



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

January 18, 2024 10:00 a.m.

1. **Call to Order & Introductions** – Susan Bowler, 2023 Committee Chair Susan Bowler
2. **Approval of Agenda** – Bowler
3. **Approval of Minutes** – November 16, 2023 Meeting – Bowler
4. **Action Items**
 - A. SECB NG9-1-1 Operations Workgroup Nomination - Bowler
 - B. NIOC Nomination - Bowler
5. **Discussion Items**
 - A. Regional BCA Presentation – Jill Bondhus, ECN
 - B. Presentation: Intrado/VIPER – CHE considerations for i3 compatibility – Lisa Kelly, Intrado
 - C. SECB Grant –Frederick/Jacobson
 - D. Mental Health Awareness Training Grant Allocation - Frederick
 - E. Regional Needs Study – Frederick/Jacobson
 - F. Verizon Misroutes – Tony Martin.
 - G. Mental Health Call Processing Standard – Tony Martin.
6. **Reports**
 - A. PSAP Operations Roundtable Workgroup – Heidi Meyer
 - B. SECB NG9-1-1 Committee Report – Janelle Harris/Brent Anderson
 - C. 9-1-1 GIS and Data Report (attached) – Marcia Broman
 - D. 9-1-1 Network Report (attached) – Jacobson
 - 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
7. **New Business** – None
8. **Announcements**
 - A. Next Meeting: Thursday, February 21, 2024, 10:00 am.
9. **Adjourn** – Bowler

**Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
Meeting Minutes
November 16, 2023**

Committee Members Attendance:

Airport – Sara Boucher-Jackson
Allina EMS - **absent**
Anoka County - Val Sprynczynatyk
Bloomington - **absent**
Carver County – Susan Bowler
Chisago County – **absent**
Dakota County - Brent Anderson
Eden Prairie – **absent**
Edina – **absent**
Hennepin County – Tony Martin
Hennepin EMS – Dan Klawitter
Isanti County – **absent**

M Health EMS – Elias Charif
Metro Transit – Chad Ladda
Minneapolis – Scott Peterson
North Memorial – **absent**
Ramsey County – Jon Rasch
Ridgeview EMS - John Scheuch
Scott County – Scott Haas
Sherburne County - Laura Anderson
St. Louis Park – **absent**
U of M – **absent**
Washington County - Darlene Pankonie

Alternates/Guests:

Laura Barton, *911 Authority*; Shawn Bergstrom, *Minneapolis*; Rick Buchholz, *IES*; Leticia Cardenas, *MECC*; Mark Lallak, *ECN*; Heidi Meyer, *ACECC*; Lauren Petersen, *Airport*; Darin Riney, *911 Authority*; and Dave Taylor, *IES*

MESB Staff: Marcia Broman; Jake Jacobson; Jacob Kallenbach; and Jill Rohret

1. Call to Order – Susan Bowler

Susan Bowler, the 2023 9-1-1 TOC Committee Chair, called the meeting to order at 10:04 a.m.

2. Approval of Agenda – Bowler

Motion made by Darlene Pankonie, seconded by Tony Martin to approve the November 16, 2023 meeting agenda. Motion carried.

3. Approval of Minutes – Bowler

The minutes from the October 2023 meeting need to be adjusted to show Sara Boucher-Jackson, and Susan Bowler as being in attendance.

Motion made by Val Sprynczynatyk, seconded by Darlene Pankonie to approve the October 2023 meeting minutes with the previously mentioned additions to the attendance. Motion carried.

4. Action Items

A. 2024 9-1-1 TOC Chair & Vice Chair Nominations – Bowler

Motion made by Darlene Pankonie, seconded by Val Sprynczynatyk to nominate Susan Bowler as the 2024 9-1-1 TOC Chair. Motion carried.

Motion made by Val Sprynczynatyk, seconded by Jon Rasch to nominate Laura Anderson as the 2024 9-1-1 TOC Vice Chair. Motion carried.

B. 2024 SECB Appointments – Bowler

SECB IPAWS Committee

Motion made by Val Sprynczynatyk, seconded by Darlene Pankonie to appoint Kari Morrissey as the primary, and Scott Haas as the alternate to the SECB IPAWS Committee.

SECB NG9-1-1 Committee

Motion made by Darlene Pankonie, seconded by Jon Rasch to appoint Janelle Harris as primary, and Brent Anderson as alternate to the SECB NG9-1-1 Committee.

SECB NG9-1-1 Technical Operations Workgroup

Motion made by Darlene Pankonie, seconded by Tony Martin to appoint Scott Petersen as the MESB Representative to the SECB NG9-1-1 Technical Operations Workgroup.

SECB NG9-1-1 Operations Workgroup

This motion was not properly processed and will be revisited at the December 2023 9-1-1 TOC meeting.

5. Discussion Items

A. Solacom – CHE considerations for i3 Compatibility

Comtech Greg Dixon who was present with Tony Parrot conferenced in, provided a presentation of Solacom i3 Compatibility.

Presentation walked through the i3 functional elements, where Solacom has been deployed in ESInet environments, and with lessons learned and suggestions for PSAPs to consider.

B. MESB Cost Study – 911 Authority

911 Authority continues to visit member PSAPs to garner additional information necessary to the cost study. If you have any questions, please reach out to them or Jake. They will start compiling their report in early December following the conclusion of site visits and meetings.

Scott Haas mentioned their visit helped him think of costs that he didn't immediately identify. Fixed assets, towers, consultants, recorders, recruitment, and software's are all aspects that go towards the costs of operating PSAPs.

C. Verizon Misroutes – Tony Martin

Tony Martin mentioned there was another meeting with the FCC. Misroutes continue to happen on the occasion across the country. If you receive a misroute, please gather as much information and data as possible so they can assess the issue. If this happens, please reach out and send it to Jake and Marcia. Verizon continues to work towards a solution, with device and carrier possibly playing a part in the problem. Martin will continue to keep tabs on the situation and provide updates.

D. Mental Health Call Processing Standard – Tony Martin

Martin mentioned that the group met again to continue their work on the mental health call processing standard. They continue to process the fact sheets. 988 has provided examples of

events and the processes that go along with it. The group did a case study scenario and worked through the process/terminology. Martin will continue to keep the group updated on their progress.

6. Reports

A. PSAP Operations Roundtable Workgroup – Heidi Meyer

Report attached to the meeting materials.

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

Brent Anderson discussed a couple key points from the November 15 meeting. ECN is pushing out an RFP for mapping solutions and comparing to what is currently in place (Rapid Deploy). The telecommunicator job reclassification bill was just presented, and they are getting that ready to push out in January. A letter garnering support from stakeholders for the telecommunicator bill will be going around, and any information or questions on this subject should be directed to Darlene Pankonie. ECN previewed their new website hub, and it looks like it will be a useful tool. Lastly, please keep submitting your recognitions for PSTs to ECN as they are looking to recognize folks across the states. The committee also approved a GIS representative to join the group.

C. 9-1-1 Data Report – Marcia Broman

Report attached to the meeting materials.

D. 9-1-1 Network Report

Report attached to the meeting materials.

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

No meeting in November. Nothing to report.

F. IPAWS Report – Scott Haas

Haas mentioned that the meeting will occur on November 16. He will have updates ready for the December meeting.

G. SECB NG9-1-1 Technical Operations Workgroup – Scott Petersen

Major discussion areas:

Reviewing the model architecture to meet FBI CJIS System Requirements along with compliance to BCA requirements.

Review of current input so far on the Multi-Line Telephone System (MLTS) documents and reference materials.

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

Nothing to report.

7. New Business – None

8. Announcements

A. Next Meeting: Thursday, December 21, 2023. 10:00 a.m.

B. Ramsey County Open Position

Ramsey County will have an Emergency Communications Manager position opening. This is currently open and will close on December 3, 2023.

C. Remodels and Renovations

Ramsey County will go into a remodel in which they will relocate to their secondary PSAP on January 9, 2024.

Washington County will be going through a remodel in December 2023-January 2024. No relocation outside of their current building is necessary as they are moving to their training room across the hall.

D. Blue Peak Wellness

Blue Peak Wellness kicked off at the airport.

9. Adjourn – Bowler

Chair Bowler called the meeting adjourned at 11:42 a.m.

Draft



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: January 18, 2024
Agenda Item: 4A Recommendation of 2024
MESB Representation to SECB NG911 Operations
Workgroup
Presenter: Bowler

RECOMMENDATION

The 9-1-1 TOC should recommend to the MESB its primary metro region representative to the SECB NG911 Operations Workgroup.

BACKGROUND

All PSAPs have the opportunity to participate in this workgroup. The MESB would like to have a designated representative to provide updates for the 9-1-1 TOC meetings.

ISSUES & CONCERNS

The 2023 representative:

SECB NG911 Operations Workgroup:
Kari Morrissey

Others are welcome to join the workgroup as it is open to all.

FINANCIAL IMPACT

None

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: January 18, 2024
Agenda Item: 4B Recommendation of 2024
MESB Representation to NENA Interop Oversight Commission
Presenter: Bowler

RECOMMENDATION

The 9-1-1 TOC should make recommendations to the MESB for its primary for the NENA Interop Oversight Commission (NIOC).

BACKGROUND

The Metropolitan Emergency Services Board has had a representative on the NENA Interop Oversight Commission. The seat on the NIOC expires next month and an MESB nomination or approval letter is needed to continue membership.

ISSUES & CONCERNS

The 9-1-1 TOC should make a recommendation to the Board for the 2024 primary representative to the NENA Interop Oversight Commission.

The 2023 representative:

NENA Interop Oversight Commission
Darlene Pankonie

Darlene Pankonie wishes to continue in her role on the NENA Interop Oversight Commission. Final approval will come from the MESB Board at its March meeting.

FINANCIAL IMPACT

None

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date:
Agenda Item:

January 18, 2024
5C Discussion: SECB Grant
Presenter: Fredrick/Jacobson

RECOMMENDATION

This is being brought to the Committee to provide direction on best uses for the Statewide Emergency Communications Board (SECB) grant allocation.

BACKGROUND

As part of the biannual SECB grant process, the SECB awarded the MESB region \$75,000 for Resiliency Training. However, only half (\$37,500) is available from January 1-June 30, 2024; the other half (and any unspent from the first half) will be available July 1, 2024-June 30, 2025.

Given the nature of the grant process and dates of allocations, the grant will need to follow the standard RFP process.

ISSUES & CONCERNS

RFP needs to be released before the next 9-1-1 TOC. MESB Staff needs direction from this group for what to include in the RFP. Grant funds need to be fully spent by June 30, 2025.

FINANCIAL IMPACT

None to MESB.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: January 18, 2024
Agenda Item: 5D Discussion: Mental Health Awareness Training Grant Allocation
Presenter: Fredrick

RECOMMENDATION

Discussion only; no action needed. This is being brought to the Committee for awareness purposes only.

BACKGROUND

As part of the allocation of the FY2024 SECB grant, MESB has been awarded \$4,070.00 for Mental Health Awareness Training. This training is to be accomplished through the Minnesota Crisis Intervention Team (MNCIT). course offering

ISSUES & CONCERNS

At present, MNCIT has published this course availability for March, April, and May of 2024. The funding for this course from the SECB grant is not valid until July 1, 2024. If there are any interested parties that wish to attend the March, April, or May offerings, it is possible to move some funding to be used prior to July 1, 2024.

The original offering for the course was also to be \$180 per seat, which would allow for each agency that has a seat on the 911 TOC to send one person. However, the seat cost is now \$200 per seat, meaning only 20 (rather than 22) seats can be filled with grant funding, and a portion of a 21st seat.

FINANCIAL IMPACT

None to MESB. May be costs associated to agencies not having full seat cost covered via grant funding.

MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL



METROPOLITAN EMERGENCY SERVICES BOARD

Meeting Date: January 18, 2024
Agenda Item: 5E Discussion: Update of MESB
Regional Needs Document
Presenter: Fredrick/Jacobson

RECOMMENDATION

Discussion only; no action needed at this time. This will require committee action no later than its April 2024 meeting.

BACKGROUND

In 2023, each region of the Statewide Emergency Communications Board (SECB) was requested to compile a list of Regional Emergency Communications Needs, to seek potential funding from the Minnesota State Legislature. All seven SECB regions submitted a document by May 2023 (see attached: document from MESB for last year). More recently, there was an ask from the SECB Finance Committee for each region to complete this document on an annual basis and submit it by the committee's May meeting. The MESB Regional Needs Document will need to be approved by the Board at its May meeting, with Final Draft for TOC approval no later than its April meeting. The Regional Needs Document update will be required for both 9-1-1 and Radio TOCs.

ISSUES & CONCERNS

Input will be sought over in next month's meetings. Due to time constraints in 2023, last year's MESB Regional Needs document was taken heavily from the Funding Priorities document. It is recommended for TOC membership to document all its needs and include needs since the Funding Priorities were published.

FINANCIAL IMPACT

None to MESB.

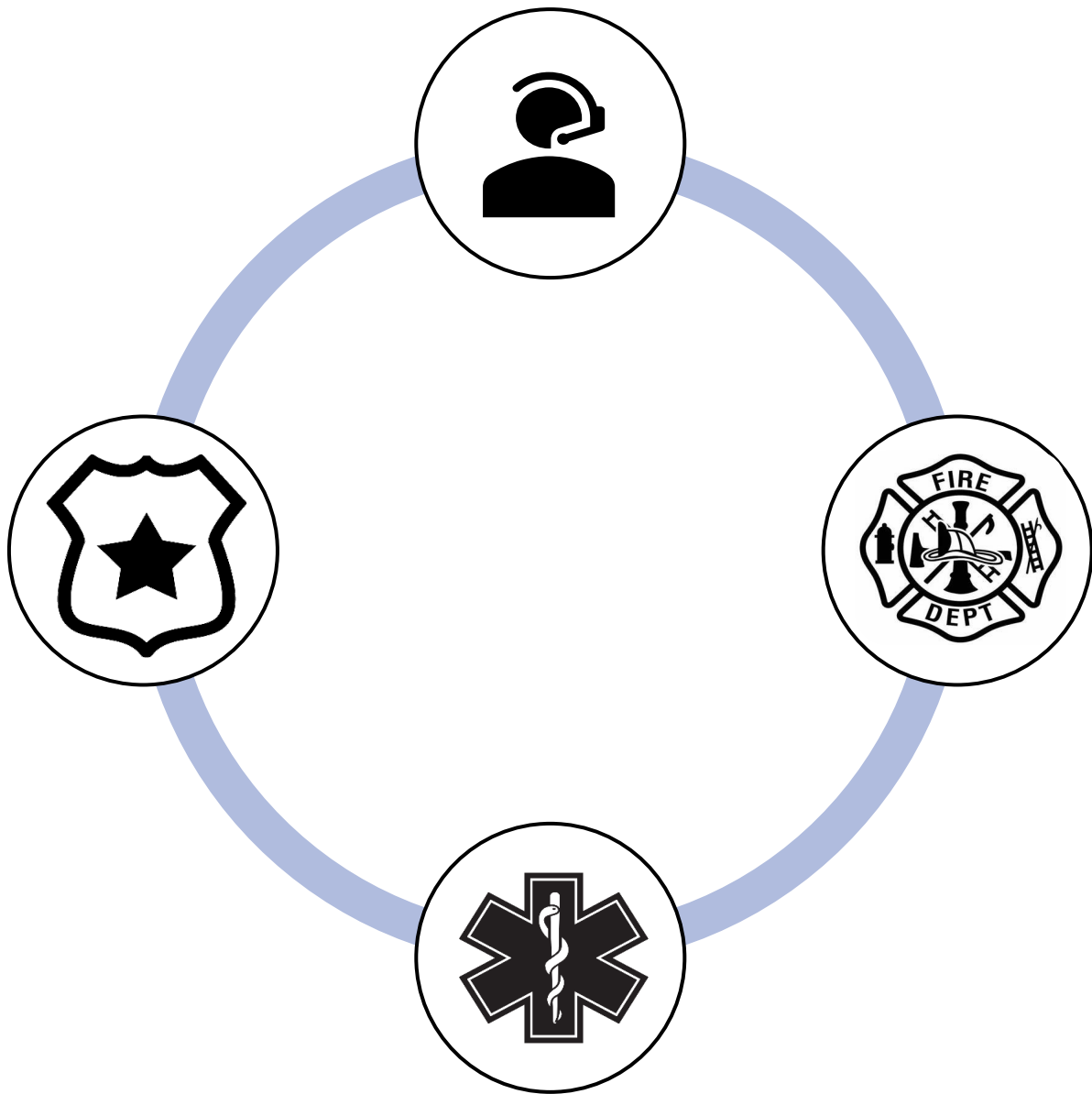
MOTION BY:
SECONDED BY:
MOTION:

PASS/FAIL



Metropolitan Emergency Services Board

Regional Needs: The Public Safety Emergency Communications Ecosystem



May 1, 2023

The Metropolitan Emergency Services Board

The Metropolitan Emergency Services Board (MESB) is one of seven regional Emergency Communications Boards (ECBs) and Emergency Services Boards (ESBs) in the state of Minnesota. The MESB was established under MSS 471.59, MSS 403.39 and MSS 403.392 to provide local governance on matters related to emergency communications (9-1-1 and ARMER), as well serving as the regional EMS system for the metro region. The MESB is a joint powers board composed of the following entities: Anoka County; Carver County; Chisago County; Dakota County; Hennepin County; Isanti County; Ramsey County; Scott County; Sherburne County; Washington County; and the City of Minneapolis.

The Public Safety Emergency Communications Ecosystem

With approximately 94,000 active radios (MnDOT, October 2022), the statewide Allied Radio Matrix for Emergency Response (ARMER) system, built by Motorola Solutions and owned and operated by the Minnesota Department of Transportation (MnDOT), provides interoperable Land Mobile Radio (LMR) communication capabilities to 9-1-1 emergency communication centers (ECCs) (also known as Public Safety Answering Points or PSAPs), law enforcement, fire, Emergency Medical Services (EMS), emergency management, public works, and other public safety users across Minnesota.



Construction of the ARMER system in the Twin Cities metropolitan region began in the late 1990s and expanded to include greater Minnesota in the mid-2000s. In late 2020, the MnDOT completed its backbone of the ARMER system buildout. There are now 335 state-maintained and 100 locally maintained ARMER tower sites on-the-air across Minnesota that provide ARMER system radio coverage (mobile only) to 95% of the state's geographic area. Of the 100 locally maintained ARMER tower sites, 54 are in the metro region.

As the ARMER system matures, there is a need to maintain and replace or upgrade aging infrastructure, equipment, and technology. The Statewide Emergency Communication Board (SECB) and state agencies are currently working to develop a capital improvement plan to address this need.

In 1979, the Metropolitan 9-1-1 Telephone Board was formed as a joint powers board of the seven metropolitan counties to plan, design, and implement the first multi-jurisdictional enhanced 9-1-1 (E9-1-1) system in the United States. This system went live at midnight, December 1, 1982, and provided the basis for the statewide buildout of E9-1-1. Today, all 108 PSAPs in the state are part of the statewide 9-1-1 network. Of the 108 PSAPs, 24 are located in the metro region. The 9-1-1 network is in process of transitioning from E9-1-1 to Next Generation 9-1-1, which will provide PSAPs additional abilities to answer texts, receive photos and videos, provide improved 9-1-1 caller location, and provide pre-determined rules for routing of 9-1-1 calls.

Today, the Department of Public Safety contracts and pays for the statewide 9-1-1 system. Local governments pay for costs associated with receiving 9-1-1 calls and dispatching public

safety responders. Local government costs include maintaining the physical PSAP; salaries/benefits for PSAP employees, including public safety telecommunicators (PSTs), administration staff, technical staff, and in some cases, dedicated GIS staff; purchase and maintenance of call handling equipment (CHE) used to answer 9-1-1 calls; purchase and maintenance of communications/radio equipment used to dispatch response to 9-1-1 calls; software or subscription services to maintain the PSAP's 9-1-1 data and services, including GIS data; and software or subscription services to provide Integrated Public Alert and Warning Systems (IPAWS) alerts to the public. Much like the ARMER system, as the 9-1-1 network and 9-1-1 systems continue to evolve, there is a need to maintain, upgrade, or replace aging equipment to allow for new technology to meet the expectations of the public, which would like to communicate with 9-1-1 in the way the public communicates with one another.

Much like hardships of recruitment and retention of staff across public safety disciplines, PSAPs today face difficulty in maintaining a full-complement of PSTs which are needed to answer a PSAP's specific volume of 9-1-1 and administrative calls. PSAPs also face difficulty in recruiting new people to serve as PSTs, as many people do not wish to work in a high-stress environment or work nights, weekends, and/or holidays, which is required in a public safety field.

Funding Considerations



The State of Minnesota's portion of the costs associated with operating the ARMER system is funded through a combination of trunk highway funds, 9-1-1 special revenue funds, and radio tower lease receipts.

Except for PSAP equipment and a limited portion of local infrastructure expenses which can be funded via the 9-1-1 special revenue fund, local costs (including tower site leases, utilities, and system and equipment maintenance) associated with the ARMER system are typically funded via local property tax revenues or per radio charges to ARMER system users in a county. Due to these constraints, public safety agencies

across Minnesota face significant funding challenges related to the escalating costs of maintenance of ARMER system infrastructure, equipment, and technology. Without access to stable, adequate supplemental funding sources, it will be increasingly difficult for local entities to support their ongoing ARMER system maintenance and sustainment needs.

Regional Priorities

Though this document covers region-wide needs only, and does not include individual needs of counties, that is not to say that these regional priorities will not benefit each of the ten metro counties individually. What follows are priorities that metro region agencies agree are a priority.

Computer-Aided Dispatch (CAD)-to-CAD Interoperability Solution

The 24 primary and secondary PSAPs in the metro region desire to acquire a CAD-to-CAD integration solution designed to connect disparate CAD systems for the purpose of expediting emergency response which may cross jurisdictional and PSAP boundaries.

The solution would also provide improved situational awareness for metro region PSAPs. Such a solution was found to be a need in the Metropolitan Emergency Services Board's May/June 2020 Civil Unrest After-Action Report/Improvement Plan. The solution could allow other PSAPs to answer 9-1-1 calls intended for a PSAP which has been inundated with 9-1-1 calls; this will provide 9-1-1 callers with better service in extraordinary situations/events.

Estimated Metro Region cost: ~\$180,000 per year, plus one-time implementation costs of approximately \$30,500*

*This item is included in HF 2431/SF 2454

BDA Requests

Several buildings in the region have been identified as having radio coverage gaps and would benefit from having bi-directional amplifiers (BDA) installed. This would assist first responders with radios be able to assist and be heard on the radio no matter where in a building the responder is located.

Estimated Metro Region cost: ~\$3 million*

*This item included in HF 2431/SF 2454

GIS Software Services – School Mapping

With the frequency of mass shootings/armed assailant incidents increasing nationwide, and in reviewing the response to recent school shootings, primarily in Uvalde, TX, the metro region would like to implement school mapping, whereby maps of schools would be available in each PSAP, which could facilitate the location of 9-1-1 callers within the building. Additionally, having these resources available could provide first responders with information that could affect emergency response, such as locations of chemistry labs, etc. which could alter responders' plans.

Estimated Metro Region cost: ~\$400,000 in one-time implementation costs and \$40,000 per year in annual maintenance costs*

*This item included in HF 2431/SF 2454

GIS Software Services

GIS software services are needed to support the creation, conversion, and maintenance of GIS-derived Master Street Address Guides (MSAGs) for the PSAPs in the ten-county metropolitan region. These services would further integrate the region's legacy 9-1-1 data processes with those needed for NG9-1-1. The outcomes include improving 9-1-1 data accuracy, gaining operational efficiency, and maintaining 9-1-1 data synchronization during the transition to full i3 NG9-1-1 implementation. Additionally, a web-based map viewer will allow for all metro region PSAPs and GIS partners to have visibility to the region's current NG9-1-1 and related geospatial datasets in a secure, shared environment, allowing for seamless data sharing, greater collaboration, and improved data integrity.

Estimated Metro Region cost: ~\$180,000 per year, plus one-time implementation costs of approximately \$30,500 for generalized GIS software services
~\$344,059 for five years for the web-based data viewer, plus \$8,279 in one-time implementation costs.

AES Encryption

The Statewide Emergency Communication Board (SECB) recommends a transition to a higher level of encryption (AES or Advanced Encryption Standard) for sensitive radio transmissions on the ARMER system. To achieve this capability, supplemental funding is necessary to replace and/or upgrade existing ARMER system equipment.

Estimated Metro Region cost: ~\$9 million

Geo-Diverse 9-1-1 Call Handling Equipment (CHE) ESInet Connections

Many Minnesota PSAPs are taking advantage of geo-diverse technology with new CHE platforms that allow for 9-1-1 calls to be delivered to two locations simultaneously. Geo-diverse configurations split the A and B servers typically found at one location, into two separate geo-diverse locations, which allows for additional staff at another location, or PSAP, during extremely busy times or special events to answer 9-1-1 and administrative calls while the main PSAP is still active. It also allows the PSAP to abandon its primary location while the backup location is fully operational and gives the opportunity for a staged evacuation while staff is enroute to the backup location. Additionally, the main PSAP can operate on the connections that exist at its backup location if the main PSAP experiences any technical issues with its connections. To allow for full redundancy and resiliency, each PSAP utilizing geo-diverse CHE should have two Emergency Services Internet (ESInet) connections at each location to ensure the maximum number of 9-1-1 calls can be received at either location at any time, regardless of any problems occurring at the other location. Currently, ECN only pays for two ESInet connections at each PSAP, which is the typical setup for legacy CHE. ECN should reconsider its position and pay for four ESInet connections for PSAPs which implement geo-diverse CHE systems. Having four ESInet connections provides improved resiliency and redundancy for a PSAP's 9-1-1 system and best serves the residents of its jurisdiction.

Estimated Metro Region cost: ~\$12,000 per PSAP per year, or \$216,000 annually in addition to ECN's current costs

Vendor-provided Radio Technical Training

According to SECB standard, system administrators must go through training at least once every two years. To keep current with evolving technology, administrators request to attend training provided by a contracted technical vendor to fulfill this need.

Estimated Metro Region cost: ~\$40,000 per year

CRTF Training and Exercising

The Metro Communications Response Task Force (CRTF) holds quarterly training/exercises for deployable personnel to remain current on local, state, and national standards. These deployable personnel typically are assigned to assist in the field, the command post, EOCs, and PSAPs during planned and emergent events.

Estimated Metro Region cost: ~\$10,000 per year

Staff Recruitment & Retention

Public safety disciplines, including PSAPs and LMR technology departments, struggle to recruit and retain employees. There is a need to establish a program to actively recruit new staff and to retain employees. The Emergency Medical Services Regulatory Board has established a pilot grant to focus on EMS employee sustainability. Similar programs should be instituted for other public safety disciplines, though with this request the focus is on public safety telecommunicators and system technologists. The metro region would like to contract with a vendor to place targeted recruitment ads via radio, flyers, videos, and social media platforms.

Estimated Metro Region cost: ~\$100,000 per year

Ongoing Maintenance for Existing ARMER Infrastructure

Every five years, the State of Minnesota (specifically MnDOT) executes a service contract with Motorola for maintenance and upgrades to the ARMER system. A combination of 9-1-1 fees, state funds, and federal trunk highway funds are used to fund maintenance of state-owned radio infrastructure. Counties and the City of Minneapolis own "local enhancements" which are additional tower sites or channels interconnected with the state-owned sites to provide adequate coverage for local users. These local enhancements are shared with general users of the ARMER system. Local enhancements and backhaul to the regional network are funded by the owning agencies. Since the state-owned and local enhancements form the completed radio network, a funding source to assist in the maintenance of the local enhancement sites is needed.

Estimated Metro Region cost: ~\$500,000

Subscriber Equipment Replacement

The subscriber radios (mobiles and portables) used to communicate on the ARMER statewide system have a finite lifespan. These radios reach end-of-life when firmware, batteries, or replacement parts become unavailable. Continuing to use outdated subscriber equipment results in distorted or incomplete communications. Equipment replacement is typically funded locally with no state or federal dollars associated; having shared funding for these shared resources would be ideal to ensure the quality and consistency of emergency communications.

Estimated Metro Region cost: ~\$11 million

Additional Local Enhancement for Capacity/Coverage Needs

As the population in the region continues to increase and new buildings are constructed, local subsystem owners need to add additional ARMER tower site to increase coverage and capacity to meet higher density population centers.

Estimated Metro Region cost: ~\$50 million

Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
9-1-1 GIS and Data Report
January 18, 2024 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 the **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. **9-1-1 Requirements for Multi-Line Telephone Systems:** An MESB workgroup recently prepared an educational document on the 9-1-1 requirements for Multi-Line Telephone Systems (MLTS). The document is a **resource to educate and guide PSAP personnel and MLTS owners/operators in key MLTS 9-1-1 requirements**. Increased compliance with these requirements supports timely and effective emergency response by providing accurate call routing, callback number, and dispatchable location whenever a MLTS user dials 9-1-1.
 - a. **Content:** The document summarizes the issue, reasons for compliance, federal and state requirements, and common problems encountered by public safety with MLTS. It provides guidance for PSAPs on handling and reporting the issues they experience with MLTS 9-1-1 calls, as well as implementation and testing guidance for MLTS owners/operators. Resources are also listed.
 - b. **Availability:** PSAPs are encouraged to check out the document on [MESB's 9-1-1 MLTS webpage](https://mn-mesb.org/multi-line-telephone-systems-mlts/) and use the content found there to support their efforts to educate businesses and other entities in their serving areas on the 9-1-1 requirements for MLTS. (<https://mn-mesb.org/multi-line-telephone-systems-mlts/>)
 - c. **Broader Use:** The document was intended for broader use. It has been submitted to the SECB NG9-1-1 Committee for use as a resource to educate and guide both Minnesota PSAP personnel and MLTS owners/operators. It is hoped that various SECB forums will discuss and potentially use the document's content in various ways to achieve compliance through education.
 - d. **Contributors:** Special thanks go out to the document contributors – Marv Solberg (Hennepin County), Vic Barnett (RCECC), Darlene Pankonie (Washington County), Jake Jacobson and Marcia Broman (MESB).
3. **Regional GIS Dataset Aggregation and Validation:** The region has moved to a **monthly cadence** for NG9-1-1 validations and submission to statewide datasets. The next full regional NG9-1-1 data validation run is planned for **January 12, 2023**.
4. **Regional Data QA/QC:** MESB continues to **analyze the region's NG9-1-1 data errors** identified through MESB's internal validation tools, GeoComm's Data Hub (GDH), and 1Spatial's platform. MESB also validates "live" 9-1-1 call locations against the regional GIS to identify missing or inaccurate GIS data. When needed, MESB reaches out to county GIS contacts to make recommended data remediations. If it is determined that MSAG and/or ALI updates are needed MESB will process them on behalf of its PSAPs.
5. **Metro Regional GIS-derived MSAG transition:**
 - a. All MESB PSAPs have now made the **initial transition to a GIS-derived MSAG**. As part of the ongoing GIS MSAG maintenance plan, **MSAG "refreshes"** are being scheduled. For some MSAGs, this may involve upgrading to a GIS MSAG style of one MSAG entry for each side of each road centerline segment. Additional methods are also used for GIS MSAG maintenance between full "refreshes."

- b. **Refresh complete:** Dakota County, Ramsey County, Bloomington PD, Anoka County, Chisago County, Edina PD, Eden Prairie PD
 - c. **Refresh pending at Intrado:** Isanti County (waiting on deployment date from Intrado)
 - d. **Refresh anticipated in 2024:** MAC Airport, Fort Snelling, St Louis Park PD Hennepin Sheriff, Carver County, MECC, Scott County, Sherburne County, U of M PD, Washington County
6. **Verizon Wireless Misrouted Calls:** PSAPs should continue to report any Verizon out-of-state misrouted calls. The FCC is highly interested in specific call examples from PSAPs.
- a. 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).
 - b. 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**.
 - i. Often the email reporting method is easiest to convey and track the necessary information on these issues.
 - ii. Comtech has stated that call reports “must be within the past 7 days, preferred within 3-5 days for most accurate traces.”
 - iii. Providing a screenshot of the call, along with a CDR (if possible), and specifics about where the caller’s stated location are all very helpful to the investigation.
 - c. PSAPs are asked to **notify MESB (Jake Jacobson and Marcia Broman) of any tickets opened with Comtech on Verizon out-of-state misrouted calls.** (An email “cc” will suffice.) MESB will monitor the ticket and trends across the region, ask additional questions of Comtech/Verizon (as needed), and share information about the call with the FCC inquiry that is currently underway.
7. **Verizon/Comtech new ALI Customer Name Content:** Verizon/Comtech is piloting a software change to identify ALI displays of 9-1-1 calls that are made via WiFi calling or from a Non-mobile fixed device.
- a. In these instances, public safety telecommunicators (PSTs) may see “**VOWIFI CALLING**” or “**NON-MOBILE DEVICE**” in the *Customer Name field* of the ALI display as an additional trigger that the call may not be a typical 9-1-1 call processed on the cellular network.
 - b. Knowing the carrier classifies a call as one processed over WiFi, or if the device used to make a call was intended to be stationary, may aid as an **additional factor when PSTs interact with callers to determine their location.**
 - c. The update **only affects the *Customer Name field*** of the ALI display.
 - d. As noted in item #6 of this report, PSAPs have found that at times the location of Verizon 9-1-1 **calls processed using WiFi, rather than the cellular network, may inaccurately reflect where the caller is located.** This is in part because the caller may not have updated the emergency address programmed into their phone for WiFi calling to reflect their current location.
 - e. Verizon/Comtech state that **rebidding location** is a recommended practice as it may help to improve the caller’s location coordinates.
8. **Verizon/Comtech LBR Software Update:** An issue was recently detected with wireless ALI displays of Verizon LBR routed calls. The problem affected the formatting of the cell tower and sector address information in the ALI display. The cause was determined to be a recent LBR software update. A fix is being installed by Comtech in one data center on 1/9/24 and the second data center the following week. MESB will monitor the ALI formatting to ensure the fix restores the standard wireless ALI display format used in the MESB region.
9. **Integration with State NG9-1-1 GIS Activities:** All MESB regional NG9-1-1 required datasets are included in the statewide enterprise database. These datasets include: the metro regional supplier boundary, road

centerlines, address points, and Emergency Services Zones (resulting in PSAP, law enforcement, fire, and EMS boundaries.)

10. **SECB NG9-1-1 GIS Workgroup:** This **SECB workgroup focused on NG9-1-1 GIS topics** is now meeting monthly on the 2nd Thursday of each month 9:00-10:30 am. The meetings are held virtually. MESB is participating on behalf of the region. Metro county GIS data producers are also encouraged to participate as their availability allows.
11. **GIS supporting RapidDeploy Radius ALI Mapping:** MESB continues to provide regular monthly “refreshes” of the metro GIS datasets used for the ESRI map and geocoding services that support the RapidDeploy Radius mapping application.
12. **Quarterly MSAGs:** The Q1 2024 PSAP MSAGs were recently distributed to PSAP Data Coordinators and their GIS points of contact.

ONGOING ACTIVITIES

13. **Wireless Cell Sector/Routing Data:** The three major wireless carriers in the MESB region have all implemented location-based routing, using the device’s location and PSAP boundary polygons to route the call. Cell sector routing, however, is used as a fallback on 9-1-1 calls when location-based routing is not feasible. MESB continues to process wireless cell sector routing updates for all four wireless 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 and MESB staff will investigate.
14. **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.
15. **Regional Data Viewer:** PSAPs are encouraged to use the [regional 9-1-1 dataviewer](#) developed by MetroGIS/Met Council to view the geospatial data county GIS departments consider valid and current for regional 9-1-1 use. This is the authoritative source of NG9-1-1 GIS data for the 10-county MESB region. (<https://www.metrogis.org/projects/9-1-1-Data-Viewer.aspx>.)

Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
9-1-1 Network Report
January 18, 2024 Meeting

The roll out for the Lumen Ticketing system planned for late January to February

- PSAPs will be receiving registration notices and opportunities for training via MS Teams
- Opinion: Use of the online ticketing system is best suited for
 - Tracking ticket status.
 - When you are unable to get the NOC via phone, you can create a ticket online.
 - Uploading files/data that can help in resolution.

New Lumen Program Manager: Robert (Bob) Grudberg



- Bob replaces Troy Mullis (who replaced Jake).
- As it was with Troy, I'll be in continual contact with Bob and attending his weekly Lumen network meeting.
- As Program Manager, Bob will be working on the project side of the house, such as a new circuit provisioning for a geo-diverse implementation.
- Usually for you, your needs are with current operations (e.g. an outage) which is handled by Tom Hopkins (who replaced Syl Barroso who replaced Matthew Hoffer).



- Keep me (Jake) in the loop if working with Bob or Tom.

First Meeting Jan 10. – ECN 911 Interoperability and Data Sharing Initiative

- Vision/Scoping session, well represented by MESB PSAPs.
- Next meeting expected in February.

Underway: ECN Mapped ALI RFP evaluation

- Think RapidDeploy/Rapid SOS and other vendors in that space.
- Darlene Pankonie serving as the PSAP representative.

Underway: Reviewing for potential – interoperability with Wisconsin PSAPs – Pierce, Butler counties

- Wisconsin PSAPs getting on a WI ESInet that would have capabilities of transferring voice 9-1-1 calls to MN PSAPs.
- Gave Lumen green light to pursue, expect follow up meetings when details provided.

TDOS-like attacks on administrative phones with two PSAPs in the metro area.

- Disgruntled employee (not from PSAP) and person with law enforcement issues repeatedly calling and tying up the administrative lines.
- Lumen Fraud Division and other agencies assisting with the troubleshooting and isolation.

Dakota now on Motorola SaaS system

- Migration in December.
- Joins Scott County, the first metro PSAP to migrate.
- Dakota and Scott join the SaaS system which has now over 40 PSAPs implemented statewide.

2023 Call Stats

Looking at the year's 9-1-1 data in the Metro (~2 million calls)

- 14% of the calls include a "Transfer Out" i.e. 9-1-1 PST is transferring the call to someone – another PSAP, Language Line, Poison Control, admin lines etc. (includes situations where another party is bridged, not necessarily a transfer and drop of the call from the primary).
- 11% of the calls are a "Transfer In" i.e. call received is not direct from the 9-1-1 caller but another PSAP (includes secondary PSAPs in this %).
- Metro Area Busiest Hour 4-5PM; Least Busy 4-5AM (Including or Excluding State Patrol Metro)

