



## **METROPOLITAN EMERGENCY SERVICES BOARD 9-1-1 TECHNICAL OPERATIONS COMMITTEE AGENDA**

August 17, 2023, 10:00 a.m.

1. **Call to Order & Introductions** – Susan Bowler, 2023 Committee Chair
  - A. Introducing Jacob Kallenbach, new MESB Senior Administrative Assistant
2. **Approval of Agenda** – Bowler
3. **Approval of Minutes** – June 15, 2023 Meeting – Bowler
4. **Action Items**
  - A. None
5. **Discussion Items**
  - A. 911 Authority conferenced in: MESB commissioned study: identify current operating costs for PSAPs in the 10-county region – 911 Authority
  - B. FY 24 One-Time Budget funding, what is eligible – Kent Wilkening/ECN
  - C. ESInet Abandonment and Alternate Routing Review – Matthew Hoffer/Lumen
  - D. Certification of Telecommunicators legislative initiative – Darlene Pankonie
  - E. Increase in Misdials to 9-1-1 – Darlene Pankonie
  - F. Update on PST Certification Language – Darlene Pankonie
  - G. Blue Peak Consulting Resiliency Training/WG Update – Heidi Meyer
  - H. Verizon Misroutes – Tony Martin
  - I. Mental Health Call Processing Standard – Tony Martin
  - J. PSAP Salary Survey – Heidi Meyer
6. **Reports**
  - A. PSAP Operations Roundtable Workgroup – Meyer
  - B. SECB NG9-1-1 Committee Report – Janelle Harris/Brent Anderson
  - C. 9-1-1 Network Report (attached) – Jacobson
  - D. 9-1-1 Data Report (attached) – Jacobson for Marcia Broman
  - E. MN Sheriff's Assoc. PSAP Subcommittee Report – Bowler
  - F. IPAWS Report – Kari Morrissey
  - G. SECB NG9-1-1 Technical Operations Workgroup – Scott Petersen
  - H. SECB NG9-1-1 Operations Workgroup – Morrissey
  - I. Update: CAD-to-CAD RFP – Jacobson
7. **New Business** – None
8. **Announcements**
  - A. Next Meeting: Thursday, September 21, 2023, 10:00 a.m.
9. **Adjourn** – Bowler

**Metropolitan Emergency Services Board  
9-1-1 Technical Operations Committee  
Meeting Minutes  
June 15, 2023**

**Committee Members Attendance**

Airport - Sara Boucher-Jackson  
Allina EMS - Absent  
Anoka County - Val Sprynczynatyk  
Bloomington - LaVae Robinson  
Carver County - Susan Bowler  
Chisago County – Mike Parker  
Dakota County – Heidi Hieserich  
Eden Prairie – Lisa Vik  
Edina – Janelle Harris  
Hennepin County -Tony Martin  
Hennepin EMS - Dan Klawitter  
Isanti County - **absent**

Metro Transit – Cari Sampson  
Minneapolis - Joni Hodne  
North Memorial - absent  
Ramsey County - Jonathan Rasch, Nancie Pass  
Ridgeview EMS - absent  
Scott County - Carrie Bauer  
Sherburne County - absent  
St. Louis Park - Eric Lammle  
U of M – Robin Carter  
Washington County - Darlene Pankonie

**Guests:**

Matthew Hoffer, *Lumen*; Lauren Petersen, *MSP Airport ECC*; Dave Taylor *IES*; Rick Bucholz *IES*; Hedi Meyer *Anoka*; Frank Jarman, *Motorola*

**MESB Staff:** Marcia Broman; Jill Rohret; Tracey Frederick; Richard “Jake” Jacobson

1. **Call to Order & Introductions** – Susan Bowler, 2023 Committee Chair  
**Meeting started at 10AM**
2. **Approval of Agenda** – Bowler  
**Agenda approved.**
3. **Approval of Minutes** – May 18, 2023, Meeting – Bowler  
**Minutes approved, no changes.**
4. **Action Items**
  - A. Approval of Regional Funding Priorities – Tracey Fredrick/Jake Jacobson  
**Members provided priority list for Tracey to begin funding process request:**
    - **Regional CAD Interoperability**
    - **Regional GIS support**
    - **Staff Recruitment/Retention**
    - **Regional Communications Interoperability Planning**
    - **Mutual PSAP Backup Center**
    - **Resiliency Training**
    - **Regional Logging**
    - **Indoor Mapping**

- **Mental Health Training (from MCIT)**

B. Approval of Amendments to PST Training Curriculum – Heidi Meyer  
**Approved by MESB Members**

**5. Discussion Items**

A. Increase in Misdiagnoses to 9-1-1 – Darlene Pankonie - **PSAPs to collect data on these incidents.**

B. Verizon Misroutes – Tony Martin – **Escalating to FCC**

C. Update on PST Certification Language – Pankonie --**Progress continues.**

D. Blue Peak Consulting Resiliency Training/WG Update – Meyer – **Champions Day 6/27**

E. Mental Health Call Processing Standard – Martin -- **In progress**

F. PSAP Salary Survey – Meyer --**Progress continues with PSAPs inputting data into Basecamp.**

**6. Reports**

A. PSAP Operations Roundtable Workgroup – Meyer

B. SECB NG9-1-1 Committee Report – Janelle Harris/Brent Anderson

C. 9-1-1 Network Report (attached) – Jacobson

D. 9-1-1 Data Report (attached) – Marcia Broman

E. MN Sheriff's Assoc. PSAP Subcommittee Report – Bowler

F. IPAWS Report – Kari Morrissey Nothing **to report.**

G. SECB NG9-1-1 Technical Operations Workgroup – Scott Petersen **Not Available**

H. SECB NG9-1-1 Operations Workgroup – Morrissey

I. Update: CAD-to-CAD RFP – Jacobson in **progress**

**7. New Business – None**

**8. Announcements**

A. Next Meeting: Thursday, July 20, 2023, 10:00 a.m.

**Later Moved to August 17, 2023, 10AM**

**9. Adjourn – Bowler**

**12:10 PM adjournment**



## **METROPOLITAN EMERGENCY SERVICES BOARD**

**Meeting Date:** August 17, 2023  
**Agenda Item:** 5A. Discussion – MESB Commissioned Study  
Identifying Current Operating Costs for MESB PSAPs  
**Presenter:** 911 Authority

### **MESB EMERGENCY COMMUNICATIONS OPERATIONAL COST STUDY 2023** **Goals, Objectives, and Timeline**

#### **Purpose**

The purpose of this study is to identify the current operating costs for emergency communications in the 10-county region related to staffing, training, facilities, equipment, software, services, and other costs necessary to support emergency communications in the region, including 9-1-1, ARMER, IPAWS, and wireless broadband. The study will also identify common costs across agencies, applications, equipment, and services. Including the secondary PSAPs

#### **Scope**

Currently in discovery and not exhaustive, the study will quantify the following cost elements:

- Personnel costs
- Training costs
- Facility costs
- Office equipment
- Software/applications
- CHE maintenance agreements
- Computer-aided dispatch (CAD) costs and maintenance
- GIS data provisioning and maintenance, including software and maintenance costs
- IPAWS software and maintenance
- Community alert notification software and maintenance
- Mobile data computers (MDCs), wireless service contracts, software, and maintenance
- PSAP connectivity to the state 9-1-1 network
- State 9-1-1 network contract costs in the Metro region
- State ARMER maintenance costs in the Metro region
- State ARMER rent and utility costs in the Metro region
- ARMER maintenance agreements for infrastructure and subscriber radios
- ARMER tower lease and utility costs
- ARMER radio programming and maintenance costs
- ARMER radio battery replacements and charger costs

#### **Stakeholders**

Feedback must be discussed and provided at the March 2023 9-1-1 TOC meeting, as the April meeting takes place after the April NG9-1-1 Committee meeting.

- PSAPs in the 10-county region
- ARMER system administrators/managers
- MESB staff
- Local government officials
- Emergency responders

### **Data Collection**

The data for this study will be collected through a survey of PSAPs, ARMER system administrators, and others in the 10-county region. The survey will ask for information on the following:

- Current operating costs
- Common costs across agencies, applications, equipment, and services
- Recommendations for reducing costs

### **Data Analysis**

The data collected from the survey will be analyzed to identify trends and patterns in the operational costs related to emergency communications in the metro region. The analysis will also be used to identify common patterns across agencies, applications, equipment, and services.

### **Timeline**

The study will be completed in four phases:

- Phase 1: Develop survey (August 2023)
- Phase 2: Pilot/beta survey and start data collection (September 2023)
- Phase 3: Close data collections, begin analysis, and draft report (November/December 2023)
- Phase 4: Final report (January 2024)



## **METROPOLITAN EMERGENCY SERVICES BOARD**

**Meeting Date:** August 17, 2023  
**Agenda Item:** 5C. Discussion – Abandonment and Alternate Voice Routing  
**Presenter:** Matthew Hoffer

### **Abandonment and Alternate Voice Routing Rule – in place today with ESInet**

*Abandonment Routing:* requiring a PSAP decision to implement, typically involves all 9-1-1 voice traffic either sent to another PSAP or its own administrative lines.

*Alternate Routing:* when a 9-1-1 call has entered the ESInet network and for whatever reason is unable to successfully connect to the intended PSAP, it follows a programmed, PSAP-determined rule to have it directed somewhere else such as another PSAP, administrative line, or to a fast busy signal.

### **Abandonment Routing**

#### **Two major scenarios of use:**

1. When a PSAP abandons its operations with possible evacuation. PSAPs are directing their 9-1-1 traffic to another PSAP.
2. When a PSAP has planned or emergency maintenance with the 9-1-1 side of their CHE in which the HW/SW update is made relatively soon enough that the calls can be directed to the administrative lines with PSAP PSTs remaining in place to answer.

PSAPs can have up to 10 entries “pre-built” with Lumen on where to abandon its 9-1-1 traffic, but it’s reasonable to list fewer. The entry in the first position is the “active position”. Using other entries will require a request or change to Lumen, which you can schedule or contact the NOC when needing to abandon.

For consideration. Have at least three options: one to another PSAP; one to one’s own administrative lines; and one to another PSAP outside your shared system if in a share system.

“Pre-built”: Lumen has created and stored the abandonment instruction, which can be moved into production relatively quickly. If not pre-built, there will be significant time in getting the needed script created before it can be executed.

It is possible to have multiple PSAPs abandoned simultaneously to the same PSAP. Aside from staffing concerns in such a scenario, there may be a maximum number of “appearances” (i.e., Call capacity) that the call handling equipment can handle.

#### **Two options for executing abandonment:**

1. Call the Lumen NOC 800-357-0911 (PSAPs to use opt 1) and request abandonment.

- It's possible to schedule an abandonment but still call 10 minutes before the appointment so you ensure it's properly executed. (FCC metric: abandonment within 30 minutes of request).
2. Turn the switch of your PSAP Abandonment Device (PAD), abandonment near instantaneously.
    - Only applies to stand-alone systems, not shared systems.
    - If using, notify the NOC afterward that you activated the PAD to intentionally abandon.

Note: As you're connected to an IP network, abandonment is linked to your (URI", Uniform Resource Identifier, that works similar to typing a web address. (e.g., [www.amazon.com](http://www.amazon.com) or [www.mn-mesb.org](http://www.mn-mesb.org)) Example: Sherburne URI = SHBNMNS03 (Sherburne, MN, Sheriff's Office, version 3)

Each PSAP has one unique URI, although Dakota has three (zones 1, 2, and 3), and Hennepin has three (East, North, South). These are the exceptions. Technically Dakota or Hennepin can abandon parts of their traffic to three separate PSAPs. (Note: separation into zones and regions wasn't intentional for abandonment decisions but involved other factors)

### **What will be different in the next round NG911- Policy Routing Capability**

Policy Routing Capability takes advantage of GIS-based location data where it will be possible to draw polygons on a map with calls within the designated area directed to a designated PSAP.

### **Alternate Routing**

Resembles the concept of "traffic busy" in the old phone systems, but now encompasses several possibilities as you're on an IP network where a variety of SIP error codes can be mapped to trigger alternate routing. SIP error codes are like the dreaded 404 error code you may encounter when you can't access a website or webpage.

There are three common types of alternate routing that PSAPs should consider:

1. To an admin line – to consider when there's an equipment malfunction or that other personnel are available should all PSAP TSPs be busy and not picking up the call.
2. To fast busy – to consider when the PSAP can be overwhelmed with calls and will have no personnel available to field the prodigious number of calls. Think of civil unrest.
3. To another PSAP – usually a rule with smaller PSAPs, in which a PSAP is overwhelmed with calls on a peak occasion, can have the adjacent PSAP.

It is possible to have up to 10 pre-built alternate routing entries but typically one or two is sufficient for covering common scenarios. Recommended for MESB PSAPs to have one for admin lines and one for fast busy.

### **Alternate Routing**

<b>PSAP</b>	<b>#1 Alternate. Dest.</b>	<b>#2 Alter. Dest.</b>
Airport	Admin Lines	
Allina	Admin lines	RCECC
Anoka	Admin lines	
Bloomington	Admin lines	
Carver	Admin Line	
Chisago	Admin Line	
Dakota	Admin Line	
Eden Prairie	Admin Line	
Edina	Fast Busy	
Ft. Snelling	Admin Line	
HCMS	Admin Line	
Hennepin East	Fast Busy	
Hennepin North	Fast Busy	
Hennepin South	Fast Busy	
Isanti	Fast Busy	
MECC	Fast Busy	
Metro Transit	Admin Line	
MHealth	U of M	
North Memorial	Admin Line	
Ramsey	Admin Line	
Ridgeview	Admin Line	
Scott	Admin Line	
Sherburne	Admin Line	
St. Louis Park	Admin Line	
State Patrol Metro East	Fast Busy	Admin Lines
State Patrol Metro West	Fast Busy	Admin Lines
University of Minnesota	MECC	



## **Abandonment Routing**

<b>PSAP</b>	<b>#1 Abandon . Dest.</b>	<b>#2 Abandon. Dest.</b>	<b>#3 Abandon. Dest.</b>	<b># 4 Abandon. Dest.</b>	<b># 5</b>	<b># 6</b>	<b># 7</b>	<b># 8</b>
Airport	Edina	Hennepin South	Admin Lines	RCECC				
Allina	Admin lines	Admin lines	RCECC					
Anoka	Dakota Zone 3	Admin lines	Different Anlia Admin lines	Hennepin South	RCECC			
Bloomington	Dakota Zone 1	Hennepin South	Admin Lines	RCECC				
Carver	Ridgeview	Scott	Admin Lines	Hennepin South	RCECC			
Chisago	Isanti	Admin Lines	Hennepin South	RCECC				
Dakota	Ramsey "Backup"	RCECC	Hennepin South					
Eden Prairie	Edina	Admin Lines	Hennepin South	RCECC				
Edina	St. Louis Park	Eden Prairie	Hennepin South	Bloomington	Airport	Admin Lines	Edina Backup(?)	RCECC
Ft. Snelling	Airport	Admin Lines						
HCMS	Admin Line	North Memorial	Admin Lines					
Hennepin East	Admin Line	MECC	Admin Lines	Hennepin South				
Hennepin North	Admin Lines	Hennepin East	Admin Lines	Hennepin South	RCECC			
Hennepin South	Admin Lines	MECC	Admin lines	Admin lines	Hennepin South	RCECC		
If Admin lines listed more than once, different set of Admin Lines; not listing the phone numbers in this document								
Isanti	Chisago	Admin Lines	Hennepin South	RCECC				
MECC	Hennepin South	Admin lines	Hennepin North	Hennepin East	Admin Lines	RCECC	UofM	
Metro Transit	Admin Line	Hennepin South	RCECC					
MHealth	Washington County							
North Memorial	Admin Line	HCMS						

Ramsey	Dakota Zone 3	RCECC Backup	Admin Lines					
Ridgeview	Admin line	Carver						
Scott	Carver	Admin Lines	Hennepin South	RCECC				
Sherburne	Wright	Admin Lines	Hennepin South	RCECC				
St. Louis Park	Edina	Admin Lines	Hennepin South	RCECC				
State Patrol Metro East	State Patrol Rochester	Admin Lines						
State Patrol Metro West	State Patrol Rochester	Admin Lines						
University of Minnesota	MECC	Admin Lines	Hennepin South	RCECC				

At minimum, each PSAP should have one PSAP and one Admin line option.

Those pointing to RCECC should point to RCECC's backup URI.

Focus here is abandonment on the network side. There are options on the CHE side to consider such as geo-diverse configurations.

PSAP Abandonment Devices (PADs) are a good thing to have for PSAPs not in shared systems.

If in a shared system, consider an abandonment option for a PSAP outside of the shared system.

**Metropolitan Emergency Services Board  
9-1-1 Technical Operations Committee  
9-1-1 Network Report  
August 17, 2023, Meeting**

**1. Announcement RE: Lumen Senior Operations Service Manager**

**2. From Lumen/Matthew Hoffer's weekly recaps since last TOC meeting in June:**

- Jul 13th- Transient ping failure on the ESInet connection for Eden Prairie PD Co at 14:17. No errors detected since that time.
- Jul 20th- The CUG A circuit for Dakota Co went down at 15:45. Believed related to what appears to be a fiber cut on twin OC-48s past the handoff point between CenturyLink and Frontier in Eagan. It appears the admin lines are also impacting at Dakota, as we received a report from Mike Mihelich and Vic Barnet, they are receiving admin calls at Ramsey ECC. We are continuing to monitor progress reports from Frontier. 9-1-1 calls are still reaching the PSAP.
- Jul 28th- The CUG B (Lumen) circuit for Ridgeview Medical has been down since 08:30. Trouble isolation continues currently. The design of the CHS-2 network allows them to maintain diversity with 3 operational connections shared with Carver Co.
- Aug 2nd- The CUG A circuit for Dakota Co was down between 00:10-01:40. Trouble cleared before isolation but was narrowed to some point in the Frontier local network.

**3. Developing: TDOS or TDOS-like attacks with administrative lines.**

- Involves administrative lines, not 9-1-1 calls on the ESINet.
- Receiving chronic calls with no ID – “Anonymous” – difficult to trace.
- At the least, alert your phone provider, Jake, and the state's Fusion Center  
[BCA.Investigations.MNFusionCenter@state.mn.us](mailto:BCA.Investigations.MNFusionCenter@state.mn.us)    [Home / Minnesota Fusion Center \(mn.gov\)](https://www.mn.gov/Minneapolis-Fusion-Center)

**4. Developing: Addressing challenges of emergency calling with MS Teams**

- Spans data, network and legislative as national cloud-based system issues and compliance requirements don't fit neatly into existing categories and practices.

**5. LBR for all three wireless carriers is now in place for the MESB area, replacing cell-sector based routing.**

- Third and final wireless carrier VZW migrating to LBR August 1.
- Immediate results witnessed by PSAPs, accurate location and reduction of transfers.

**6. CHE work in metro area:**

- 7/26 CHS-1 Server updates
- 8/9 Carver/Ridgeview firewall updates
- 8/23 Dakota Migration to SaaS
- 8/30 State Patrol migration to geo-diverse environment (combining Roseville and Rochester sites into one location).

**7. Ingress Traffic Migration to Sinch Status**

- From Sandi Stroud ECN, % of providers migrated:
  - 100% of Wireless
  - 47% of VoIP
  - 56% of wireline
- Note:
  - These are % for the state, may be different in MESB area for VoIP and wireline
  - % is on the # of providers, not number of subscribers
  - Lumen wireline yet to migrate

**Metropolitan Emergency Services Board  
9-1-1 Technical Operations Committee  
9-1-1 Data Report  
August 17, 2023, Meeting**

1. **Importance of GIS for 9-1-1:** PSAP managers are strongly encouraged to assist their GIS counterparts in communicating to key decisionmakers and county leadership what a **vital role GIS has to their current and future PSAP operations**. Geospatial datasets provide foundational data for PSAP CAD/mapping systems and future NG9-1-1 core services, as well as support many other non-public safety uses that are important to cities and counties.
2. **Regional Data QA/QC:** MESB continues to **analyze the region's errors** identified through MESB's internal NG9-1-1 validation tools, GeoComm's Data Hub (GDH), and 1Spatial's platform. These reviews result in outreach to county GIS contacts for recommended data remediations or in some cases the need for MESB to process MSAG and/or ALI updates. The most recent full regional NG911 data validation run through GDH was conducted on 7/20/23.
3. **Integration with State NG911 GIS Activities:** MESB continues to work with MnGeo on remaining issues related to running the metro regional datasets through ECN's **1Spatial NG9-1-1 validations** and submitting the regional data to the **statewide enterprise database**.
4. **Metro Regional GIS-derived MSAG transition:**
  - a. MESB has started a process of refreshing PSAP GIS-derived MSAGs to use what has been found to be the most efficient creation style, i.e., one MSAG entry for each side of each road centerline.
  - b. **Complete:** Chisago County, Dakota County (incl. refresh), Anoka County, Eden Prairie, St Louis Park, Edina, Bloomington, Ramsey County (incl. refresh), Isanti County, Hennepin Sheriff, MAC Airport, Fort Snelling, Scott County, Sherburne County, Washington County; Carver County
  - c. **In preparation stage at MESB:** Minneapolis/U of MN
5. **RapidDeploy RadiusPlus mapping system:** Any metro PSAP with deployment questions can contact Jake Jacobson, [riacobson@mn-mesb.org](mailto:riacobson@mn-mesb.org). Wendy Chretien (ECN) and Kelsey Jindra (RapidDeploy) are also coordinating **project deployment and "go live"** with MESB and Greater MN PSAPs (e.g., equipment installation, network connectivity, training, and operational use planning). RapidDeploy is offering multiple training options, including on-site, if PSAPs prefer. Both Anoka and Dakota County PSAPs have had some recent success stories with the tools involved in their Radius implementations.
6. **Verizon Out-of-State Misrouted Calls:**
  - a. On behalf of the region, Tony Martin, Director, Hennepin Sheriff's Office PSAP, **has engaged with the FCC on the issue of Verizon's WiFi misroutes**. Tony shared with the FCC the list MESB prepared of MESB PSAP reported out-of-state misroutes and will keep the 911 TOC updated on what may come from this issue.
  - b. PSAPs are reminded the most expedient method to report issues with wireless calls, such as misroutes, is to **open a ticket with the applicable wireless carrier** (not through Lumen repair or 911NET).
  - c. **Verizon out-of-state misrouted calls (or any other Verizon wireless issues) should be reported to the Comtech NOC 800-959-3749 or [noc@comtech.com](mailto:noc@comtech.com)**. Comtech has stated that call reports "must be within the past 7 days, preferred within 3-5 days for most accurate traces."

7. **Dish Wireless starting to go-live in MESB region:**
  - a. **Dish Wireless has tested and gone live in eleven MESB PSAP serving areas in the metro region.** In recent months, MESB processed cell sector routing for over 2500 Dish Wireless cell sectors in the MESB region. As a result, PSAP-testing and go-live notifications are anticipated to continue in the months ahead. Dish Wireless contacts at Intrado are coordinating PSAP testing through Jake Jacobson at MESB.
  - b. **Key Dish Wireless contact information** includes:
    - i. **24/7 Dish Wireless Trouble Reporting (managed by Intrado):** 800-514-1851
    - ii. **24/7 Dish Wireless NOC:** 833-347-4602 Opt. 1
    - iii. **Dish Wireless Exigent Circumstance Requests:** 877-510-4357 Opt. 1; Fax 703-953-3661
8. **PSAP pANI Range Summary:** MESB is developing summaries of the pANI ranges for each PSAP by provider, including both wireless ESRK and VoIP ESQK numbers. These reference lists may be helpful to PSAP managers in the event of an outage where the pANI of a 911 call is known, but not the callback telephone number. The call's pANI could be looked up in the list to determine which provider's NOC the PSAP manager should open a ticket with to determine the callback phone number. Once complete, the summaries will be distributed to PSAP managers.

## ONGOING ACTIVITIES

9. **Wireless Cell Sector/Routing Data:** MESB processes wireless routing updates for all carriers on behalf of the metro PSAPs. Should PSAPs want the routing for a specific cell sector or 9-1-1 call reviewed, just email [mesbgis@mn-mesb.org](mailto:mesbgis@mn-mesb.org) and MESB staff will investigate.
10. **Regional GIS Data Aggregation:**
  - a. **Road Centerline and Address Points:** The MetroGIS/Met Council processes regional road centerline and address point dataset updates nightly to the MN Geospatial Commons website. Each metro county's most recent centerline and address point data that has been uploaded to the portal and passed validations is included in the regional datasets. The regional road centerline and address point datasets comply with the current MN Geospatial Advisory Council (GAC) data standards.
  - b. **Boundary Polygons:** MESB maintains the regional PSAP, ESZ, MSAG community, law, fire, and EMS boundary polygon layers in coordination with the PSAPs. These datasets are updated as boundaries change or at least quarterly. Mobile Positioning Center, Text Control Center, and VoIP Positioning Center vendors are directed to the MN Geospatial Commons for downloads of metro's PSAP boundary polygons.
11. **Regional Data Viewer:** PSAPs are encouraged to use the 9-1-1 dataviewer developed by MetroGIS/Met Council to view the geospatial data county GIS departments consider valid & current for regional 9-1-1 use. (<https://www.metrogis.org/projects/9-1-1-Data-Viewer.aspx>.)