

What didn't work well?

Call Takers

- Not aware of 911 lines being down
- When calling back numbers that appeared at the top of the list on RapidSOS, they would reappear once they were removed.
- Starting at the top of the list of hangups on RapidSOS instead of bottom
- Volumes at positions were turned down
- Did not test text to 911 lines

Law East

- Nothing noted

Law West

- Nothing noted

Information

- Nothing noted

Fire

- Nothing noted

Supervisor

- Continuous tweets (after initial tweet) to utilize non-emergency number not sent until halfway through the outage
- Did not communicate our requests clearly to road patrol sergeants about them needing to limit their activity for info until about 2030 hours when calls were coming in. Initially they were told 911 was down but not what we needed from them to help our situation
- Did not know the names of the Sarpy County Communications staff

What should we change/add/leave alone?

- Staffing levels were sufficient at 7 for the call volume
- Extra dispatcher would have been nice to help but not necessary due to length of time they were needed
- When sending mass alerts, include verbiage to not do a test call to 911 to see if it works

- On mass alerts, have telephone number not clickable by users on the alert to eliminate influx of calls
- Plan for 911 outages and practice how we would handle them
- Incorporate a checklist to ensure notifications are made and nothing gets missed
- Incorporate training for line dispatchers at the shift level

What we learned and how we prepared

- Teamwork is essential to successfully handle situations as this
- A supervisor needs to be available as soon as possible to assist staff. In this case, the on duty supervisor was able to not answer phones and was available to assist, monitor and manage almost immediately after the initial outage began
- Situations such as these is something the shift has not planned for. A simple discussion amongst the shift is all it takes.
- When using RapidSOS, the numbers at the top of the list would reappear once they are removed and it does not remove the number for all positions that have RapdSOS open and as a result, some callers were called back multiple times. Once we figured this out, call takers coordinated and went to the bottom of the list to start calling back the oldest calls first by doing a “leap-frog” to eliminate calling the same number back multiple times by different call takers. Once they were called back, the number was removed from the list.
- We learned that the media was an asset in this situation by getting our non-emergency number out to the public
- C Shift has learned the names of the Sarpy County Communications staff and committed them to memory and learned where to look them up in the event we need their assistance again
- About 3 hours into the outage, there was an idea to see if NDOT can put our non-emergency number on message boards in our county. NDOT is not able to put telephone numbers on the DMS.

William Muldoon

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:41 PM
To: William Muldoon
Subject: [EXT] Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

William Muldoon

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:38 PM
To: William Muldoon
Subject: [EXT] Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify

William Muldoon

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:30 AM
To: William Muldoon
Subject: [EXT] Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

**BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME.
THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.**

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

***** For 911 Reroute Requests Call 800-357-0911 *****

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify

William Muldoon

From: no_reply@comcast.com
Sent: Thursday, August 31, 2023 11:16 PM
To: William Muldoon
Subject: [EXT] Potential outage affecting Comcast Emergency Services to your PSAP

A Message from Comcast e911 Operations...

PSAP Administrator,

Comcast is experiencing an event that is affecting or may potentially affect 9-1-1 call concentrating its efforts on investigating and remediating the event and will update you useful to your facility becomes available.

If you are receiving 9-1-1 calls without ALI, please forward ANI and time stamp or other to

ThirdPartyCarrierOutageNotifications@comcast.com.

If you have an urgent matter that cannot be resolved via email, please call 800-777-9824 or browse to psap.comcast.com for more information.

Information available at this time is as follows:

- * Ticket Number: INC005423382 / UNO000036970433
- * Detected Time: 2023-08-31 22:13 Mountain
- * Mitigated Time: TBD
- * Affected Routes: Multiple
- * ANI impacted: Yes
- * ALI impacted: Yes
- * SR impacted: Unknown

Potentially Affected Locations:

CARRIER	FCC PSAP ID	FCC PSAP NAME
COX	4568	Cass County Sheriffs Dept
COX	4587	Douglas County 9-1-1 Communications Center
COX	4648	Sarpy County 9-1-1
COX	4662	Washington County 911

Thank you,
Comcast e911 Operations

This message and any attachments to it contain PROPRIETARY AND CONFIDENTIAL INFORMATION to recipients. Please DO NOT FORWARD OR DISTRIBUTE to anyone else. If you are not an intended recipient, contact the sender to report the error and then delete all copies of this message from your system.

If you have any further questions, ne
please call 800-777-9824, email us at ThirdPartyCarrierOutageNotifications@comcast.com
or browse to psap.comcast.com

William Muldoon

From: no_reply@comcast.com
Sent: Friday, September 1, 2023 8:24 AM
To: William Muldoon
Subject: [EXT] Potential outage affecting Comcast Emergency Services to your PSAP - Final

A Message from Comcast e911 Operations...

***** FINAL UPDATE *****

PSAP Administrator,

Comcast has resolved an event that was affecting or may have potentially affected 9-1-1. This notification is the final update on the event.

If you are receiving 9-1-1 calls without ALI, please forward ANI and time stamp or other information to ThirdPartyCarrierOutageNotifications@cable.comcast.com.

If you have an urgent matter that cannot be resolved via email, please call 800-777-9824 or browse to psap.comcast.com for more information.

Information available at this time is as follows:

- * Ticket Number: INC005423382 / UNO000036970433
- * Detected Time: 2023-08-31 22:13 Mountain
- * Mitigated Time: 2023-09-01 07:23 Mountain
- * Affected Routes: Multiple
- * ANI impacted: Yes
- * ALI impacted: Yes
- * SR impacted: Unknown

Potentially Affected Locations:

CARRIER	FCC PSAP ID	FCC PSAP NAME
COX	4568	Cass County Sheriffs Dept
COX	4587	Douglas County 9-1-1 Communications Center
COX	4648	Sarpy County 9-1-1
COX	4662	Washington County 911

Thank you,
Comcast e911 Operations

This message and any attachments to it contain PROPRIETARY AND CONFIDENTIAL INFORMATION of Comcast. Please DO NOT FORWARD OR DISTRIBUTE to anyone else. If you are not an intended recipient, please contact the sender to report the error and then delete all copies of this message from your system.

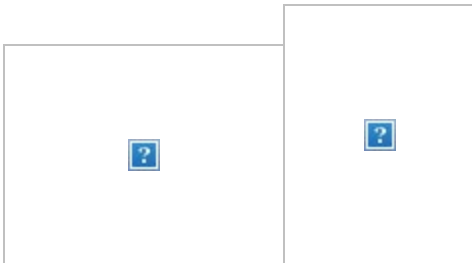
If you have any further questions, ne
please call 800-777-9824, email us at ThirdPartyCarrierOutageNotifications@cable.comcast.com
or browse to psap.comcast.com

From: [Tracy Ellinger](#)
To: [Synhorst, Jacki](#)
Subject: RE: Lumen outage - impact to PSAPs
Date: Thursday, November 16, 2023 1:45:59 PM
Attachments: [image001.png](#)
[image002.png](#)

- A. We had no 911 service during this time. We were able to rely on RapidSOS to call back potential 911 callers.
- B. Our center learned after the fire department called them to let them know about a post they had seen another center put on Facebook. At that time they attempted the call and it did not go through and they contacted me at home.
- C. August 31, 2023 between 7pm and 9pm when dispatch was notified by the fire dept of a Facebook post they had seen and contacted us.
- D. We received some emailed and some recorded messages regarding an outage.
- E. I will send a separate email(s) with what we received from Lumen.

Thanks,
Tracy Ellinger

Tracy Ellinger
South Sioux City/Dakota County 911 Communications
701 W 29th Street
South Sioux City, NE 68776
(402)494-7555 work
(712)203-0237 cell



From: Synhorst, Jacki <jacki.synhorst@nebraska.gov>
Sent: Monday, November 6, 2023 3:30 PM
To: Tracy Ellinger <TEllinger@southsiouxcity.org>
Subject: Lumen outage - impact to PSAPs

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Hello,

The NPSC has opened an investigation into the recent Lumen outage, and it is very

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important that we determine the impact on Nebraska PSAPs. Your input is invaluable to the success of this investigation. Please review and respond to the few questions in the attached letter by November 17.

Thank you!

Sincerely,

Jacki

Jacki Synhorst
State 911 Administrative Assistant
[Nebraska Public Service Commission](#)
402-471-0237
300 The Atrium, 1200 N Street, Lincoln, NE 68508

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Dietrich, Sallie

From: Tracy Ellinger <TEllinger@southsiouxcity.org>
Sent: Thursday, November 16, 2023 1:46 PM
To: Synhorst, Jacki
Subject: FW: Initial 911 PSAP Service Disruption Notification

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 8:42 PM
To: Tracy Ellinger <TEllinger@southsiouxcity.org>
Subject: Initial 911 PSAP Service Disruption Notification



Initial 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

Below is the best available information known about this event at this time. This information may change as Lumen continues it's investigations.

Nebraska

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Lumen will follow up with additional detail concerning the service disruption.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

CONFIDENTIALITY NOTICE: If you are not a designated contact person for outage communications for this facility, you are hereby notified that you are not authorized to read, print, retain, copy, or disseminate this message, any part of it, or any attachments. If you have received this message in error, please delete this message and any attachments from your system without reading the content and notify the sender immediately of the inadvertent transmission. This email may contain confidential or proprietary information and is not to be forwarded outside your organization without the express written consent of Lumen.

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From: Tracy Ellinger <TEllinger@southsiouxcity.org>
Sent: Thursday, November 16, 2023 1:46 PM
To: Synhorst, Jacki
Subject: FW: Follow Up 911 PSAP Service Disruption Notification

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Thursday, August 31, 2023 9:37 PM
To: Tracy Ellinger <TEllinger@southsiouxcity.org>
Subject: Follow Up 911 PSAP Service Disruption Notification



Follow Up 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME. THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Under Investigation
Time of Repair	Unknown Time
Action Taken to Minimize 911 Impact	Lumen technicians from all groups are currently working to resolve the issue affecting 911 calls for the state of Nebraska. No ETR at this time. Updates to follow as new information is provided

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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Dietrich, Sallie

From: Tracy Ellinger <TEllinger@southsiouxcity.org>
Sent: Thursday, November 16, 2023 1:47 PM
To: Synhorst, Jacki
Subject: FW: Final 911 PSAP Service Disruption Notification

From: 911 Outage Report <911.outage.report@lumen.com>
Sent: Friday, September 1, 2023 8:28 AM
To: Tracy Ellinger <TEllinger@southsiouxcity.org>
Subject: Final 911 PSAP Service Disruption Notification



Final 911 PSAP Service Disruption Notification

You are receiving this email because you are a designated contact person for outage communications for this facility. There is a network event that is causing a potential 911 PSAP/Central Office/ALI Outage in your area. Lumen is attempting/or has contacted your PSAP via telephone to inform you of this possible 911 outage. Lumen is sending this email notification pursuant to Section 4.9(h) of the Rules of the Federal Communications Commission, 47 C.F.R. § 4.9(h).

BELOW IS THE BEST-AVAILABLE INFORMATION KNOWN ABOUT THIS EVENT AT THIS TIME. THIS INFORMATION MAY CHANGE AS LUMEN CONTINUES IT'S INVESTIGATION.

Cause of 911 Impact	Fiber Cut In The Area
Time of Repair	9/1/2023 5:32:00 AM
Action Taken to Minimize 911 Impact	Technicians have repaired the fiber cut to restore all 9 1 1 services impacted by this event in the state of Nebraska.

You may contact Lumen by calling the number below and referencing Ticket Number

Ticket ID	Ticket Number
PSS Id	54694
WFA Ticket	27521244
OneRemedy Ticket	27521072 27520919

or by replying to this email to get further action taken regarding the outage and to discuss any steps to help mitigate the 911 impact.

Email: 911.Outage.Report@lumen.com

*** For 911 Reroute Requests Call 800-357-0911 ***

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Thayer County Sheriff's Office

DAVID E. LEE, SHERIFF
324 Olive Avenue • Hebron, Nebraska 68370 • Phone (402) 768-6139
Fax # (402) 768-6336



November 8, 2023

Matt Effken
Legal Counsel
Nebraska Public Service Commission

Reference: Investigation into the 911 service outage on Aug. 31, 2023 to Sept. 1, 2023

Dear Matt Effken,

I am sending the input of our PSAP by answering the following questions.

- a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with "None").
Answer: None
- b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with "Not applicable").
Answer: Not applicable
- c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with "None")
Answer: None
- d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with "None").

Answer:

8/31/23 @ 20:37 phone call from Lumen. Automated message from Luman 911 outage all over Nebraska ticket # 54694 phone # for more info 1-800-357-0911 and email address given.
8/31/23 @ 21:38 phone call from Lumen. Automated message saying they don't know how long it will take to fix but it is under investigation ticket # 54694.
Advise email 911.outage.report@lumen.com
8/31/23 @21:55 phone call from Stacey Elliot with Lumen. Asking if we had any questions and may use your facility for calls if needed since our PSAP 911 has always been working.

EXHIBIT

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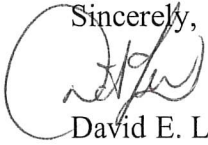
9/1/23 @08:26 phone call from Lumen. Automated message that advised that the 911 outage is fixed. It was fiber that was cut.

- e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage.

Answer: Copies of the calls are attached.

If you have questions, please feel free to reach out. PS# 402-768-6139 or by email kay.eickman@thayercountyne.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Lee", is written over a circular stamp or seal.

David E. Lee
Thayer County Sheriff's Office

Thurston County Dispatch

605 S 2nd St/POB 370

Pender, Ne 68047

402 385 6210

RE: Response to PSC Investigation Letters,
Answers to Questions or Request for Details,

a) None

b) Not Applicable

Our deputy did get messages on both work and personal cell phone so called in to test the lines to make sure we were working.

Fire Departments in area posted to facebook before making contact with our office.

Emergency manager called 911 on land line all worked fine

Several news stations called us and questioned us

c)None

d) None

e) no updates to notifications to provide.

Thurston County Dispatch Supervisor

Laura Novak

605 S 2nd St/POB 370

Pender, Ne 68047

402 385 6210

Email: thurstondsp@gmail.com, thurstoncountyso76@gmail.com, tclec1@thurstoncountysheriffne.gov

From: [Brent Grove](#)
To: [Effken, Matt](#)
Subject: Lumen Outage 8/31-9/1
Date: Thursday, November 16, 2023 7:58:11 AM

You don't often get email from b.grove@washingtoncountyne.gov. [Learn why this is important](#)

Matt,

a) Please describe the impact(s), if any, that the August 31st to September 1st outage had on your PSAP (if no impact, please respond with “None”).

Unable to accept 911 calls,

b) Please describe how you first learned that the August 31st to September 1st outage was impacting your PSAP (if your PSAP was not impacted by the outage, please respond with “Not applicable”).

Douglas County notified Washington County of the outage at approximately 1940 hours on August 31st.

c) Please provide the date and time at which the impact(s), if any, described above first began (or became apparent) with respect to your PSAP and the duration of such impact(s) (if no impact, please respond with “None”).

August 31st at approximately 1940 hours. The duration lasted approximately 9 hours. I was received notification at 0445 hours that Washington County 911 was back in-service.

d) Please describe each of the notifications and/or updates, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outage, including whether such notifications and/or updates were written or oral; (if none, please respond with “None”).

None that I could locate. The operators working during the event do not recall if a notification was made from Lumen to our dispatch center.

e) If available, please provide a copy of each notification and/or update, if any, that your PSAP received from Lumen regarding the August 31st to September 1st outag

Unable to provide a copy if any correspondence from Lumen.

BJ Grove
Communications Director
Washington County Sheriff's Office
444 S 16th St
Blair, Ne 68008
Office 402-426-6977

EXHIBIT
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CONFIDENTIAL

EXHIBIT 50

Withheld pursuant to Protective Order

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public)
Service Commission, on its own motion,)
conducting an investigation into the 911)
service Outages that began on August 31,)
2023 in areas of Nebraska served by)
Lumen and its affiliates.)
)
)
)

Application No. 911-075/PI-248

**WRITTEN DIRECT TESTIMONY OF DREW GROFF, ON BEHALF OF
CENTURYLINK COMMUNICAITONS, LLC, D/B/A LUMEN TECHNOLOGIES
GROUP**

Hearing Date: January 4, 2023

1 Q. **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Drew Groff. My business address is 5325 Zuni Street, Denver, Colorado,
3 80221

4 Q. **PLEASE STATE THE NAME OF YOUR EMPLOYER, YOUR CURRENT
5 TITLE, AND HOW LONG YOU'VE BEEN EMPLOYED.**

6 A. I am currently employed by Lumen Technologies Group as Director of the Network
7 Operations Center (“NOC”), Public Safety & Compliance. I have been employed by
8 Lumen Technologies Group, or its predecessors, for approximately 23 years.

9 Q. **WHAT PARTY ARE YOU PROVIDING TESTIMONY FOR IN THIS MATTER?**

10 A. CenturyLink Communications, LLC d/b/a Lumen Technologies Group, (hereafter in this
11 testimony, “Lumen”)

12 Q. **HAVE YOU HELD ANY PRIOR POSITIONS WITH LUMEN IN YOUR 23
13 YEARS WITH THE COMPANY?**

14 A. Yes. I have previously held positions of Senior Manager Network Operations, Senior
15 Engineer, Supervisor of Network Operations, and Customer Communications
16 Technician.

17 Q. **PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES FOR LUMEN
18 IN YOUR CURRENT ROLE AS DIRECTOR OF NOC, PUBLIC SAFETY &
19 COMPLIANCE.**

1 A. In my current role, I provide strategic leadership, direction, workload, and performance
2 management for the Public Safety Services NOC and Compliance team at Lumen. I am
3 responsible for Service Assurance functions supporting E-911, NG-911, and reporting to
4 state utility commissions and the Federal Communications Commission (“FCC”).

5 Q. **PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

6 A. I hold a Bachelor of Science in Information Technology degree completed in May, 2005.

7 Q. **WHAT IS THE PURPOSE OF PROVIDING YOUR TESTIMONY IN THIS**
8 **PROCEEDING?**

9 A. To assist in the Commission’s investigation of the outage that occurred between August
10 31, 2023 to September 1, 2023.

11 Q. **ARE YOU FAMILIAR WITH THE OUTAGE THAT OCCURRED ON AUGUST**
12 **31, 2023 INTO SEPTEMBER 1, 2023?**

13 A. Yes. I was a participant on Lumen's internal outage bridge starting on August 31, 2023,
14 through the morning of September 1, 2023, to assist with coordinating resources for
15 impact validation, isolation of the cause of the outage, and restoration efforts with my
16 peer network operations teams. I was also a participant in Lumen's post outage root
17 cause analysis investigation regarding this outage.

18 Q. **HAVE YOU REVIEWED LUMEN’S RESPONSES TO THE COMMISSION’S**
19 **FIRST SET OF DATA REQUESTS FOR THIS MATTER?**

20 A. Yes, and I assisted in providing the responses to those data requests.

1 Q. **DOES LUMEN’S RESPONSE TO DATA REQUEST NO. 1 TRULY AND**
2 **ACCURATELY DESCRIBE THE TWO FIBER CUTS THAT OCCURRED**
3 **DURING THE OUTAGE, REFERED TO AS FIBER CUT NO. 1 AND FIBER**
4 **CUT NO. 2?**

5 A. Yes.

6 Q. **SINCE SUBMISSION OF THE RESPONSES TO THE DATA REQUESTS, HAS**
7 **LUMEN DISCOVERED ADDITIONAL INFORMATION ABOUT FIBER CUT**
8 **NO. 1? IF SO, PLEASE INFORM THE COMMISSION.**

9 A. Yes. For Fiber Cut No. 1, which occurred on August 30, 2023 at approximately 1:05 p.m.
10 near railroad tracks at Dodd Road and County Road 50 in Minneapolis, Minnesota, the
11 project owner’s (MetroNet’s) contractor, International, Inc., cut three (3) Lumen fiber
12 cables (96 count, 120 count, and 288 count), despite the fact the fiber had been properly
13 located by Lumen’s contractor, Stake Center. Lumen has submitted a claim for
14 reimbursement due to the contractor’s mistake.

15 Q. **SINCE SUBMISSION OF THE RESPONSES TO THE DATA REQUESTS, HAS**
16 **LUMEN DISCOVERED ADDITIONAL INFORMATION ABOUT FIBER CUT**
17 **NO. 2? IF SO, PLEASE INFORM THE COMMISSION.**

18 A. Yes. For Fiber Cut No. 2, which occurred on September 1, 2023 at approximately 7:05
19 p.m. near 108th and Chandler Streets in Omaha, Nebraska, the project owner’s (Allo
20 Communications, LLC) contractor, Bauer Underground, damaged one (1) Lumen fiber
21 cable (96 count). While Lumen made a locate request to Stake Center, Stake Center’s
22 designated employee assigned to this Lumen ticket responded to the area but failed to

1 locate Lumen’s fiber, as well as locates for other utilities, before Bauer Underground
2 commenced work.

3 **Q. DOES LUMEN HAVE A CONTRACT WITH STAKE CENTER WITH RESPECT**
4 **TO LOCATES?**

5 A. Yes, it does, and Stake Center did not meet required expectations by failing to locate the
6 Omaha ticket.

7 **Q. DID THE RESPECTIVE FIBER CUTS IN MINNEAPOLIS AND OMAHA**
8 **IMPACT THE EXISTING E-911 OR NEW NG-911 NETWORKS?**

9 A. No, the fiber cuts did not impact the existing E-911 or new NG-911 networks. The outage
10 was not related to either the E-911 or NG-911 networks; rather, it was an “ingress” outage,
11 meaning it was on the network that transports the 911 calls from the aggregation point to
12 the Intrado NG-911 core. The outage was caused by two separate fiber cuts in separate
13 states that impacted geographically diverse routes for some, but not all, 911 calls placed in
14 the state of Nebraska to reach the NG-911 network for delivery. This is because the 911
15 network is separate from the signaling network, and its these two networks that complete
16 calls to 911.

17 **Q. ARE YOU FAMILIAR WITH EMERGENCY SERVICES IP NETWORK**
18 **(“ESInet”)AND NG-911 CORE (“CORE”)? IF SO, PLEASE DESCRIBE EACH.**

19 A. The Emergency Services IP Network (ESInet) is an IP-based network that provides the
20 infrastructure for the NG-911 network. It provides the egress connectivity from
21 geographically diverse and redundant NG-911 Emergency Call Management Complexes

1 (“ECMCs”) to the public-safety answering points (“PSAPs”). The NG-911 Core Services
2 refer to the infrastructure that provides the routing of emergency calls and data to the
3 appropriate PSAPs. The NG-911 Core is based on the National Emergency Number
4 Association (“NENA”) i3 architecture which defines the model, functions, interfaces and
5 required services for NG-911.

6 **Q. PLEASE TELL THE COMMISSION THE CURRENT STATUS OF ESInet and**
7 **CORE IN NEBRASKA.**

8 A. As of the date of the outage, August 31, 2023, thirty-eight (38) of the sixty-eight (68)
9 PSAPs in Nebraska had migrated from E-911 to the NG-911 network. As of December 12,
10 2023, fifty-five (55) of the sixty-eight (68) had migrated to the NG-911 network. A copy
11 of the PSAPs that have migrated to NG-911 as of this date is attached hereto to my
12 testimony as **Exhibit A**.

13 **Q. HOW DID THE TRANSITION FROM E-911 TO NG-911 CONTRIBUTE TO THE**
14 **OUTAGE, IF AT ALL?**

15 A. The outage did not impact the existing E-911 or new NG-911 networks, and therefore, the
16 transition did not contribute to the outage; rather, it was the two separate fiber cuts in two
17 separate states that caused the outage in question.

18 **Q. ARE YOU FAMILIAR WITH THE “SS7” NETWORK, AND IF SO, PLEASE**
19 **DESCRIBE WHAT IT DOES?**

20 A. Signaling System 7 (SS7) are a set of protocols used in the public switched telephone
21 network to define how network elements communicate. This includes call routing outside

1 of a switch to another switch, area, or voice provider/destination, including 911 calls when
2 dependent upon SS7 signaling technology.

3 **Q. WHAT ROLE, IF ANY, DID THE SS7 NETWORK PLAY IN THE AUGUST 31,**
4 **2023 OUTAGE AT ISSUE IN THIS INVESTIGATION?**

5 A. Voice callers in the Grand Island, Nebraska area may not have been able to reach the Grand
6 Island switch due to SS7 being impacted, preventing calls routing out of their local switch.
7 Grand Island is an aggregation point to deliver Lumen 911 Voice traffic to the NG-911
8 network. This SS7 impact did not cause the impact to be significantly larger, as 911 traffic
9 leaving the Grand Island switch to reach the NG-911 network was also impacted by the
10 two separate fiber cuts. The only exception was approximately 600 voice customers in
11 Broken Bow which, at the time of the outage, were SS7 isolated and still routing 911 calls
12 to Custer County via the legacy E-911 network. I would note again that the August 31 –
13 September 1, 2023 outage was not related to either the E-911 or NG-911 networks; rather,
14 it was an “ingress” outage, meaning it was on the network that transports the 911 calls from
15 the aggregation point to the Intrado NG911 core. Because of the outage, impacted calls
16 never reached the NG911 network. The outage also impacted the SS7 links that connected
17 to the GDISNENW aggregation point, preventing some OSPs’ 911 calls from completing
18 from that aggregation point. Calls not carried by Lumen’s transport network to the Intrado
19 NG911 core, or service providers that utilized their own SS7 connectivity to the
20 GDISNENW aggregation point, were still able to reach both E-911 and NG-911 PSAPs.
21 In other words, the PSAPs themselves were not affected, and any calls that reached the
22 NG-911 network were delivered to the appropriate PSAP.

1 Q. **DID REDUNDANCY OF THE SS7 NETWORK CONTRIBUTE TO THE**
2 **OUTAGE?**

3 A. The SS7 outage did not significantly expand the scope of the 911 call delivery impact for
4 this outage as the majority of Lumen voice customers that were SS7 isolated would also
5 not have been able to reach the NG-911 network due to the same fiber cuts impacting the
6 diverse routes. Callers that were SS7 isolated would also not have been able to call non-
7 911 numbers outside of their local area/switch.

8 Q. **CAN MORE REDUNDANCY, ALSO KNOWN AS DIVERSITY, OF THE SS7**
9 **NETWORK BE ADDED OR ACHIEVED?**

10 A. While the SS7 links were geographically diverse, we engaged our planning teams to
11 explore any additional diversity opportunities that could further protect against
12 separate/unrelated outages. Lumen did identify diverse routes on common protected fiber
13 rings that terminated in Omaha that we were able to groom to separate fiber rings and
14 network paths. This work was completed on September 8, 2023, which has increased
15 diversity since the outage. While this does not eliminate the possibility of multiple
16 unrelated outages causing future impact, it further improved end to end diversity and
17 removed one common diverse fiber ring that would compromise both paths due to two
18 separate outages in the future. The SS7 link paths are diverse to separate geographically
19 redundant Signal Transfer Points (STPs) in Minneapolis and St. Paul, Minnesota. We have
20 one SS7 link to each STP which are now diverse, as described.

21 Q. **DURING THE OUTAGE PERIOD, DID LUMEN NOTIFY IMPACTED PSAPs?**

22 A. Yes.

1 Q. **WERE NOTIFICATIONS TO THE PSAPs COMPLETED IN A UNIFORM**
2 **MANNER?**

3 A. PSAP notifications were generated upon discovery of impact and may not have been sent
4 to or received by impacted PSAP at the same time based on information available and
5 isolation of impact determinations.

6 Q. **BASED ON YOUR KNOWLEDGE AND EXPERIENCE, ARE YOU**
7 **GENERALLY FAMILIAR WITH FCC REQUIREMENTS GOVERNING**
8 **NOTIFICATIONS TO PSAPs?**

9 A. Yes.

10 Q. **DID THE NOTIFICATIONS TO THE IMPACTED PSAPs MEET FCC**
11 **REQUIREMENTS?**

12 A. Yes. The FCC requirements for ingress voice outages are to notify the designated point of
13 contact for each PSAP as soon as possible from the point of discovery. As the complete
14 scope of impact was still being determined, notifications were initiated to all PSAPs in the
15 state of Nebraska beginning at 20:37 CST on August 31, 2023. Upon review of the PSAP
16 notifications sent on August 31, 2023, it was determined that Boone County Sheriff was
17 inadvertently left off of the original statewide notification and a report was filed at 13:47
18 CST on September 6, 2023.

19 Q. **HOW MANY PATHS OF REDUNDANCY ARE THERE FOR NG-911 AND THE**
20 **LEGACY (E-911) NETWORK?**

1 A. At minimum, there are two (2) paths from the NG-911 Core or Selective Router (Legacy
2 911 to the last service office) with additional layers of redundancy at different locations in
3 the network from the NG-911 Core to each PSAP. For example, components in each
4 Longmont/Miami core have redundancy within each core (4 total) and most of the NG-911
5 network rides protected fiber rings that provide additional protection to the 2 redundant
6 paths.

7 **Q. DOES LUMEN HAVE PLANS TO ADD REDUNDANCY TO EITHER NG-911**
8 **OR LEGACY (E-911) NETWORK?**

9 A. While the August 31 to September 1, 2023 Outage did not impact the E-911 or the NG-
10 911 network, there was an impact to the ingress voice network. Therefore, Lumen has
11 reviewed the ingress voice path to reach the NG-911 network from the existing aggregation
12 switches in the State of Nebraska for any opportunities to further improve diversity.
13 Lumen identified that the Grand Island aggregation switch had opportunities to further
14 improve diversity of the redundant paths by eliminating certain sections of the path from
15 being on common protected fiber rings. There are pending groom orders that move one of
16 the diverse routes away from riding the same common protected fiber rings that Lumen is
17 trying to get completed by the end of December which may extend into 2024. While this
18 route change would not have prevented the outage on August 31, 2023, it does provide the
19 greatest diversity available on this route and could prevent future dual outage situations out
20 of the Grand Island ingress voice network. While Lumen has taken steps to further improve
21 diversity, it is still possible that diverse routes could be impacted at the same time by
22 unrelated, unanticipated impacts in the future.

1 Q. **HAVE OTHER CARRIERS OFFERED LUMEN ADDITIONAL REDUNDANCY**
2 **FOR THE E-911 OR NG-911 NETWORKS?**

3 A. To my knowledge, other carriers have not offered anything to Lumen for extra
4 redundancy.

5 Q. **DOES LUMEN BELIEVE THERE IS A NEED FOR EXTRA REDUNDANCY?**

6 A. The 49 Voice OSP in the state of Nebraska can connect directly to 2 geographically
7 diverse Points Of Interface (POI) for 3 out of 4 Local Access and Transport Area
8 (LATA). The exception is the 958 LATA which has a single POI location in Lincoln,
9 Nebraska, but has confirmed diverse network paths to each Legacy Network Gateway
10 (LNG) in Highlands Ranch, Colorado, and Chicago, Illinois, that deliver traffic to the
11 NG-911 network. These options provide additional diversity for voice OSP in the state
12 on the ingress to reach the NG-911 network as compared to a single aggregation switch
13 in a LATA.

14 Q. **HAS LUMEN EXPLORED THE POSSIBILITY OF OBTAINING ADDITIONAL**
15 **REDUNDANCY FROM OTHER CARRIERS?**

16 A. For the ingress voice network, Lumen will normally utilize its own networks as it has
17 direct ability to monitor the networks as well as knowledge of the exact routes to ensure
18 we can maximize geographic and physical diversity. Lumen has reviewed opportunities
19 to further improve end to end diversity on Lumen's voice ingress network with Lumen's
20 Planning organization and will consider opportunities to utilize a third-party carrier. On
21 the NG-911 network, we do utilize other carriers where applicable to maximize last mile
22 diversity. This is most commonly due to limited physical diversity to the majority of

1 Host PSAP utilizing only Lumen facilities. In any event, supplier diversity would not
2 have alleviated the issue here, which was caused by two fiber cuts in two different states,
3 which were unfortunate occurrences that network diversity is not designed to protect
4 against.

5 **Q. WERE OTHER COMMUNICATION SERVICES AFFECTED DURING THE**
6 **OUTAGE PERIOD?**

7 **A.** The impacted signaling links were not dedicated to 911 services, and as a result, any
8 service supported by these signaling links were equally impacted.

9 **Q. DOES THIS CONCLUDE YOUR WRITTEN DIRECT TESTIMONY?**

10 **A.** Yes, it does. I would like to thank the Commission for considering this testimony.

EXHIBIT A

PSAP Name	Solution Deployed 8/31/23	Solution Deployed as of 12/12/23
Antelope County	E911	NG911
Boone County	E911	E911
Boyd-Holt	E911	NG911
Brown County	E911	NG911
Buffalo County	NG911	NG911
Burt County	NG911	NG911
Butler County	E911	E911
Cass County	E911	E911
Cedar County	NG911	NG911
Chase County	NG911	NG911
Cherry County	E911	NG911
Cheyenne County	NG911	NG911
City of Alliance	NG911	NG911
City of Beatrice	NG911	NG911
City of Columbus	E911	E911
City of Falls City	E911	NG911
City of Grand Island	E911	E911
City of Hastings	E911	NG911
City of Holdrege	NG911	NG911
City of Lincoln	E911	E911
City of McCook	NG911	NG911
City of Norfolk	NG911	NG911
City of North Platte	NG911	NG911
City of S Sioux City	NG911	NG911
City of Wayne	NG911	NG911
Clay County	E911	NG911
Colfax County	NG911	NG911
Cuming County	NG911	NG911
Custer County	E911	E911
Dawes County	NG911	NG911
Dawson County	NG911	NG911
Dixon County	NG911	NG911
Dodge County	NG911	NG911
Douglas County	NG911	NG911
Dundy County	NG911	NG911
Fillmore County	E911	NG911
Franklin County	NG911	NG911

EXHIBIT A

Frontier County	NG911	NG911
Furnas County	NG911	NG911
Garden County	NG911	NG911
Hamilton County	E911	E911
Hitchcock County	NG911	NG911
Howard County	NG911	NG911
Jefferson County	E911	NG911
Johnson County	E911	NG911
Kearney County	NG911	NG911
Keith County	NG911	NG911
Kimball County	NG911	NG911
Knox County	NG911	NG911
Mid Rivers 911	E911	E911
Morrill County	NG911	NG911
Nemaha County	E911	E911
Nuckolls County	E911	NG911
Otoe County	NG911	NG911
Perkins County	NG911	NG911
Pierce County	NG911	NG911
Region 26	E911	E911
Rock County	E911	NG911
Saline County	E911	NG911
Sarpy County	NG911	NG911
Saunders County	E911	E911
Scotts Bluff County	NG911	NG911
Seward County	E911	NG911
Sheridan County	E911	NG911
Thayer County	E911	NG911
Thurston County	E911	E911
Washington County	NG911	NG911
York County	E911	NG911

CONFIDENTIAL

EXHIBIT 52

Withheld pursuant to Protective Order