

MONTHLY UPDATE



DIRECT FROM DANA



The Emergency Communication Networks (ECN) division is losing one of our finest. Chris Pedersen submitted her resignation, effective February 21. We wish Chris every success and sense of fulfillment in her new career endeavor. We feel very fortunate for the time Chris shared her professionalism, expertise and attention to every detail to support ECN and the Statewide Emergency Communications Board (SECB). We know she will be an equally fine asset to her new employer.

Cathy Anderson has kindly added the 2019 Annual E9-1-1 Audit Fund Report to her job responsibilities. She is in the process of personalizing the Fee Expenditure Reporting Forms for each eligible county. They will be emailed to the same person who completed and remitted them to us last year. If you are aware of changes in personnel, responsible for completing and remitting these forms, please directly reach out to Cathy Anderson with an updated contact. Completed forms reporting 2019 eligible expenses from the 9-1-1 fee allotments are due March 31.

Language Line Facts

ECN engages in a contract for language translation line services on behalf of all Minnesota Public Safety Answering Points (PSAPs) to provide 9-1-1 call translation for non or limited English speaking callers. If your PSAP is unaware of this service, please reach out to [Dan Craigie](#) (651-201-7551) for information.

A typical month results in more than 900 calls throughout PSAPs across the State of Minnesota, with a combined cost of more than \$7,000. Language Line Solutions provides trained interpreters and to provide translation services for 240 languages. Typically Minnesota PSAPs request more than 25 different languages each month, with the top four languages consistently being Spanish, Somali, Hmong, and Karen.

2019 Emergency Communication Networks (ECN) Accomplishments

Annually, each division with the Minnesota Department of Public Safety (DPS) is required to provide a list of prior year accomplishments for the prior year to the Commissioner's Office who in turn provides them to the Governor's Office. Please see ECN's 2019 Accomplishments below:

9-1-1

- Completed ingress network request for proposal (RFP) that will upgrade how originating service providers (OSP) connect to the 9-1-1 system. This new contract will impact up to 300 OSPs operating in Minnesota and, pending the award, will set the stage for a complete Next-Generation 9-1-1 (NG9-1-1) implementation in the coming years.

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February 2020

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Cont. from Director Notes

- Further development of a statewide geospatial dataset that will be the foundation for NG9-1-1 services. This project involves all 87 counties, 102 PSAPs, and a multitude of municipalities, regional jurisdictions, tribal lands, and other partners. It will revolutionize how geospatial data is used for emergency services. This multi-year project continues to collect standards, develop standards, and perform outreach with success.
- Continued implementation of Text-to-911 across the state with several PSAPs now taking texts for their jurisdiction. ECN was also recognized for its successful outreach to the deaf and hard of hearing community.
- 96.5 percent of the top 30 Minnesota cities have text service covered by their own jurisdiction. Mankato and Shakopee texts are still answered by the regional text PSAP in each of their respective regions:

City	Rank	Population	Text in Jurisdiction
Minneapolis	1	404,670	Yes
St. Paul	2	297,160	Yes
Rochester	3	111,396	Yes
Duluth	4	86,164	Yes
Bloomington	5	85,080	Yes
Brooklyn Park	6	78,823	Yes
Plymouth	7	75,105	Yes
Maple Grove	8	66,969	Yes
St. Cloud	9	66,770	Yes
Woodbury	10	66,699	Yes
Eagan	11	65,874	Yes
Eden Prairie	12	63,206	Yes
Coon Rapids	13	62,159	Yes

Blaine	14	61,210	Yes
Burnsville	15	61,158	Yes
Lakeville	16	59,786	Yes
Minnetonka	17	51,651	Yes
Apple Valley	18	50,602	Yes
Edina	19	49,976	Yes
St. Louis Park	20	47,486	Yes
Moorhead	21	41,321	Yes
Mankato	22	40,900	No
Maplewood	23	39,678	Yes
Shakopee	24	39,656	No
Richfield	25	35,912	Yes
Cottage Grove	26	35,632	Yes
Roseville	27	35,254	Yes
Inver Grove Heights	28	34,757	Yes
Andover	29	31,906	Yes

- Session initiated protocol (SIP) upgrades were executed at three PSAPs in 2019, bringing the accumulative total to 54 PSAPs or 52 percent.
- Initial basic cybersecurity initiatives continue to be supported with the implementation of two firewalls in each PSAP. In 2019, the first five PSAPs received firewalls to protect their own call handling systems and networks from unauthorized access and service disruptions.
- ECN was the recipient of the Access Award by the Minnesota Commission of the Deaf, Deafblind & Hard of Hearing which acknowledged the notable work by the ECN 9-1-1 Program to increase the accessibility of services for and with deaf, deafblind, and hard of hearing Minnesotans.
- ECN cooperated with an investigation by the Minnesota Public Utilities Commission (PUC) of our state contracted 9-1-1 vendor (CenturyLink) and its

subcontractor (West Safety Services) following a significant service disruption in August 2018. Remediation steps include developing a Crisis Communications Plan to better respond to future 9-1-1 service disruptions. This includes a messaging strategy as well as communications at the PSAP level.

Interoperability (9-1-1)

- Twenty PSAPs have engaged in a contract with a single 9-1-1 call handling vendor who will implement a shared call handling service on a statewide level. Service as a System (SAAS) nodes have been turned up and tested in two diverse locations in Minnesota. Each PSAP sharing this call handling system will have two diverse and redundant circuits delivering 9-1-1 calls. The turn-up schedule began Jan. 20 and will continue through 2020.
- ECN was awarded a grant through the National 9-1-1 Office, which is being subgranted to regions for expanding NG9-1-1 migration. In addition to supporting the 9-1-1 geospatial information systems (GIS) project and the shared call handling system project, one region has been awarded grant funding to evaluate the feasibility of statewide computer aided dispatch (CAD)-to-CAD interoperability project. Initial meetings have been held with potential vendors who can support such an initiative.

Allied Radio Matrix for Emergency Responders (ARMER)

- ECN provides the majority of the funding to sustain ARMER and takes a leadership role in negotiating upgrade and maintenance agreements with the ARMER system vendor, Motorola. In preparation for the December 2020 expiration of existing agreements, ECN has engaged a professional services contractor to provide assist in navigating this process. Throughout 2019, there was significant growth in understanding and increased clarity in the path forward.
- ECN partnered with Minnesota Department of Transportation (MnDOT) to reduce the cybersecurity risk to ARMER. A cybersecurity workgroup was formalized under the Land Mobile Radio (LMR) Committee of the SECB. ECN also partnered with the U.S. Department of Homeland Security (DHS) to bring a cybersecurity tabletop exercise to Minnesota. The

training opportunity addressed cybersecurity risks and the need for a cybersecurity program. ECN then developed a work plan to address known risks from a cybersecurity assessment.

- ECN initiated a three-phase examination of encryption on ARMER. The first phase was of providing basic education to level set understanding was completed. Planning for the next two phases are underway. These next steps are surveying current use/anticipated needs and establishing a formal workgroup to decide a course for moving forward.
- ECN led a year-long workgroup through the review of several standards related to participation on ARMER. The workgroup updated and consolidated five existing standards into one standard that addresses today's needs.
- ECN supported the SECB governance process in addressing newly-identified technology issues related to patching of ARMER talkgroups. ECN supported bringing the concerns of technologists to the governance process. To that end, the SECB drafted a letter of concern to the state's LMR provider, Motorola. ECN educated ARMER users on the issue and provided best practices for navigating the issue until a permanent solution was identified. ECN pursued this matter until a viable solution to the problem was presented. ECN will stay involved until the issue is fully mitigated.
- ECN assisted Dickinson County, Iowa; Worth, County, Iowa; and Burlington Northern Sante Fe (BNSF) Railroad Police with the requests to be interoperability participants on ARMER. Interoperability participants do not use ARMER for day-to-day operations but have purchased subscriber equipment providing them direct access to ARMER when working with a Minnesota public safety entity.

Interoperability (LMR)

- ECN matured the Communications Unit (COMU) program through training, recognition, and policy development. In 2019, twenty-eight people were classroom trained in three different COMU positions. This included a brand new COMU position focused on information technology needs of an incident. Six people completed post-classroom training requirements and received state recognition in four

different COMU positions. Policies were refreshed and approved by the SECB. The first COMU report was delivered to the Interoperability Committee.

- ECN asked the Interoperability Committee of the SECB to empanel a workgroup to formally consider the anticipated demand for emerging technology allowing for inexpensive connectivity and interoperability of push-to-talk applications on cellular devices and ARMER talkgroups.

Wireless Broadband and Applications (WBB&A)

- ECN established a Wireless Broadband User Forum for public safety users. The first meeting was a two-day session in May with AT&T/FirstNet, the FirstNet Authority, ECN, and Minnesota public safety stakeholders. The User Forum will be an on-going program conducted bi-annually in varying locations across the state.
- ECN established a bi-annual meeting with FirstNet and the FirstNet Authority to discuss coverage build out and continued progress updates on the network for ECN staff.
- ECN attended several meetings for outreach and education:
 - The Minnesota Sheriff's Association orientation for newly elected sheriffs and deputy sheriffs
 - The Association of Minnesota Counties Conference
 - Hennepin County Emergency Management meeting with leadership on WebEOC
 - Homeland Security and Emergency Management (HSEM) Governor's Conference
 - National Basketball Association (NBA) Final Four coordination activities with the City of Minneapolis
 - International Wireless Communication Expo (IWCE)
 - IWCE Santa Clara Saving Lives Conference
 - FirstNet Roadmap Meeting
 - Boulder Colorado FirstNet Authority and Public Safety Communications Research (PSCR) lab tours
 - Association of Public Safety Communications Officials – International (APCO) Conference
 - Public Safety Communications Research (PSCR) division conference

- The Government Information Technology (IT) Symposium
- Update on the Minnesota Cyber Range at Metro State University
- The Verizon Convergence Exercise
- More than 30 public safety constituents attended public safety communications conferences across the country to learn and understand new and emerging technologies within wireless broadband with assistance from ECN.
- ECN awarded a professional and technical assistance contract to Televate, LLC to assist with project management and program consultation for the WBB&A Program in alignment with the requirements of the State and Local Implementation Grant Program 2.0 (SLIGP2.0). A survey was prepared with Televate's support to be distributed to public safety agencies statewide last month. Interviews have been scheduled with key leaders and stakeholders across the state to better understand both minimum expectations, as well as desired immediate and long term needs for wireless broadband use within Minnesota's public safety community.
- ECN (along with the professional and technical support from Televate) established a project plan for the next three years based upon strategies and tactics that were identified within the SECB 2019-2021 strategic plan. The project plan maps out data technology transitions, assessment of applications & methods for data sharing, the integration of communication technology, and wireless network coverage verification. It further identifies the need for new policies and agreements to encourage interoperability and mutual aid. The plan will guide the WBB&A committee by providing more granular steps within each strategy identified within the strategic plan.
- ECN realigned the function of the Interoperable Data Committee (IDC) of the SECB to the WBB&A Committee to better represent with the future role of this committee. The committee faces new priorities and initiatives after Governor Dayton decided to opt Minnesota in to FirstNet in October 2017. That was followed by the FirstNet core going on-line in March 2018. This change requires additional outreach and education for information technology leaders who support first responders, as well as a need for

operational end users to participate on the committee and workgroups.

- ECN supported the development of two new workgroups under the WBB&A Committee: the Applications Workgroup and the Standards Workgroup. Both workgroups joined efforts in reviewing the lengthy list of the 2015 Minnesota requirements. Significant progress has been made in refining and reprioritizing the requirements list to ensure they remain visibly addressed by FirstNet. Upon completion, the WBB&A Committee will prepare a list of questions to be posed to all wireless carriers in Minnesota. The goal is to garner a comparison of features that can be evaluated by public safety stakeholders when planning to procure a vendor for wireless broadband service.
- DPS leadership and Minnesota IT Services (MNIT) have approved a contract to establish a coverage assessment tool for data analysis and mapping of wireless broadband Long-Term Evolution (LTE) coverage in the state on any carrier providing public safety service. The SLIGP2.0 grant allows for areas designated as covered to be tested independently.
- ECN participated on a webinar and also filed comments in response to a Federal Communications Commission (FCC) request for comments encouraging interoperability and bi-directional roaming between FirstNet and the networks of other carriers that provide service to public safety entities. AT&T and the FirstNet Authority have interoperability only on its exclusive AT&T network and there is no roaming agreement between carriers.
- ECN was the first state to support Colorado & the Boulder Regional Emergency Telephone System (BRETSA) in its efforts for full interoperability. Minnesota is leading the way to achieving the network needed for public safety. The following states have since stated their support of the declaration, Pennsylvania, New Jersey, Illinois, and New Mexico.

Interoperability (WBB&A)

- ECN matured the use of the federal database and tool, Homeland Security Information Network (HSIN). The platform is used to allow the Minnesota's public safety stakeholders to share information concerning

the use of applications and functionality of users on FirstNet, or other public safety network spectrum over a private, secure website.

- ECN continues the dialogue between the FirstNet Authority as well as the FirstNet/AT&T team in Minnesota. Verizon has participated in dialogue to continue towards nationwide interoperability on wireless networks as well.

Integrated Public Alert and Warning (IPAWS)

- Facilitated five public alerting authority workshops with 69 attendees in the following counties: Freeborn, Douglas, Rice (2), and Winona.
- Presented two IPAWS sessions at the 10th Annual Public Safety Communications Conference.
- Spoke at the FCC Workshop on Multi-lingual Alerting in Washington, D.C.
- Led two Federal Emergency Management Agency (FEMA) Warning Coordination Courses (G-272) for the HSEM training program.
- Presented IPAWS for Incident Command System (ICS) for the Dakota County Emergency Services Committee and the Dakota County Fire Chiefs Association.
- Tracked county use of IPAWS alerts and followed up with counties on processes and improvement as needed.
- Tracked counties testing with IPAWS and followed up with those who needed assistance on processes and improvements.
- Presented at the Association for Minnesota Public Educational Radio Stations (AMPERS) annual meeting.
- Assisted more than 20 counties with implementing their weekly testing programs.
- Participated in three national workgroups to form guidance for locals in the area of alert, warning, and notification.
- Coordinated with the Bureau of Criminal Apprehension (BCA) and Emergency Alert System (EAS) participants on the first ever BLUE Alert Test in Minnesota.
- Led training and development program for the ECN 2019 summer interns.

Interoperability (IPAWS)

- Followed federal legislation that impacts public alert, warning and notification and kept leadership informed on possible ramifications to the state, tribal, and local jurisdictions.
- Assisted more than 20 counties in understanding why and how to perform the newly required FEMA proficiency demonstrations.
- Attended the Minnesota Broadcasters Association (MBA) Annual Meeting to promote statewide alert and warning, and BLUE Alert awareness.
- Presented on IPAWS at five of the six HSEM quarterly meetings.

2019 ECN Stakeholder Engagement Activities

- Supported more than 85 SECB Board, Committee, and Workgroup Meetings.
- Participated in more than 100 regional governance meetings.
- Hosted three regional leadership meetings.
- Published 12 monthly newsletters.
- Hosted seven regional GIS workshops.
- Hosted the 2019 Public Safety Communications Conference, which included:
 - 359 attendees
 - 33 exhibitors
 - 48 sessions
 - 2 case studies

9-1-1 NEWS

GIS

Last month, ECN and the Minnesota Geospatial Information Office (MnGeo) staff attended the National Emergency Number Association (NENA) [NG9-1-1 Standards & Best Practices Conference](#) in Austin, TX. The conference includes sessions such as “End-to-End Next Generation Emergency Services: What Does It Look Like?” This session and others discussed the building blocks, standards and multi-media aspects of the emergency services. In addition, several sessions addressed GIS specific issues such as data preparation and stewardship.

The NG9-1-1 GIS project roadmap is beginning the review process and is awaiting release for publication. This document details the comprehensive plan for the NG9-1-1 GIS program. The roadmap will address:

- Required Datasets and Standards
- Data Aggregation Workflow
- Data Quality
- Data Management Solutions and Requirements
- Outreach and Education

ECN and MnGeo staff are active contributors and participants in NENA committees and workgroups. MnGeo staff are on the road centerlines working group and the emergency service boundary working group.

More information about the GIS project can be found on ECN’s NG9-1-1 [GIS Project website](#).

[Norm Anderson](#) (651-201-2483 or 651-201-7559) is the GIS Project Manager for ECN and MnGeo. [Akiko Nakamura](#) (651-201-7558) from our office is also working on the project. Reach out to either one of them with questions related to the GIS project.

Ingress Network Updates

We continue to make significant progress toward our Ingress Network RFP. There are four stages involved in an RFP:

1. Review
2. Evaluation
3. Selection
4. Contract signature

Currently, we are navigating through the evaluation phase, and look forward to the next steps as we move toward a better technological E9-1-1 network for the State of Minnesota.

ARMER

SUA Negotiations

As part of their contract to assist us in negotiating the best possible price for a System Upgrade Agreement (SUA), Tusa Consulting has been interviewing subsystem owners. In February and March, they will be presenting

to regional leadership the tasks Tusa has been contracted to perform, their process, their timeline, and the deliverables. They will also detail Tusa's analysis of the current service and upgrade agreements; Tusa's analysis of subsystem owner service and upgrade agreements; exploration of cost containment strategies; and exploration of cost benefit analysis. A March 1 deadline has been set to identify core contract elements.

Inter-Zone Patching

At the request of the LMR Committee, the SECB sent a letter to Motorola expressing dissatisfaction with how inter-zone patching works. In 2019, ARMER system administrators discovered that when talkgroups mapped to different zones were patched, end users on different talkgroups were able to transmit over the top of someone transmitting on the other side of a patch.

Motorola recently advised Minnesota of a potential fix to this issue and intends to present this update to the LMR Committee at its February meeting.

IPAWS

On Feb. 5, 2020, citizens of six counties in northeastern Minnesota were impacted by a Wireless Emergency Alert (WEA) message intended to be a routine TEST disseminated by HSEM that inadvertently went LIVE as an "evacuate immediately" message, without indicating it was a TEST message. As a reminder, when conducting any system testing, make sure you are taking the time to thoroughly read the prompts that appear on the computer screen. Don't be in a rush. The prompts are inserted to assist in avoiding missed steps that lead to mistakes and false alarms.

There are 21 counties due to renew their Collaborating Operating Group (COG) Certificates on March 30. FEMA should be contacting each county with a new certificate. If your county is listed below and you have not heard from FEMA by March 23, please contact ECN Director [Dana Wahlberg](#):

- Becker
- Beltrami
- Benton
- Clearwater
- Douglas
- Fillmore

- Goodhue
- Hubbard
- Kittson
- Lake of the Woods
- Lyon
- Meeker
- City of Minneapolis
- Otter Tail
- Pennington
- Polk
- Roseau
- Sherburne
- Stearns
- Winona

IPAWS Program Manager John Dooley continues to make good progress following his stroke in December. He is eager to return to the office to provide additional training and support to Minnesota counties to ensure everyone feels confident with using the IPAWS equipment.

Interoperability

Minnesota Land Mobile Radio Conventional Interoperability Plan

Last month, the Interoperability Committee and the SECB approved the 2020 Minnesota Land Mobile Radio Conventional Interoperability Plan. This plan calls for the update of Minnesota's fixed conventional VHF and 800 MHz interoperability resources. Next, MnDOT will endeavor to define a technical transition plan and ECN will work on updating standards as well as a training plan. A copy of the plan can be found on the [ECN Interoperability webpage](#).

Interstate Interoperability

Maturing land mobile radio interoperability with our interstate neighbors has long been a priority of the SECB and ECN. The state has supported the deployment of control stations to the dispatch centers of many non-Minnesota border counties giving them access to ARMER. These technology deployments have resulted in varying degrees of success. As our neighbors now migrate from legacy county-run VHF systems to their own statewide radio systems, the way we look at interstate interoperability must evolve. To that end, Statewide Interoperability Coordinator (SWIC) Jim Stromberg and Regional Interoperability Coordinator Steve Tait have drafted an Interstate Interoperability Best Practices Guide as well as a detailed technical plan.

The Interoperability Committee has supported the creation of a workgroup to review and refine these two draft documents. SWIC Stromberg specifically asked for

one technical and one operational/dispatch representative from each Emergency Communications/Services Board region to participate. Please contact [SWIC Stromberg](mailto:SWIC.Stromberg@mn.gov) (651-201-7557) if you are interested in serving on this workgroup.

Communications Unit Reports

SWIC Stromberg has asked members of the COMU Workgroup to work with their Emergency Communications/Services Board regions to draft annual COMU Reports. The COMU Standard Operating Guidelines (SOGs) ask each region to provide a report summarizing exercises, significant events, trends and concerns. SWIC Stromberg must also draft a statewide report. This will be the second year of this COMU report.

SWIC Stromberg requested regional reports be submitted to him by Feb. 18 for presentation in March 2020.

AHA/CPR Legislation Status

ECN has been asked to discontinue efforts in preparing training to support PSAPs in meeting the new statutory requirement for either performing Telephone Cardio Pulmonary Resuscitation (T-CPR) or transferring full cardiac arrest calls to a secondary PSAP capable of performing T-CPR. The bill takes effect July 1, 2021.

Given the number of existing training options available, the NG9-1-1 Committee chair prefers to select an established platform. Some training options may be free. Costs are associated with others. Chair Dar Pankonie will engage in a discussion with the committee to choose the best option for Minnesota PSAPs. Committee member representatives from each region will be asked to go back to their respective regions for additional input to help select the best option for Minnesota. The intent of the training is to present an option that may be adopted by PSAPs regardless of what they are doing today and which option they intend to pursue to meet the implementation deadline. There is a nominal amount of dedicated funding (limited to FY20-21) in the ECN budget to help offset financial costs associated with this implementation.

T-CPR will be an agenda item at the 9-1-1 Committee meeting on Feb. 19 from 1-3 pm. The meeting materials call-in information may be found [here](#). Please feel free to join as a guest or reach out to one of your regional member [representatives](#) for more details.

Wireless Broadband - FirstNet

Wireless Broadband User Forums Held Across Minnesota



Last week, the First Responder Network Authority (FirstNet Authority) and the State of Minnesota hosted a series of FirstNet User forums. Public safety stakeholders gathered in St. Cloud (Feb. 4), Walker (Feb. 5) and North Mankato (Feb. 7) to learn more about the FirstNet network statewide build-out and available services, provide feedback regarding broadband challenges, and discuss how FirstNet can help overcome these challenges.

FirstNet Authority experts Lesia Dickson and Tim Pierce addressed the day-long events, updating the audience about upcoming network plans and the [FirstNet Authority Roadmap and its six technology domains](#). The FirstNet Authority team reiterated the importance of receiving valuable stakeholder feedback to help advance the FirstNet experience and influence future investments. Discussion highlighted best practices when planning for and requesting a FirstNet deployable asset, including the triage request process and combining assets with mutual aid.

FirstNet Authority's Amy Haukness also facilitated discussions on the User Experience and Voice Communications Roadmap Domains. Participants shared feedback and experiences using data during day-to-day and emergency operations. The forum wrapped up with the AT&T FirstNet team displaying network products and

services, including the Uplift Request Tool and the FirstNet Assist App.

The FirstNet Authority thanks ECN for hosting the user forums, and looks forward to continued collaboration.

Upcoming Events



ECN is excited to announce the 11th Annual Minnesota Public Safety Communications Conference, April 15-17, 2020 at the InterContinental Hotel in St. Paul.

Details about the conference for sponsors, exhibitors and participants can be found on the ECN website, or by clicking [here](#).

Updates will be made as additional plans are confirmed, so check back often.