



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

October 17, 2019, 10:00 a.m.

1. **Call to Order** – Committee Vice-Chair, Cheryl Pritzlaff
2. **Approval of Agenda** – Pritzlaff
3. **Approval of Minutes of May 16, 2019 Meeting** – Pritzlaff
4. **Action Items**
 - A. Finalize Issues for SECB Grant Requests – Eggimann
 1. Current Suggestions
 - a. Telecommunicator Resiliency Resources
 - b. Backup PSAP Equipment
 - c. "Is the Caller the Killer?" Training
 - B. Telecommunicator Training Curriculum Update - Morrissey
5. **Discussion Items**
 - A. Winter Storm-Related Incident Coordination with State Patrol – Tabled
 - C. Fraud / Identity Theft Procedure – Pankonie
 - G. Review the Unassigned Future Issue list - Eggimann
6. **Reports**
 - A. PSAP Operations Round Table Work Group – Morrissey
 - B. SECB NG9-1-1 Committee Report – Pass/Scanlon/Pankonie
 - C. 9-1-1 Network Report – Eggimann
 - E. 9-1-1 Data Report – Broman
7. **Adjourn**

**Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
Meeting Notes
September 19, 2019**

Members Present:

Carrie Bauer, Scott
Jon Eckel, Chisago
Heidi Hieserich, MAC
Kathy Hughes, Minneapolis
Tony Martin, Hennepin
Darlene Pankonie, Washington
Nancie Pass, Ramsey
Cheryl Pritzlaff, Dakota

Jim Scanlon, Bloomington PD
Kevin Schwartz, Hennepin
Shane Sheets, Carver-**alternate**
Bob Shogren, Isanti-**alternate**
Marv Solberg, St. Louis Park
Val Sprynczynatyk, Anoka
Victoria Vadnais, Allina
Lisa Vik, Eden Prairie

Guests Present:

Marcia Broman, MESB
Mary Ehram, Solacom
Joe Fick, Motorola
Tracey Fredrick, MESB
Frank Jarman, Motorola
Rhonda Kris, CenturyLink

Bryan Kuelle, St. Louis Park-**alternate**
Dustin Leslie, ECN
Kari Morrissey, Anoka-**alternate**
Lauren Petersen, MAC-**alternate**
Jill Rohret, MESB
Scott Wosje, Northland Business Systems
Martha Ziese, MESB

1. Call to Order:

Cheryl Pritzlaff, 9-1-1 TOC Vice-Chair called the meeting to order at 10:08 a.m.

2. Approval of Agenda:

Jill Rohret asked that two discussion items be added to the agenda: 5D. NENA one day class in the metro, and 5E. Ramsey County drill.

M/S/C – Jon Eckel moved to approve the September 19, 2019 agenda as amended. Val Sprynczynatyk seconded. Motion carried.

3. Approval of Minutes

M/S/C – Val Sprynczynatyk moved to approve minutes from July 10, 2019. Shane Sheets seconded. Motion carried.

4. Action Items

A. Approval of 9-1-1 Grant Projects for 2020 Regional Funding Priorities

Rohret said that the 9-1-1 TOC will need to take action next month on grant projects to be included on the MESB's 2020 Regional Funding Priorities. The Board will vote on these priorities in November. She said that there are two items currently on the list, resiliency training and back-up PSAP equipment.

Jon Eckel asked how much money is available for these grants? Rohret said it depends on the grant. There are a couple of grants that might be available through ECN. The amount included in federal grants is declining and they now typically focus on training. The grant proposals need to be ready to go when the MESB is made aware of the grants. Additionally, sometimes at the end of a grant term there is money left unspent and that could be offered to regions with defined projects.

Carrie Bauer suggested funding the class "Is the Caller the Killer?" It is a two-day class which focuses on analyzing 9-1-1 calls; often the killer is the 9-1-1 caller. The class could help telecommunicators ask better questions.

M/S/C - Heidi Hieserich moved to add "Is the Caller the Killer?" training to the list of potential grant projects and continue the discussion at the October meeting. Nancie Pass seconded. Motion carried.

B. Election of New Committee Chair

Hieserich volunteered to serve as Vice-Chair for the remainder of 2019.

M/S/C – Nancie Pass moved to appoint Heidi Hieserich Vice-Chair for remainder of 2019. Val Sprynczynatyk seconded. Motion carried.

5. Discussion Items

A. Winter Storm-Related Incident Coordination with State Patrol – Tabled

Dar Pankonie said she would try to work on this before the next 9-1-1 TOC meeting.

B. Fraud/Identity Theft Procedure

Pankonie will be speaking with the Sheriff's Association to determine if they have finalized how fraud claims should be handled.

C. Review of the Unassigned Future Issue List

Pankonie asked that the legislative requirements for Telephone CPR (T-CPR) be added to the topic list. This topic was discussed at last month's SECB NG9-1-1 meeting. Conversations have started between Cathy Anderson at ECN and some centers that do not provide T-CPR.

D. NENA Class

Tracey Fredrick said the MESB did not receive any responses to its RFPs for Resiliency Training. The funds allocated for that class were reallocated to other projects, however there is money left to allow the MESB to hold a one-day NENA course in October. She referred members to the NENA class list handout.

Pass said that Ramsey County would be in favor of the personal development classes of Leadership in the 9-1-1 Center and Change Management; these classes would help to fulfill one of their goals which is future leadership mentoring of staff.

Sprynczynatyk suggested the 9-1-1 customer service class such as Take Seconds, Saves Minutes.

Tony Martin suggested the Human Element of the 9-1-1 Culture class, while Hieserich suggested a class in the personal development area and the Take Seconds, Saves Minutes class.

The group agreed that any of the of the three classes: Takes Seconds, Leadership in the 9-1-1 Center or 9-1-1 Center Culture would be acceptable.

E. Ramsey County Drill

Pass said Ramsey County will be holding a drill for its COOP plan in October and they are seeking PSAP Supervisors to come and observe. The drills will be October 10 from 10:00-2:00 and October 13 8:00-noon in the Arden Hills backup facility. October 13 is the day volunteers are needed for observation. Pass can reimburse for overtime (only). This drill will train sixty employees this year and then sixty will be trained next year.

6. Reports

A. PSAP Operations Round Table Work Group

Kari Morrissey said the workgroup will be bringing some added curriculum requests to the MESB for approval. The additions would be the T-CPR legislation and advanced location technology.

B. SECB NG9-1-1 Committee Report

i. 9-1-1 System Outage

Pankonie said that no additional meetings have yet been scheduled on this matter.

ii. New Classes of Service Implementation

Pankonie said she will be getting out a video next week on the new classes of service. Some of the cell providers are probably already delivering that data, but it is unknown since those classes of service do not exist in the network.

Marcia Broman reminded members that these changes may affect CAD mapping.

PSAP can start the interaction with their CPE vendors.

Dustin Leslie said that ECN is ready, just waiting to get it on the calendar with Intrado in November.

D. 9-1-1 Network Report – (Written Report Attached)

Rohret said that the State has issued a RFP for 9-1-1 Ingress Services.

E. 9-1-1 Data Report – (Written Report Attached)

7. Adjourn

The meeting adjourned at 11:30 a.m.

METRO REGION PORTABLE BACK-UP PSAP RESOURCES

For many years, PSAPs have recognized the need for back-up PSAPs and the challenges involved in maintaining a separate back-up PSAP location. Discussions regarding a regional back-up PSAP facility have foundered due to the expense of building a facility large enough to house call-takers and dispatchers from multiple PSAPs at once, should the need arise. Despite these issues, PSAPs continue to require back-up PSAP resources.

Additionally, a need for surge capacity in the metro 9-1-1 system has been identified. Each PSAP has a limited number of 9-1-1 lines established based on historical call volumes. In the days responding to and recovering from a terrorism or natural disaster event in the metro, these lines will be inadequate. In recent years, a number of incidents occurred across the country where PSAPs are intentionally overwhelmed by denial of service attacks on the PSAP. These cyberterrorism events have impacted PSAPs after police officer involved shootings, during pipeline protests, and during seemingly normal operations.

Background

In the past, some metro region PSAPs had dedicated facilities for a back-up PSAP, including Hennepin and Ramsey Counties. Today, Hennepin County no longer has a facility dedicated as a back-up PSAP but does have the ability for the PSAP to function in an alternate location; Ramsey County currently maintains a back-up PSAP, though recognizes the need for a regional solution for back-up resources. The expense to build and maintain a separate dedicated back-up facility is an impediment to its construction.

PSAPs understand that having a stand-alone back-up resource with a dedicated location may not be the best fit when a disaster strikes. If both the main PSAP and back-up PSAP are not usable, the COOP plan becomes useless. Having the ability to utilize locations within the ten-county metro region better fits the needs of multiple PSAPs that could have various location options.

All PSAPs must have a continuity of operations plan (COOP) that goes beyond having calls routed to an alternate PSAP in the short-term. PSAPs must have plans to operate in an alternate state for several days, if not weeks, in the event their primary locations are compromised.

Proposal

The Metropolitan Emergency Services Board (MESB), working with metro PSAP leadership, proposes a deployable, regional solution for back-up PSAP operations. The solution includes a regional cache of compatible ARMER mobile radio consoles, a shared-hosted back-up 9-1-1 answering solution, and computers which can serve as CAD terminals. The cache components would be staged at various locations across the ten-county metro region and would be maintained and exercised regularly by the MESB's Communications Response Task Force (CRTF) and PSAPs themselves. PSAPs would be responsible, as part of their COOP, to identify locations in or around their respective counties where backup PSAP operations could be deployed. Such a location would need a room of an appropriate size, reliable Internet access, 24/7/365 emergency access, ability to activate HVAC systems, and physical security measures; Scott County, for example, plans to use a large meeting room at a county library.

Radio System Access

Providing telecommunicators with access to the ARMER system can be accomplished via consoles or mobile/portable radios. Motorola has introduced the MCC 7500E IP Dispatch Console, which can be installed in a fixed location or be used to dispatch in a mobile environment. This console is a small form factor workstation, making it ideal for mobile or temporary environments. It has increased radio resource capacity over the MCC 7100 console, with up to 160 radio resources and 60 simultaneous audio streams, along with an enhanced Instant Recall Recorder (IRR).

The proposal would include the purchase of four (4) MCC 7500E consoles. PSAPs would be responsible for providing the appropriate peripheral accessories (headsets, microphones, foot pedals), which can work on either the MCC 7500E or MCC 7100 consoles. The MESB CRTF, ECN, and other metro public safety agencies have caches of portable radios which could be deployed along with the dispatch consoles.

Cost estimate: \$80,000 per console, for a total of \$320,000.00 (non-recurring charges).

9-1-1 Call Answering Applications

Even though a PSAP's phone system, or entire location, could be down, the PSAP is still expected to answer its 9-1-1 calls. Often, PSAPs alternatively route calls to a different PSAP, which is sufficient for a shorter period of time. But for longer periods, it makes sense for a PSAP to relocate to a back-up location at which it can answer its 9-1-1 calls.

The proposal includes the MESB issuing an RFP for a hosted/cloud-based 9-1-1 solution, which would provide 20 phone positions installed on laptops. The MESB would create a virtual PSAP and routing for it, which in normal, day-to-day business, would not receive any 9-1-1 calls or texts. If a PSAP needs to relocate to any one of the designated back-up locations, the 9-1-1 service provider would alternately route some or all of the impacted PSAP's calls to the virtual PSAP equipment. Deployed 9-1-1 telecommunicators would then process calls on the hosted answering solution. In the event of an overcapacity event, 9-1-1 calls beyond the capacity of the primary PSAP could be routed to the virtual PSAP equipment. Alternately, a designated class of service could be routed to the virtual PSAP equipment during large events.

PSAPs could utilize this cache during times when it needs to abandon their primary location, or if their phone system goes down. Additionally, the cache could be used during planned events, such as phone upgrades, deep cleaning of communications center or possibly during construction projects within the center. These types of use would provide PSAP staff with regular training on the cache. It should be noted that this cache would only supply access to 9-1-1 lines, not administrative lines.

Cost estimate: \$40,000 in command post fees and \$10,000 PSAP fee, for a total of \$270,000.00 (non-recurring charges). Monthly recurring fees of \$5,700.00 would be borne by metro region PSAPs.

ComputerAided Dispatch (CAD)

The basic function of CAD is a method of dispatching public safety units (law, fire & EMS) assisted by computer to determine the correct agency response to a specific location and for a specific call type. CAD is also used for its mapping capabilities, messaging to and from responders, and it tracks arrival, status updates and call completion notes. Once the call is completed those records auto populate into the agency's records management system. PSAPs

and their public safety responders cannot expect to have the same CAD capabilities when operating in an emergency back-up situation.

The proposal includes a minimum of three computers to provide basic mapping information and a light local or online CAD database. The cache could utilize recycled mobile data laptops, donated by public safety agencies, through which telecommunicators would be able to access the data in a deployment environment. The MESB CRTF will regularly exercise the backup CAD solution and ensure that the appropriate Windows and anti-virus updates are installed on each deployable CAD position.

Cost estimate: To be determined; MESB will investigate obtaining donated laptops.

Emergency Communications Professional

Initial Training Manual



Metropolitan Emergency Services Board

August 2018

FOR OFFICIAL USE ONLY

Special Thanks:

A special thanks to the members of the Metropolitan Emergency Services Board's 9-1-1 Technical Operations Committee (9-1-1 TOC) and its Training Roundtable Subcommittee for their guidance and technical input to this training manual. This manual contains the basic training information needed to become a fully trained emergency communication professional (ECP). Additional information can be found in each individual agency's Policy and Procedures manual, and on the included Internet links. Emergency communications is an ever changing and challenging profession which requires life-long learning; this manual is the first step of that learning.

Note: As of the date on the cover page, all links included in this document are current and operational. However, PSAP staff should check links before commencing training using this document, as many websites change links frequently. If a link is found to be faulty, please report it using the approved curriculum change process.

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1. Roles and Responsibilities

Scope:

This section introduces the emergency communications professional (ECP) trainee to agency specific information, mission and vision statements, and department service area. The ECP trainee will be introduced to position duties and responsibilities as well as the role of emergency communications in the public safety response system.

Learning Objectives:

1. Ability to articulate the basic vision, values and mission of the Public Safety Answering Point (PSAP) and its umbrella agency
2. Understand the role of the ECP within the public safety response system
3. Review the scope of the duties and responsibilities of the ECP
4. Comprehend the organizational chart both within the PSAP and the greater public safety organization
5. Understand the jurisdictional boundaries of each public safety organization served
6. Understand the expectations for professional behavior

Many agencies have mission and/or vision statements. These statements articulate the scope of the organization and the values it holds. A mission statement describes the 'what' of an organization; it gives a description of the purpose of the organization. A vision statement describes the 'how.' It may include the values, beliefs and vision for the organization. Neither statements give specific instructions for daily operations; rather they serve as repository for the goals for operations and expectations for professional behavior. The [insert agency name] mission and or vision statement states as follows:

[Insert agency mission statement and/or vision statement]

Emergency Communications Professional (ECP)

The U.S. Department of Labor defines the roles of police, fire and emergency medical services (EMS) dispatchers as those who:

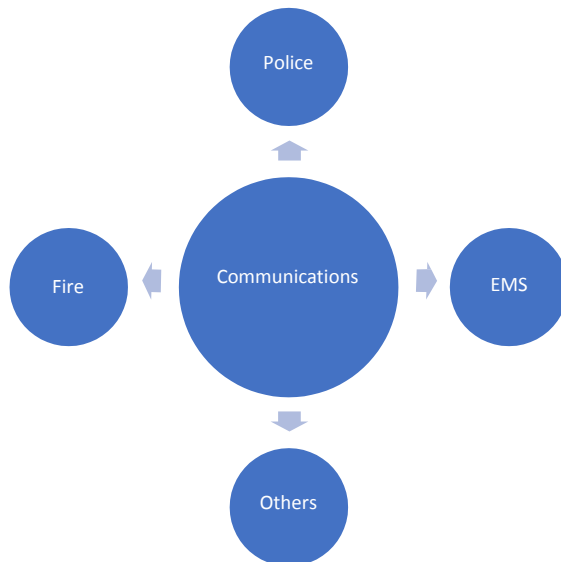
Operate radio, telephone or computer equipment at emergency response centers.
Receive reports from the public of crimes, disturbances, fires, and medical or police emergencies. Relay information to law enforcement and emergency response personnel. May maintain contact with caller until responders arrive.¹ (U.S. Department of Labor)

As the link between the public and the emergency response system, the ECP is responsible to be the voice of the victim until responders arrive. The ECP is an integral partner in the public safety profession. The request

for emergency assistance begins with the ECP who may also have the title of call taker and/or dispatcher. People in this position gather the necessary information to safely and efficiently assign public safety responders – police, fire, EMS and other necessary personnel-to requests for public safety assistance.



Once information is transmitted to the public safety responders, the ECP maintains communications with and between each responding discipline – police, fire, EMS – and, as needed, other responders such as public works, animal control or others. This link remains in place until the call for service is closed.



Scope of Responsibility

ECPs make critical decisions daily. Due to the consequences of one's actions or inactions, the need to be highly trained and cognizant of the scope of responsibilities is paramount to the safety of the public and responders alike. The specific duties and responsibilities are as follows:

[Insert job description]

While these responsibilities may appear overwhelming, **[insert agency name]** is committed to providing the training, feedback and support needed for trainees to become fully qualified ECPs. Each section of this training manual will serve as both a training guide and a resource for trainees. Be advised that this is simply an initial training document; the field of emergency communications is an ever-evolving profession that requires continual training to maintain a high quality of service to **[insert jurisdiction]** community and public safety partners.

The initial training is based on minimum training standards for public safety telecommunications and best practices as developed by the Association of Public-Safety Communications Officials International (APCO). The full document may be accessed at:

<https://www.apcointl.org/download/minimum-training-standards-for-public-safety-telecommunicators/?wpdmdl=6288&ind=0>

To be successful in this profession, one must understand and follow all department issued policies and procedures. These are designed for maximum safety and efficiency while reflecting agency and industry best practices.

[Insert link to local policy and procedure manual]

Communities Served

Each PSAP is responsible for a specific geographic area. The center may be responsible for a city, county, region, response zone or other specified area. The PSAP may serve overlapping areas for individual disciplines, such as EMS. **[Insert PSAP name]** serves the geographic area of:

[Insert cities, geographic area definitions]

Every response zone is unique. In **[insert PSAP name]** response area, the following points of interest which will become familiar to trainees due to their importance or unique response needs:

Insert Agency specific:

Schools

Businesses

Industry

Points of interest

Areas of concern

Rivers/parks

Transportation (bus, train, shipping)

Any other important locations

[Insert PSAP name] public safety partners for these areas are:

Law enforcement agencies and jurisdictional boundaries

Fire departments and response areas

EMS agencies and Response areas

While the above lists the specific agencies, please remember that there may be overlapping areas where multiple agencies, such as police departments, sheriff's departments, and Minnesota State Patrol have response jurisdiction. There are also mutual aid pacts which address calls for services or situations which require additional assistance.

For example, Interstate 94 (I-94) is primarily the Minnesota State Patrol's response area; however, in the event of a life-threatening accident or a lack of available resources, the local police department or sheriff's department may respond to an accident on I-94.

EMS response areas are defined by the State of Minnesota, however, in some instances, non-life-threatening transports may be handled by a contract agency.

Fire departments are also unique. Fire departments range from full-time paid fire departments to paid on-call departments to a combination of both. The status of some fire departments may change according to the time of day or the day of the week, which may dictate a unique response. These will be outlined in detail later in the training.

Chain of Command

According to MBASKool.com:

Chain of command defines the reporting relationship in the organization and indicates which person in the organization reports to whom. It also tells the flow of authority and accountability of the employees within the organization. A chain of command indicates at what place in the organization does the decision making happen.ⁱⁱ (MBA Skool)

Each level of the chain of command has a specific level of responsibility that is outlined within the job descriptions. The higher the level in the chain, the more responsibility is required of the person holding that position.

Communications is a major component in the incident command structure. The chain of command in the Incident Command System (ICS) provides a standardized approach to command, control and coordination of emergency response. Having a working knowledge of the agency's chain of command will alleviate confusion and miscommunications during high stress calls.

Within an organization, one may find several layers this chain. Daily, one may report to a watch commander or shift supervisor. For performance reviews, one may have a specifically assigned supervisor. One may also have supervisors for specialty assignments such as training or special events. It is important to know one's chain of command to maintain clear communications.

[Insert PSAP organizational chart]

[Insert agency organizational chart]

Code of Ethics

Every business, school or organization has a code of ethics. A code of ethics is a set of guidelines which defines the expectations for one's action and behavior in accordance with an organization or profession's primary values and behavior. An agency's code of ethics may be found within a job description, vision statement or policy and procedure manual outlining expectations for professional behavior.

[Insert appropriate department documents]

In addition, there are two professional emergency communications organizations, APCO and the National Emergency Number Association (NENA). Both publish their own codes of ethics. These codes are regarded as standards among emergency communication professionals.

APCO Public Safety Telecommunicators' Code of Ethics

As a Public Safety Telecommunicator, I am dedicated to serve the public; to safeguard life and property; to keep my personnel informed on all calls that may require their attention; to assist all public safety vehicles and personnel in the performance of their duties; assure that all rules and regulations which govern my position are not violated in any manner.

I will keep my private and social life free from all criticism; maintain a calm attitude during times of stress and emergencies; develop self-control and be constantly mindful of the welfare of others, regardless of race, creed, or religion. I will obey the laws of the land, rules, and regulations of the Federal Communications Commission and my department. Whatever information I receive of a confidential nature will be revealed only in the official performance of my duties.

I will never act in a selfish or unofficial manner or let my personal feelings,

friendships, prejudices or animosity influence my decisions. I will enforce the rules and regulations of my department and the Federal Communications Commission without fear, favor or ill will, never employing unnecessary force and never accepting gratuities.

I recognize the high responsibility of my position as a symbol of public faith and trust and will accept it to be held as long as I am faithful to the ethics of public safety service. I will constantly strive to achieve those objectives and ideals, which govern my profession, dedicating myself, before God, to my chosen profession, public safety telecommunications.

Author: Evert E. Carter, Chief Dispatcher Williamson County Sheriff's Department Marion, Illinois 1981¹⁰

National Emergency Number Association's Code of Ethics

Emergency Number Professionals (ENPs) must maintain professional standards of competence, morality and integrity. To accomplish this, the NENA Institute Board has adopted the following Code of Ethics as a guideline to ascertain that an individual is initially qualified and eligible to maintain status as an Emergency Number Professional, and to establish grounds for possible suspension or revocation.

- 1. ENPs shall place the needs of the public as their first priority.*
- 2. ENPs shall obey all laws and regulations and should avoid any conduct or activity that would cause harm to citizens that they serve.*
- 3. ENPs shall continually seek to maintain and improve their knowledge, skill and competence related to emergency communications, through education, training and other methods of self-improvement.*
- 4. ENPs shall faithfully and diligently perform their assigned duties to the best of their ability.*
- 5. ENPs shall foster awareness and understanding of the importance of emergency communications*
- 6. ENPs shall strive to meet the highest standard of personal conduct and maintain the integrity and reputation of Emergency Number Professionals by adhering to this Code of Ethics.**

One may wonder why there is such an emphasis on personal behavior and integrity. The reality is that at some point during one's career, one may be subpoenaed to testify in court. Personal and professional integrity may be called into question. Adhering to a high ethical standard reflects the professionalism and public trust which **[insert agency name]** has placed in its employees.

The second reason to adhere to a code of ethics relates to daily activities. Communications is team effort. As such, one is part of the overall public safety response team and the communication center team. To maintain a healthy work environment, employees must always treat each other with respect. Each team member must fulfill their responsibilities in an efficient, professional manner in each call for service, with each public interaction and with each radio transmission. This is a profession where one's actions may involve a life or

death decision. Adhering to a high code of ethics leads others to trust in one's ability to perform the duties to which one is entrusted.

The ECP's behavior is also dictated by local, regional, state and national best practices, policies, rules and regulations. These standards will be referenced in each section to which they apply.

APCO - Minimum Training Standards

APCO is the international professional organization for public safety telecommunicators. Though some states have mandatory minimum training requirement, Minnesota does not require any minimum training standards or license. Many PSAPs follow the APCO training standards to train telecommunicators. APCO standards describe core competencies as, "The unique traits, requisite knowledge, comprehension and application of skills and situational analysis leading to the appropriate response to the caller, co-worker, other public safety stakeholders or event(s) consistent with general practices and locally defined parameters."^v(APCO)

Section Review

1. What is the difference between a vision statement and a mission statement?
2. What values are articulated in these documents?
3. What is the basic mission of the emergency communication center?
4. What is the mission of the ECP?
5. What agencies are served by the communication center?
6. What is a chain of command?
7. Where does the ECP fit into the chain of command?
8. Does the chain of command differ between police, fire and EMS? If so, how?
9. What role does ethics play in the communication center?
10. Why is it important to maintain a high level of integrity both on and off duty?

Optional Exercises

1. Provide a map on which the trainee outlines the jurisdictional boundaries for police, fire and EMS.
2. Give a list of important landmarks for the trainee to find on a map
3. Ride along with an officer to give visual references to the above landmarks and to discuss the officer's communication needs

ⁱU.S. Department of Labor, Bureau of Labor Statistics, 43-5031 Police, Fire, and Ambulance Dispatchers, www.bls.gov/oes/current/oes435031.htm#nat. Accessed October 2, 2017.

ⁱⁱMBA Skool, Concepts of Human Resources, Chain of Command, www.mbaskool.com/business-concepts/human-resources-hr-terms/16140chain-of-command. Accessed October 2, 2017.

ⁱⁱⁱCarter, Evert E., Chief Dispatcher, Williamson County Sheriff's Department, Marion, Illinois, 1981, www.apcointl.org/resources/9-1-1/9-1-1-public-information/code-of-ethics.html. Accessed October 7, 2017.

^{iv}NENA Institute Board, ENP Policy and Procedure, April 19, 2017, pg. 11.

https://cdn.ymaws.com/www.nena.org/resource/resmgr/enp/nena_institute_board_enp_pol.pdf. Accessed October 17, 2017.

^vAPCO International, Minimum Training Standards for Public Safety Telecommunicators, pg. 12,

www.apcointl.org/download/minimum-training-standards-for-public-safety-telecommunicators/?wpdmdl=6288&ind=0. Accessed September 26, 2017.

2. Legal Concepts

Scope:

This section deals with the legal obligations of the ECP. Concepts such as confidentiality, liability, negligence and duty will be discussed. Minnesota State Statutes, Minnesota Administrative Rules and dispatch protocols will be introduced.

Learning Objectives:

1. To be introduced to the terms, liability, negligence and duty
2. To have a basic understanding of the privacy concerning 9-1-1 calls
3. Learn how the department policies and procedures impact the actions of the ECP
4. To have a basic introduction to:
 - a. HIPAA
 - b. Data privacy
 - c. Kelsey's Law
 - d. Safe at Home

Organizational and Personal Integrity

This section deals with organizational and personal integrity. Agency policy and procedures are in place to ensure that the ECP and the agency ensure the highest level of professionalism as possible. The policies and procedures are in place to reduce the exposure to liability. No one is 100% clear of liability for any call, but by following the established policies and procedures, this liability can be reduced.

Below are some definitions:

Duty: Duty is a moral or legal obligation; a responsibilityⁱ (Oxford). Duty is a requirement to take action. For the ECP, the responsibility to act begins with the first ring of the telephone. One has the responsibility to answer a 9-1-1 call as quickly as possible.

Negligence: Negligence is the failure to act or the failure to use reasonable care as would be exercised by another person in similar circumstancesⁱⁱ (Merriam Webster). Intent for harm is not required to be present in instances of negligence, just a failure to take action or a breach of duty. If the ECP ignores a ringing 9-1-1 line in hopes that another ECP will answer the call, such action could be construed as negligence due to the lack of action.

Liability: The condition of being actually or potentially subject to an obligation; condition of being responsible for a possible, or actual loss, penalty, evil expense or burden; condition which creates a duty to perform an act immediately or in the future. ECPs can be held liable for the actions they take or do not take. For example, if an ECP does not verify a caller's address for a medical emergency, responders may initially be sent to an incorrect address, which delays response, even if the error is quickly identified and corrected. In a lawsuit, the ECP can be held responsible for the delay in EMS response, even if the response did not have an impact on the outcome of the call.

Vicarious Liability: “A legal doctrine referring to the imposition of liability on one person for the actionable conduct of another based solely on a relationship between the two persons. For example, the liability of an employer for the acts of an employee”ⁱⁱⁱ (APCO, 13).

Vicarious liability is the responsibility the supervisor holds for the actions of the ECP. By reviewing the chain of command, the ECP will see who is responsible for whom.

Department policies and procedures are in place to outline the ECP’s duties and responsibilities. They are also in place to limit the liability an ECP may carry in the event of a lawsuit or disciplinary action. When questioning what action needs to be taken or not taken, ask the on- duty supervisor or assigned supervisor for direction.

Criminal Law versus Civil Law

Law enforcement usually deals with criminal law. According to Brian Duignan, “Criminal law governs behavior that is or can be construed as an offense against the public, society or the state – even if the victim is an individual.” Criminal laws are designed to keep society safe. Examples of offenses which fall under criminal laws or codes are: driving under the influence, murder, assault, and other actions that may adversely impact the safety and well-being of the public.

Civil law deals with behavior that constitutes an injury to an individual, or other private party. Duignan states, “Civil disputes involve such things as libel, slander, defamation of character, breach of contract or other acts which impact a single individual or corporation”^{iv}(Duignan). Civil cases are brought by an individual against another individual. Examples of civil cases are: eviction due to non-payment of rent, a dispute over a bill for car repairs, late child support payments, and numerous others.

While the ECP usually handles calls regarding criminal or safety events, he/she may also receive calls for civil disputes. Each agency may handle civil cases differently, depending on circumstances. Agency specific guidelines are as follows:

[Insert agency specific policies and response guidelines]

Data Practices

Retention:

Minnesota Statutes give clear direction regarding 9-1-1 call recordings and retention. This statute was written at a time when all 9-1-1 tapes were large reel-to-reel tapes. The space to store more than 31 days of tapes was immense. If a tape needed to be held for evidence, new tapes needed to be put into circulation. This was a cumbersome process. Today’s recordings are digital and take less space. The legal retention period gives a minimum retention required; however, longer retention periods are acceptable. Retention tables must be on file with the Minnesota Historical Society. Minnesota Administrative Rules 7580.600, Subp.5 reads as follows:

Recording calls. The PSAP manager shall develop and maintain a system for recording 9-1-1 calls received by the PSAP. The records shall be retained for a period of at least 31 days from the date of the call and shall include the following information: date and time the call was received; nature of the problem; and action taken by the dispatcher. A magnetic tape recording will satisfy this requirement.

[Insert agency retention policy]

Audio Recordings:

Minnesota is one of the few states which does not allow the audio recording of the 9-1-1 call to be released to the general public. The exception is if the caller gives written permission to release his/her call to the public. A written transcript is considered public information. Actual costs associated with transcribing the call can be charged to the requesting individual. The second exception is for training purposes. Calls can be reviewed and played for public safety training purposes only. Any other sharing of the actual audio of the call is prohibited. Minnesota State Statute (MSS) 13.82 Sub.4 covering audio recordings states:

The audio recording of a call placed to a 9-1-1 system for the purpose of requesting service from a law enforcement, fire, or medical agency is private data on individuals with respect to the individual making the call, except that a written transcript of the audio recording is public, unless it reveals the identity of an individual otherwise protected under subdivision 17. A transcript shall be prepared upon request. The person requesting the transcript shall pay the actual cost of transcribing the call, in addition to any other applicable costs provided under section 13.03, subdivision 3. The audio recording may be disseminated to law enforcement agencies for investigative purposes. The audio recording may be used for public safety and emergency medical services training purposes.

As the 9-1-1 call is considered evidence, especially in domestic assault cases, the ECP may receive a subpoena to appear in court to testify to her/his actions during and after the call. Special training and/or instructions may be provided by the county/city attorney's office, the ECP supervisor, or other trained personnel.

For more information on public safety department data practices see [MSS 13.69](#).

Media/Information Dissemination:

Every agency has a policy on dissemination of information to the media. Some may have specific officers assigned to public relations, others utilize the Chief or other law enforcement officer. Fire and EMS disciplines engage in many of the same or similar information dissemination policies. The ECP must ensure that he/she does not inadvertently release information through general conversations with media personnel or other non-authorized individuals.

[Insert agency information dissemination protocol]

Health Insurance Portability Accountability Act (HIPAA):

There are other statutes and laws which give directions in the official duties of an ECP. The Health Insurance Portability Accountability Act (HIPAA) covers what information can be shared between the caller, the ECP and the responders. Health information given over the radio or mobile data computer (MDC) to a public safety responder must comply with HIPAA. Generally, most PSAPs are not HIPAA covered entities and therefore HIPAA does not apply. Even those that may be, such as PSAPs owned and operated by an EMS health care provider, are permitted to any disclosure of personal health information that is necessary for patient treatment purposes. This covers most EMS related transmissions between the PSAP and field responders.^v

Full information regarding HIPAA may be accessed at:

<https://www.hhs.gov/hipaa/for-professionals/faq/505/what-does-the-privacy-rule-allow-covered-entities-to-disclose-to-law-enforcement-officials/index.html>

Kelsey Smith Act:

The Kelsey Smith Act was signed into Minnesota law in 2010. This act requires cell phone companies to turn over to law enforcement records that show the location of a person who is missing and/or in danger. The ECP may be asked to contact a cell phone company's security department to "ping" a phone. The ping is an electronic signal which pinpoints a phone's location. In the event of an emergency, cell phone companies may request an administrative subpoena which gives the cell phone company the phone number to ping, the nature of the emergency, the case file number and the requesting officer's name. This act only covers immediate emergencies. All other location inquiries require a subpoena.

Safe at Home:

Minnesota Statutes Chapter 5b and Minnesota Rules Chapter 8290 cover the Safe at Home program. This program is designed for those individuals who fear for their safety to maintain a confidential address. When someone enrolls in Safe at Home, they are given an address which is a post office box number with an additional lot number; this becomes the participant's legal address.

All participants have the same post office box number. The lot number is unique to specific individuals. The physical address of the participant is kept private within the Minnesota Secretary of State's Office. If a participant calls 9-1-1, the ALI and ANI screen will be displayed as is done in all other 9-1-1 calls. The ECP must verify the location according to best practices for all 9-1-1 calls.

Additional best practices for law enforcement are outlined on the Secretary of State's website:

<https://www.sos.state.mn.us/safe-at-home/about-safe-at-home/>

Section Review

1. Explain how an agency's policies and procedures impact the liability of the ECP
2. Discuss the differences between duty and negligence
3. Review the data retention of the 9-1-1 logs and why 9-1-1 calls are retained
4. Discuss the importance of the Kelsey Smith Act. How does it impact the pinging of cellphones?
5. Safe at Home has several benefits and concerns. Discuss with your trainer these benefits and concerns
6. HIPAA is heard often with regards to sharing of health information over the radio. Discuss with your trainer the impact of HIPAA when dispatching medical emergencies

ⁱ Oxford Dictionary. <https://en.oxforddictionaries.com/definition/duty>. Accessed January 15, 2018.

ⁱⁱ Merriam-Webster Dictionary. www.merriam-webster.com/dictionary/negligent. Accessed July 12, 2018.

ⁱⁱⁱ APCO, APCO ANS 3.101.3-2017, pg.13. <http://dev.apcointl.org/doc/911-resources/apco-standards/432-competencies-training-requirements-for-public-safety-communications-training-officers/file.html>. Accessed January 15, 2018.

^{iv} Duignan, Brian, "What is the Difference Between Criminal Law and Civil Law?", Encyclopedia Britannica. www.britannica.com/story/what-is-the-difference-between-criminal-law-and-civil-law. Accessed April 15, 2018.

^v Wolfberg, Douglas, Stephen R. Wirth & Ryan S. Stark, "HIPAA Didn't Kill the Radio Star." <https://psc.apcointl.org/2010/08/26/hipaa-radio-emd/>. Accessed April 15, 2018.

3. Interpersonal Communications

Scope:

Interpersonal communications in the PSAP takes several forms. This chapter introduces the ECP to the concept of active listening. Barriers to clear communications, communications cycle and de-escalations techniques will be introduced.

Learning Objectives:

1. To understand the difference between hearing and listening
2. To learn what may be barriers to clear communications
3. To understand how one's own bias and beliefs impact communications
4. To understand how the communications cycle works
5. To explore de-escalation techniques and ways of controlling

Listening Versus Hearing:

Early studies on communications estimated that 93% of communications is non-verbal with the spoken word comprising just 7% of all communications. More recent studies have determined that 70% of all communications is the interpretation of body language. Tone of voice, speed, enunciation and volume comprise 23% of spoken communications. That leaves only 7% of communications based only on wordsⁱ (Aurora Employee Assistance Program).

While listening and hearing are often used interchangeably, these terms have very different meanings. Hearing is one of the ECP's five senses. Hearing is perceiving soundⁱⁱ (UMD). It is receiving sounds waves through one's ears. Hearing occurs all the time whether one realizes it or not. It is the biological function of the ears.

Listening is the act of consciously hearing sound and understanding the meaning of the words (UMD). The ECP relies on active listening to gather and process information. One's normal rate of speech is 125 to 150 words per minute. The human brain can process 400 to 800 words per minute (Aurora). This excess brain computing power allows the ECP to process not only the spoken word, but also voice inflection, speed, background sounds and other sounds which comprise the caller's message.

Barriers to Clear Communications:

The inflection placed on words can change how an ECP perceives a message. Voice inflections, volume, tone can impact the interpretation of the spoken word. This is especially true when the conversation does not contain the visual clues of face-to-face communications. Read the following message out loud, placing the emphasis on the word in **BOLD CAPITALIZATION**:

I didn't say he stole the money.
 I **DIDN'T** say he stole the money. I didn't **SAY** he stole the money
 I didn't say **HE** stole the money.
 I didn't say he **STOLE** the money. I didn't say he stole **THE** money.
 I didn't say he stole the **MONEY**.ⁱⁱⁱ (Power Phone)

As one reads the sentences, notice how the inflection changes the concept of the meaning. Is the sentence defending the speaker (I) as in the first three sentences? Is the speaker clarifying what the subject (he) did or not do? Each time different word is emphasized, the interpretation of the sentence changes.

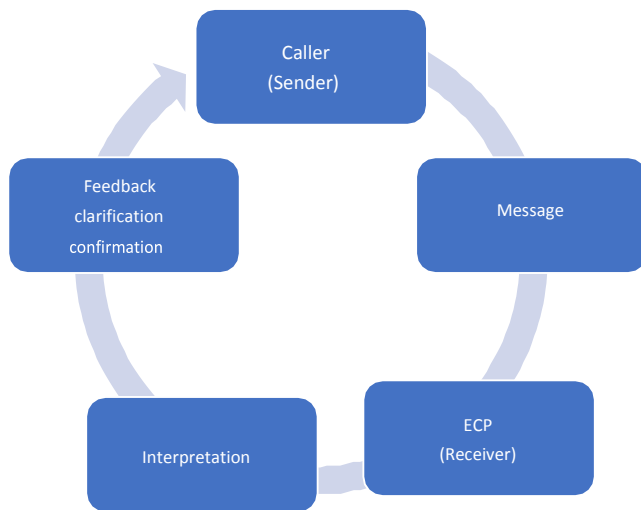
While this exercise shows one barrier to communications, there are additional barriers which may impact the ability to listen and interpret conversations correctly. The ECP's interpretation of a spoken words may be clouded by one's own background. As a call taker, the ECP should be aware of barriers which we all face. Some additional barriers are:

- Jumping to conclusions - based on the ECP's own background, experiences and values, the ECP needs to be cautious of jumping to conclusions by assuming what the caller is going to say next.
- Making assumptions – based on the caller's speech pattern, the ECP may unconsciously make negative assumptions of the caller's truthfulness, bias, economic or other life style situations.
- Tuning out ideas or values which conflict with one's own values or ideas thus not listening to the message. These can be racial, religious, cultural, socio-economic or other.
- Preparing a response or talking to another person, rather than listening to the entire message. While this occurs in both face-to-face communications, it is especially important to be aware of this during phone conversations. Momentarily dropping out of a conversation to answer a co-worker, responder or just to focus on a CAD entry may cause the ECP to miss a critical piece of information.
- Using unintended vocal intonations such as sighs, coughs, groans, volume (too loud or too soft) speech patterns (too slow or too fast), emphasis on specific words. As in the bullet point above, this can be an unconscious response to a caller or situation. The ECP may need to clarify a message if the caller's speech pattern is difficult to understand. The ECP must also be aware that he/she could send the same unclear communications if their own communication style contains such vocal elements. Many people, ECPs included, talk to themselves out loud. ECPs must be aware of how their communication affects the caller.

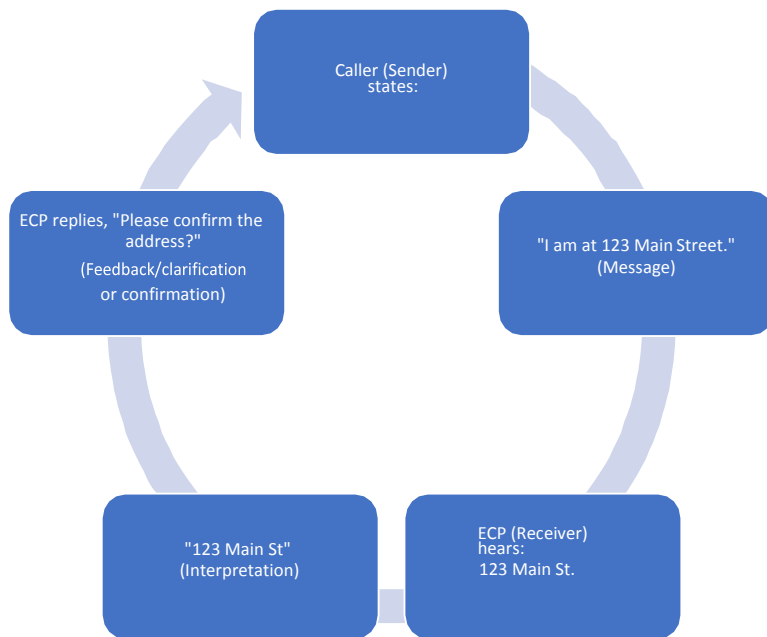
The diversity of the population also impacts communications. Diversity encompasses age, race, gender, ethnicity, culture, sexual orientation, physical ability or limitations, socio-economic status, religious and political beliefs and other ideologies. As an ECP, one will encounter diversity. As the population becomes more diverse, the ECP is challenged to become more effective in maintaining the communication cycle.^{iv}

Communication Cycle:

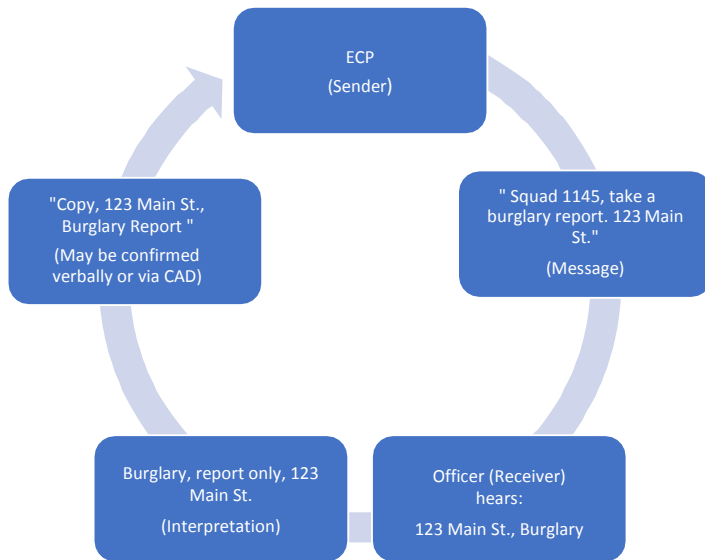
The communication cycle is a continuous loop of sending, receiving and clarifying messages. The caller provides information (message) to the ECP. The ECP interprets what he/she thinks the caller said. Confirmation, clarification or feedback is given to the caller by the ECP to ensure the caller's information (message) has been received correctly.



This communications cycle is used on every call, both with the public and public safety responders. Every time the ECP requests verification of an address from a caller, the communication cycle has made one revolution. Below is a common example of the communication cycle.



When the communication cycle is between the ECP and a public safety responder the elements of the cycle remains the same. Repeating information may or may not be necessary depending on the technology being used. When CAD is used, the information may be voice or CAD dispatched. The “feedback/clarification” stage can be confirmation of the information via the written information in CAD.



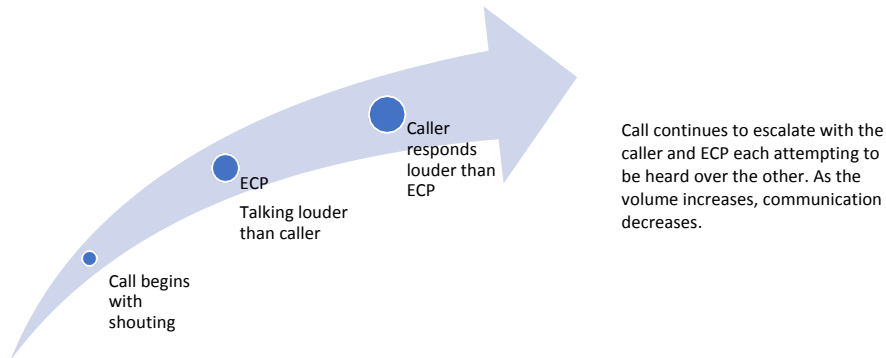
With each piece of information given, the communication cycle repeats. Through the interpretation and feedback both individuals ensure that the correct information is given and received.

De-Escalation Techniques:

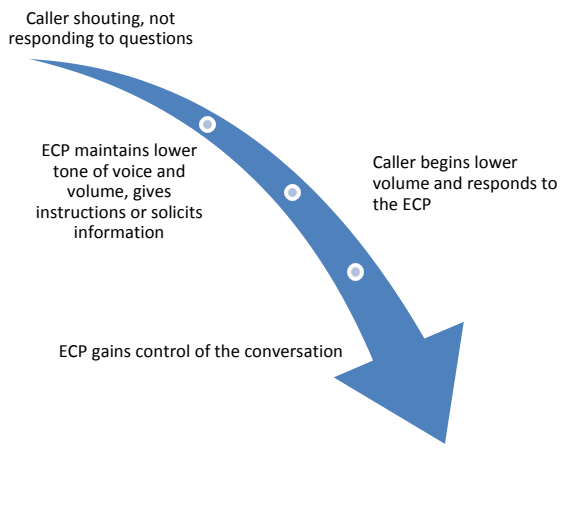
While the communication cycle looks easy on paper, it is far from simple. Facing a crisis, callers can often be emotional. The caller may have difficulty thinking clearly. One may be crying, screaming or shouting. The caller may have difficulty answering questions or following directions. These barriers to clear, concise communication need to be controlled by the ECP to the best of her/his ability. There are several techniques which have proven successful in de-escalating communication:

- Be patient – sound patient. Remember that calling 9-1-1 is the result of the caller needing assistance. This may be the only time the caller contacts 9-1-1. The ECP may not believe the caller has a true emergency; however, to the caller, the situation may be a true crisis.
- Assist the caller in keeping focused on listening to you, the ECP. This will minimize anxiety and lower emotions. If needed, direct the caller to think about focusing on the questions being asked. Re-assure the caller that these questions assist in assigning the correct responders to the call.

- Use persistent repetition. It is natural to attempt to talk louder than the caller to gain control of the conversation. This power struggle escalates the call.



- The ECP, using a consistent lower volume, steady tone of voice, pitch and inflection, will gain control of the conversation. Repeating questions or giving directions at a lower volume and pitch than the caller draws the caller down. This repetition may need to be done several times before the caller begins to respond.



- Maintain an appropriate rate of speech. Remember that the caller is in crisis mode. The caller may not be able to process questions as quickly as the ECP expects. Remember that the rate of speech is between 125 to 150 words per minute. However, people hear at 400 to 800 words per minute. There may be a delay between asking a question and hearing the answer.
- Use appropriate emotional tone. This involves learning to gauge the response of the caller. The ECP does not have the benefit of the visual part of communication. The ECP must rely on having the proper verbal response to the caller and project empathy, understanding, and confidence to the caller.
- Articulate clearly. The use of acronyms, professional terminology, or slang may confuse the caller, thus impeding the exchange of information. Professional language reflects professional behavior.
- Establish a rapport with the caller by using the caller's name when appropriate. This is especially important when dealing with a suicidal caller. By using the caller's name, the ECP begins to develop a relationship with the caller. It subtly acknowledges and affirms the caller's identity.
- The ECP must be aware of their own emotions and bias. The ECP hears through their personal filters. It is important to recognize emotional triggers which may impact the interaction between the caller and ECP.^v (APCO)

Language Line Translation Services:

Language diversity becomes more problematic as the population changes. There is assistance available when dealing with language barriers. The State of Minnesota provides telephone translation services through the Language Line. The Language Line provides translation services for over 140 different languages. For the PSAP, this service is free of charge for emergency calls. For non-PSAP calls, there is a fee charged to the agency. The Language Line access code should be used for the PSAP only. Each agency has its own unique identifier which is needed when Language Line is engaged. To hear a demonstration of the Language Line, call:

1-800-996-8808

The Language Line number for active calls is: [insert Language Line Phone Number]

The one-button transfer for conferencing in Language Line is labeled [insert PSAP Language Line label].

The agency ID is: [insert agency ID here].

More information regarding the Language Line can be found at:

<https://dps.mn.gov/divisions/ecn/programs/911/Pages/language-integretation.aspx>

When calling the Language Line, the ECP will be asked for the agency ID and language needed. The

Language Line will connect the ECP and caller with the correct Language Line translator. These translators will translate the message only. They are not to interpret the messages being translated. Nor can the translator answer questions directly. Much like dealing with hard of hearing callers, only one person may talk at a time. Since these calls are conferenced together, the ECP can continue monitoring the call for background sounds, voice quality and elements.

Deaf and Hard of Hearing Callers:

The Deaf and hard of hearing community is another diverse population. If someone in this community contacts 9-1-1 directly, they will use either a TDD/TTY machine or use text messaging on their wireless device. Text-to-9-1-1 is supported in all PSAP service areas in Minnesota. As covered in Emergency Communications Technology and Information Systems, some callers will use American Sign Language while others will use standard English. With text to 9-1-1 messaging, do not use acronyms or abbreviations unless used by the caller. The ECP may need to ask for clarification or request that the caller not use acronyms or abbreviations in their text messages. Be aware of the communication language that is unique to the TDD/TTY.

Instead of contacting 9-1-1 directly with TDD/TTY, or text to 9-1-1, callers may use the Minnesota Relay Service. Much like the Language Line, the translator will not interpret the messages or independently attempt to clarify information. They will only translate the conversation. For more information regarding the Minnesota Relay services, see link below:

<https://mn.gov/commerce/consumers/your-phone/minnesota-relay/making-a-relay-call.jsp>

The ECP must develop a higher skill level of communication. Active listening, being aware of the communication cycle, de-escalation skills will develop with practice. Remembering that cultural differences, language, age and values all can hinder clear communication. Persistent repetition, de-escalation techniques and the knowledge of the communication cycle will assist the ECP in developing the skills needed to be successful in this profession.

Section Review

1. What is the difference between hearing and listening?
2. How does word inflection change the meaning of a sentence? Why is this important to know?
3. List three barriers to clear communications and explain how they are barriers
4. Describe the communication cycle
5. What is persistent repetition?
6. How does the Language Line assist the ECP?
7. Describe how the Minnesota Relay Service works?

Optional Exercises

1. With the Communications Training Officer (CTO) or another trainee, sit back to back with one ECP describing to the other ECP how to create a Lego model by descriptions only.
2. Using a shuffled deck of cards, the ECP should sort the deck of cards into suits while processing a mock call. (Listen, ask clarifying questions, determine background noise, etc.)
3. Listen to the audio log transcripts of various types of calls. Listen for conversation, voice inflection, background noise, etc. which may impact public safety response.

ⁱ Aurora Health Care Employee Assistance Program, "The Art of Communication." www.marquette.edu/hr/documents/the-art-of-communication.pdf. Accessed February 18, 2018.

ⁱⁱ University of Minnesota, Duluth, "Hearing vs. Listening." www.d.umn.edu/kmc/student/loon/acad/strat/ss_hearing.html. Accessed February 18, 2018.

ⁱⁱⁱ Power Phone, "Teaching Interpersonal Communications Skills to New Telecommunicator Hires." <https://powerphone.com/teaching-interpersonal-communication-skills-to-new-telecommunicator-hires/>. Accessed February 18, 2018.

^{iv} Queensborough Community College, "Diversity." www.qcc.cuny.edu/diversity/definition.html. Accessed February 20, 2018.

^v Reichman, Stephen H. Sr., "High Performance CPR." www.apcointl.org/download/cde-44542-high-performance-cpr/?wpdmdl=6080&ind=0. Accessed February 20, 2018.

QUICK REFERENCE GUIDE



Minnesota 911

Keep this Quick Reference Guide (QRG) nearby for easy reference to effectively utilize Language Line® Over-the-phone Interpretation Service.

WHEN RECEIVING A CALL:

1. Inform your limited English speaking caller to stay on the line while you connect them to a Language Line interpreter
2. Dial: **1-888-269-4601** (Client ID 909972 is prepopulated so you don't need to enter it)
3. Enter on your telephone keypad or provide the representative:
 - Press 1 for Spanish
 - Press 2 for Somali
 - Press 3 for Hmong
 - Press 4 for Karen
 - Press 9 for all other languages and speak the name of the language you need at the prompt.

If having difficulty or need assistance Press 0 or say "help" at any time.
An Interpreter will be connected to the call.

4. Brief the Interpreter. Summarize what you wish to accomplish and give any special instructions.
5. ADD THE limited-ENGLISH SPEAKER to the line.
6. Say "End of Call" to the Interpreter when the call is completed.

IMPORTANT TIPS:

UNKNOWN LANGUAGE – If you do not know which language to request, our representative will help you.

LINE QUALITY PROBLEMS – If you have problems before reaching a representative, press "0" to be transferred. If there is a sound quality problem, ask the representative to stay on the line to check for sound quality. If you have problems connecting to an Interpreter call Customer Service at 1-800-752-6096.

WORKING WITH AN INTERPRETER – Give the Interpreter specific questions to relay. Group your thoughts or questions to help conversation flow quickly.

LENGTH OF CALL – Expect interpreted comments to run a bit longer than English phrases. Interpreters convey meaning-for-meaning, not word-for-word. Concepts familiar to English speakers often require explanation or elaboration in other languages and cultures.

INTERPRETER IDENTIFICATION – Our Interpreters identify themselves by first name and number only. For reasons of confidentiality, they do not divulge either their full names or phone number.

DEMONSTRATION LINE – To hear a recorded demonstration of over-the-phone interpretation call our demonstration line at 1-800-996-8808 or visit our website at www.LanguageLine.com

DOCUMENT TRANSLATION – We also provide written translation services, for more information please contact our Document Translation Department at 1-888-763-3364 or email translation@languageline.com.

CUSTOMER SERVICE – To provide feedback, commend an Interpreter, or report any service concerns, call Customer Service at 1-800-752-6096.

Language Line Services • 1 Lower Ragsdale Drive, Bldg. 2 • Monterey, CA 93940

www.LanguageLine.com

4. RADIO COMMUNICATIONS

Scope:

The State of Minnesota's Department of Transportation owns and operates the backbone of the Allied Radio Matrix for Emergency Response (ARMER) radio system. This section will introduce the ECP to the radio system and the best practices developed by the Statewide Emergency Communications Board (SECB), and its Operations and Technical Committee, Interoperability Committee and the Dispatch Best Practices Workgroup.

Learning Objectives:

1. To successfully complete the Alexandria Technical and Community College on-line training modules for the ARMER radio system
2. To understand the basics of the ARMER system
3. To learn the work flow of the ARMER as it relates to the ECP's local, regional and statewide communications responsibility
4. To have a basic understanding of need proper radio protocols.

Allied Radio Matrix for Emergency Response (ARMER)

Backgroundⁱ (ECN):

Lack of integrated communications is listed among the highest concerns when public safety responders and emergency communication professionals participate in critical incident reviews. Radio technicians cite the lack of radio spectrum availability as a mitigating factor regarding technology integration. Historically, public safety radio communications transmitted via UHF or VHF. Neither system lends itself to shared communications. With the need for better spectrum allocation, APCO Project 25 was developed to migrate public safety to a shared 700 and 800 MHz system.

The migration led to the Allied Radio Matrix for Emergency Response (ARMER) system which is an 800 MHz trunked radio system operating throughout Minnesota. Governed by the SECB with authority from MSS 403.20 through 403.40, ARMER is divided into seven regions. The core radio backbone is owned by the Minnesota Department of Transportation (MnDOT), which began building the system in the Twin Cities metro region in the early 2000s, with the St. Cloud and Rochester regions following. MnDOT had 97% of the statewide backbone tower sites completed and on the air in January 2016. With the buildout essentially complete, today's focus is on maintenance and system enhancements.

Best Practices:

Approved by the SECB, the Minnesota Dispatchers Communication Best Practices Guide serves as both a training guide and a resources manual for the ECP. The best practices document which guides the ECP is located here:

<https://dps.mn.gov/divisions/ecn/Lists/TrainingResources/Attachments/7/2018-4-23%20DISPATCHERS%20Best%20Practice%20Guide%20%20SECB%20approved.pdf>

Trainingⁱⁱ (SECB):

The Minnesota Dispatchers Communications Best Practices requires all new ECPs to complete the on-line ARMER courses hosted by the Alexandria Technical and Community College. Specifically, the following modules are required:

- Radio 101
- History of ARMER
- Interoperability 101
- Interoperability: How to Communicate Outside Your Agency
- Computer Basics for Dispatchers
- Dispatcher Technology Part I
- Dispatcher Technology Part II
- MCC7500 Dispatch Console, Part I
- MCC7500 Dispatch Console, Part II
- Dispatch Scenario Module

To access these training modules, see: <https://alextech.learn.minnstate.edu>. For the nine-county metropolitan region, the Star ID and password are as follows:

Star ID: **Metro**

Password: **region123**

Please note that the ID and password are case sensitive. PSAPs may have their own Star IDs and passwords which can be used.

In addition to the ARMER training, FEMA/NIMS training is also required. These classes are available online. Please refer to the Emergency Management section of this training guide for required on-line training.

ARMER Training Highlights

ARMER Coverage Maps:

With the exception of Red Lake County, all Minnesota counties use the ARMER system as their primary method of public safety radio communication. Red Lake is a limited participant in ARMER as it has not fully integrated into the system.

Seven regional emergency communications boards were formed in the mid-2000s. Each region has both local and regional radio resources called “talk groups” to communicate with local departments and neighboring jurisdictions.

Additionally, statewide and national talk group resources are available for larger events or those spanning regions.

The seven regions comprising the ARMER system are:

1. Northwest
2. Northeast
3. Central
4. Metro
5. Southwest
6. South Central
7. Southeast

The metro region is comprised of nine counties¹:

1. Anoka
2. Carver
3. Chisago
4. Dakota
5. Hennepin
6. Isanti
7. Ramsey
8. Scott
9. Washington

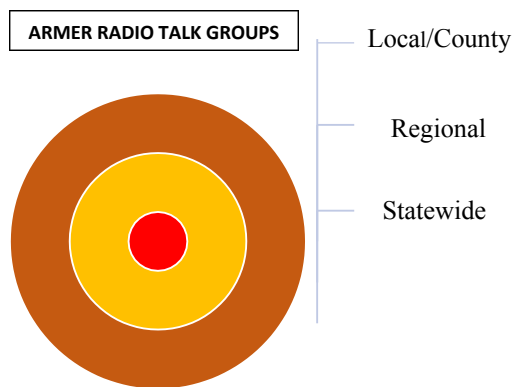
Maps of the regions can be found on the Department of Public Safety website. The maps illustrate the regions as well as participation by discipline. To view the ARMER participation maps by county and discipline please see:

<https://dps.mn.gov/divisions/ecn/programs/armer/Pages/current-status.aspx>

¹ Effective January 1, 2019, the metro region will consist of ten counties. Sherburne County will be part of the metro region on January 1, 2019.

Talk Groups and Talk Group Priorities:

The ARMER radio talk groups are arranged much like a target. Local talk groups comprise the bull's-eye with regional, statewide and national resources comprising the ever-widening circle. Only as an event moves out from the center does the ECP need to patch from local to regional to statewide to national talk groups.



The center of the bull's-eye comprises the local and county-wide talk groups which handle daily and routine radio traffic. Use of local and county-wide tactical talk groups (TACs) are assigned with emergency communications starting with the lowest numbered TAC moving through to the highest, (1 through 10). For training and scheduled events, the highest number TACs shall be assigned working down to the lowest numbered (10 through 1).

Moving out from the bull's-eye, the next level is the regional talk groups. These are reserved for those incidents which include response from multiple agencies, possibly from different counties, but stays within the region. Again, the same priorities are in place. Emergency/critical communications begin with the lowest numbered talk group and move to the highest (1 through 10). Routine, scheduled and training communications begin at the highest and work toward the lowest (10 through 1). It is important for the ECP to understand in which region they are located and where the regional boundaries are located as this will dictate when a patch is needed to a regional or statewide talk group.

The next ring is the statewide talk groups (STACs). As an incident expands it is important to understand when the decision is made to use a statewide resource. For those PSAPs which border another region, it is imperative to know when a jurisdictional boundary has been crossed. The ECP is required to patch to the appropriate resource to enable all responders to communicate quickly and seamlessly.

For those counties and regions which border a state boundary, it is also important to understand the ability to use national resources such as VCALL10, VTAC11-14, 8CALL90, and 8TAC91-94. These are used in the event of an interstate response.

Fleet Map:

Each agency is required to have a fleet map of all available resources. The fleet map for **insert agency name** is:

[Insert agency fleet map(s)]

Status Board:

An important tool of the ECP is the status board. The status board is the means of notifying all ECPs of which shared resources are in use and/or reserved for training or exercises. The status board is required to be completed, on-line, when regional or statewide talk group resources are used. When using status board, ECPs must include the date, time frame, resource used, by whom, and reason for the use. Emergency or critical events take precedence over routine training or exercises. Upon completion of the event, the resources must be released for other uses. This can be done by clearing the status board and announcing that the talk group is being cleared.

Detailed information regarding the metro and state standards for the status board are found at:

Metro ARMER Standard 3.31.0: <http://www.mn-mesb.org/wp-content/uploads/Metro-3.31.0-StatusBoard-Standard.pdf>

State ARMER Standard 3.31.0: <https://dps.mn.gov/divisions/ecn/programs/armer/Lists/ARMERStandardsListNew/Attachments/76/standard-3-31-00.pdf>

Specialized Personnel**Communications Unit Leader (COML):**

By Federal Emergency Management Agency definition, a Communications Unit Leader (COML) “designs, orders, manages, and ensures the installation and maintenance of all communications system.” COML responsibilities include developing plans for the effective use of incident communications equipment and facilities, managing the distribution of communications equipment to incident personnel, and coordinating the installation and testing of communications equipmentⁱⁱⁱ (SECB). Many PSAPs have ECPs which have received COML training. A COML is a valuable resource in large events as they develop appropriate communications plans and can coordinate talk groups on a statewide level.

Specific information on training and responsibilities of a COML can be found at:

<https://dps.mn.gov/divisions/ecn/programs/armer/Lists/ARMERStandardsListNew/Attachments/109/Standard%203-48-0%20-%202017-11-30.pdf>

Communications Technician (COMT):

The Communication Technician (COMT) is a specialized position which lends technical expertise to the COML. “COMT responsibilities include assisting COMLs to develop plans for the effective use of incident communications equipment and facilities, providing and tracking communications equipment distribution to incident personnel, and training incident personnel on the operation of communications equipment.”^{iv}(DPS)

Specific information on training and responsibilities of a COMT can be found at:

<https://dps.mn.gov/divisions/ecn/programs/armer/Lists/ARMERStandardsListNew/Attachments/109/Standard%203-48-0%20-%202017-11-30.pdf>

Metro Region Communications Response Task Force (CRTF)^v:

The Metropolitan Emergency Services Board (MESB) supports the Metro Region All-Hazards Communications Response Taskforce (CRTF). The Metro Region CRTF is an ICS trained all-hazards personnel resource to be used by an agency to assist in the field, the command post, the EOC or the PSAP. The Metro Region CRTF serves as Minnesota’s Telecommunications Emergency Response Taskforce (TERT). TERT teams were developed to lend communications assistance to PSAPs in the event of a large-scale natural disaster or other large long-term event. More information on TERT will be provided in Chapter 7 – Emergency Management.

The Metro Region CRTF responds to requests for assistance, based on established standard operating procedures (SOP) following local, state and national standards. An agency can expect an advance team to include a COML, a COMT and an Incident Dispatcher. The CRTF can be an expertise or personnel resource and may assist with logistics if the communications or other equipment is necessary. The team will assume radio duties for the incident or event and can be a resource to support troubleshooting and managing equipment, documentation and resource deployment. Personnel assist the incident commander with incident management support in the field or at the command post by completing ICS paperwork, maintaining status and accountability of equipment, personnel and units on the scene, and relaying pertinent information back to the communications center or EOC. The team can also deploy directly to an EOC or communications center to assist another PSAP.

To request a CRTF deployment, the ECP should contact the Minnesota State Duty Officer (24x7). The State Duty Officer can be reached at:

Minnesota State Duty Officer: (800) 533-0798 or (651) 649-5451

For planned events, exercises, and general CRTF or TERT information contact:

MESB Radio Services Coordinator, (Troy Tretter) at (651) 643-8398 or via email at: ttretter@mn-mesb.org

For further information and resources and links can be found on the Metropolitan Emergency Services Board website at: www.mn-mesb.org/metro-area-armer-system/crtf

Proper Radio Protocols

While radio technology and management are important, it is equally important for the ECP to understand and use proper radio procedures and protocols. While each agency has its own specific protocol, there are several universal radio protocols which shall be observed:

1. Formulate the transmission before engaging the radio
2. Be brief and concise
3. Do not use slang or unprofessional language
4. Use entire call signs
5. Avoid airing names, unless absolute necessary
6. Use phonetic alphabet
7. Speak in normal tone and rate of speech
8. Ensure the talk group is clear prior to keying the mic
9. When keying the mic, wait for the talk permit tone prior to transmitting
10. Use plain language
11. Limited use of 10-code is permitted, but only for universal codes such as 10-4

In addition to the universal protocols, the ECP may be required to format communications in agency specific SOP. These SOPs shall be followed when communicating with local responders. When dealing with mutual aid communications, plain language must be used.

Agency Specific Standard Operating Procedures (SOPs) are:

[Insert phonetic alphabet]

[Insert agency specific 10-code list, if applicable]

[Insert agency specific SOPs]

MCC 7500 Radio Consoles

While the Motorola MCC 7500 is the standard radio console in Minnesota, the programming of each console may differ based on usage. Law enforcement talk groups will have a specific configuration based on local mains, mutual aid needs and other agency specific factors. Fire and EMS talk groups also reflect the specific needs of the discipline and agency. For **[insert PSAP name]**, the basics of the console configuration and usage are as follows:

[Insert agency radio console information]

Section Review

1. What talk groups are used for daily routine traffic?
2. What are the benefits of the ARMER system that is not available in conventional radio systems?
3. In emergency situations, which shared talk groups are used first and why?
4. The ECP has reserved several regional resources for a training event. An in-progress event has transpired. In what circumstances would the training event need to release its resources?
5. What are some reasons it is important to follow proper radio protocols when communicating with responders?

ⁱ Minnesota Department of Public Safety, ARMER. www.dps.mn.gov/divisions/ecn/programs/armer/Pages/default.aspx. Accessed January 18, 2018.

ⁱⁱ Statewide Emergency Communications Board, "Minnesota Dispatchers Communications Best Practices Guide." <https://dps.mn.gov/divisions/ecn/Lists/TrainingResources/Attachments/7/2018-4-23%20DISPATCHERS%20Best%20Practice%20Guide%20%20SECB%20approved.pdf>. Accessed January 21, 2018.

ⁱⁱⁱ Statewide Emergency Communications Board, State ARMER Standard 3.48.0, "Communications Unit (COMU)." <https://dps.mn.gov/divisions/ecn/programs/armer/Lists/ARMERStandardsListNew/Attachments/109/Standard%203-48-0%20-%202017-11-30.pdf>. Accessed July 12, 2018.

^{iv} Statewide Emergency Communications Board, State ARMER Standard 3.48.0, "Communications Unit (COMU)." <https://dps.mn.gov/divisions/ecn/programs/armer/Lists/ARMERStandardsListNew/Attachments/109/Standard%203-48-0%20-%202017-11-30.pdf>. Accessed July 12, 2018.

^v Metropolitan Emergency Services Board, "Metro Region Communications Response Task Force (CRTF)." www.mn-mesb.org/metro-area-armer-system/crtf/. Accessed January 18, 2018.

5. Emergency Communications Technology and Information Systems

Scope:

The scope of this unit is to gain an understanding of the technologies involved in public safety communications. Terminology associated with call delivery, call processing and dispatch infrastructure will be introduced.

Learning Objectives:

1. To understand the differences between basic, enhanced and next generation 9-1-1
2. To identify the elements of the 9-1-1 screen
3. To introduce the different means of communication for the Deaf and hard of hearing community
4. To understand the impact of various technologies such as:
 - a. Telematics
 - b. Geographic Information Systems
 - c. Logging Recorders
 - d. Community Notifications Systems
 - e. Computer-aided Dispatch Systems

Technology:

Public safety communications technology is ever evolving. Within the PSAP, one deals with complex telephone systems, logging systems, mapping, Computer Aided Dispatch systems (CAD) as well as a host of software applications. As one begins one's ECP career, learning all these systems appears daunting. However, taken individually, these systems will enhance one's ability to provide the most efficient, effective response to the needs of the public and your public safety partners.

9-1-1

Brief History of 9-1-1:

Many people think the use of a 3-digit emergency number is an American idea. The truth is the designation of a universal emergency number (9-9-9) was established in Great Britain in 1937. In 1957, the National Fire Chief's Association suggested that a universal emergency phone number be used in the United States. Ten years later, in 1967, President Lyndon Johnson supported the concept of a universal emergency number. Prior to this, citizens needed to know the 7-digit number of their local police and/or fire departments. The Federal Communications Commission (FCC) together with the American Telephone and Telegraph Company (AT&T) determined 9-1-1 would be the number to use. At that time, rotary dial phones were the only phones available, and 9-1-1 was fast to dial and easy to remember. Thus, 9-1-1 was born with the first call made on February 16, 1968 in Haleyville, Alabama.ⁱ (PBS)

In Minnesota, the first city-wide 9-1-1 systems were installed in Windom and St. James in 1968. In 1973, the first county-wide system was installed in Jackson County. Since then, Minnesota has expanded its 9-1-1 services statewide, going from basic 9-1-1 to enhanced 9-1-1 and now transitioning to next generation 9-1-1ⁱⁱ

(DPS).

Basic, Enhanced and Next Generation 9-1-1:

Basic 9-1-1 is exactly as it states, a basic routing network for 9-1-1 calls. The call is sent to the PSAP determined by the local central office. While the voice is routed, the call does not contain caller information such as name, address or other pertinent information.

MSS 403.02 Sub. 13 defines enhanced 9-1-1 services:

“Enhanced 9-1-1 service” means the use of automatic location identification or local location identification as part of the local 9-1-1 service provided by an enhanced 9-1-1 system consisting of a common 9-1-1 network and database and customer data and network components connecting to the common 9-1-1 network database. ⁱⁱⁱ (Minnesota Revisor)

Enhanced 9-1-1 (E9-1-1) allows for additional information to be sent along with the voice call. With landline calls, E9-1-1 provides the subscriber’s name, address, and call back number. It also provides information regarding EMS, fire and police response.

Next Generation 9-1-1 (NG9-1-1) is based on Internet Protocol (IP) technology. The State of Minnesota is in the process of transitioning to NG9-1-1. When completed, NG9-1-1 will support multimedia messaging such as text, images, videos, and telematics as well as voice calls. With NG9-1-1, additional information may be added by the PSAP such as building plans, medical information and other essential information.

NG9-1-1 will provide a secure emergency communications network which will support call transfers not only to neighboring PSAPs, but to those throughout the country. It will greatly enhance the ability of the ECP to provide public safety responders with the additional information needed to coordinate incident response and management. ^{iv} (MESB)

ALI/ANI:

Automatic Location Identification (ALI) automatically displays the caller’s telephone number, the address or location of the telephone and the emergency services information which services the displayed caller location. It is important to remember that locations may change during a phone call, especially from callers using cellular phones.

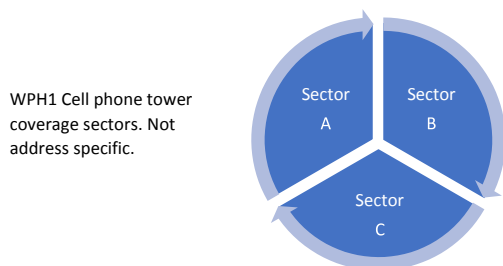
Verification of all information is required to ensure a proper dispatching of response units.

Automatic Number Identification (ANI) is the phone number from which the caller is placing the 9-1-1 call. This number may be the caller’s phone number, a business main switchboard number or a phone which cannot receive telephone calls. As with the ALI information, ANI information must be verified. Ensure that the caller can receive a callback if needed by verifying the phone number of the caller.

Wireless Phase 1 and Wireless Phase 2:

Wireless 9-1-1 calls route differently from landline phones, and different location information is provided. With wireless calls, there is no consistent name and address associated with the call. The caller may be moving, or the call may be routed to the nearest available cell tower which may not be close to the caller's actual location. With wireless calls, there are two services which give an indication to the location of the caller.

Wireless phase 1 (WPH1) is the information related to the cell-tower itself. The 9-1-1 screen will provide the callback number and the identification of the cell tower itself. Calls are usually determined by cell sector.



A sector is a geographical area covered by a cell tower. Often the tower coverage is divided into two or three sectors; each sector has 9-1-1 routing determined by its coverage area. This means that the sectors may not be all routed to the same PSAP. For example: Sector A may predominately cover a city with its own PSAP. Callers from Sector A would be routed to the city PSAP. Sector B may primarily cover a state highway or the interstate. This call would be routed to the Minnesota State Patrol. Sector C may cover a rural area which is patrolled by the County Sheriff. This would be routed to the County PSAP. WPH1 was designed to very quickly route the caller to the PSAP most likely to handle the call. As with all calls, after verifying the caller's exact location a call transfer may be needed.

Wireless Phase 2 (WPH2) is much like WPH1, except with more features. In addition to receiving the cell tower information, the ECP will receive the location of the caller within a minimum of 125 meters (approximately 82 feet), 67% of the time, per FCC regulation. The caller location is displayed in latitude and longitude. If the PSAP has a mapping interface to the ALI, the map will show the approximate location of the caller. Please note: if the caller is in a large facility with multiple stories, it will not show which floor within the building the caller is located. Along with the approximate caller location, the call back number of the phone being used will also be provided.

ECPs can quickly ascertain if the caller is being routed by phase one or phase two by looking at the type of service found on the top of the ALI screen. Additionally, if a WPH2 call, the ALI screen will show the location in latitude and longitude with a certainty factor mid-screen. Whether the call the ECP receives is a WPH1 or WPH2, it is mandatory that the ECP verify with the caller the location of the emergency. At the bottom of the ALI screen, one will see the words, "Verify caller location and call back number." As a reminder, cell callers may be mobile. The location mapped may not be the most current information on the caller's location. Avoid

a time delay by verifying all caller information.

Examples of ALI screens may be found on the MESB's website, www.mn-mesb.org. The ALI screens are not on the public side of the site and require ECPs to log in; ECPs should work with their PSAP manager to obtain an account. Login is at the upper right of the home page.

Advanced Location Based Technology

Technology is now available that offers advanced location-based information for emergency responders. The technology uses cloud-based emergency infrastructure that provides a digital data connection between the public and emergency services. These location-based companies partner with technology companies to make any device or application a lifeline. Information supplied to emergency responders can include health data, telematics information, more accurate location data and the list continues to expand. Advanced location-based technology can be integrated with PSAP systems to offer quicker and more efficient use of the data.

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Telecommunications Device for the Deaf (TTY and TDD):



Photo of TDD

TTY stands for Text Telephone. This mode of communications enables a Deaf, deaf, hard of hearing, or speech or language impaired person to place telephone calls. A Telecommunications Device for the Deaf (TDD) is the actual technology used. In many PSAPs, the TDD is integrated into the 9-1-1 telephone.

The Americans with Disabilities Act (ADA) Title II covers equal and direct access to emergency telephone communications. This applies to PSAPs, law enforcement, fire and EMS services. Title II, which is enforced by the Department of Justice, requires all ECPs to be trained semi-annually to ensure that calls received via a TDD are processed as efficiently and effectively as those received from the hearing public.

A TDD call should be treated in the same manner as a hearing call. It falls into the call pick up standards, confidentiality and call taking protocols should be observed.

For direct calls between the ECP and a Deaf or hard of hearing caller, a TDD is required at both ends of the conversation. The caller types her/his message while the ECP reads the message. The ECP must ask only one question at a time of the caller, as some TDDs do not have the capacity for a written transcript from which to read. The screen capacity is very short. The tones used to transmit the calls are either in Baudot or ASCII format. This allows only one person to type at a time. It is a slow method of communication.

TDD has some special protocols and etiquette which must be observed for effective communications. Depending on the caller, American Sign Language (ASL) may be the format of the conversation. With ASL,

the structure of sentences is different than in spoken English. Time is referred to first, followed by the main thought, then descriptive words. Verbs do not contain tenses (have, has, had, etc.) and there are no connecting words such as “and.”

TDD protocol uses abbreviations such as:

Q or QQ	Used in place of a “?” at the end of a question
GA	“Go Ahead” is used to indicate the end of a thought. It indicates that a response can now be typed. Do not start typing as the caller has not completed her/his thought.
HD	“Hold” indicates to the caller that the ECP is placing the caller on hold
SKSK	“Stop Key” This indicates the end of the conversation. No response is expected.
NBR	Number
BSY	Busy
HOSP	Hospital
HLP	Help
MED	Medical or medicine
ASAP	As soon as possible
U or UR	You, your or you’re
CD or CLD	Could
MSG	Message
R	Are
SHD	Should
TMW	Tomorrow

While these are common abbreviations, abbreviations should not be used unless the caller is using them.

[Insert agency telephone protocol for TDD calls and instructions on TDD usage]

Additional information on TTY/TDD standards may be found at: <https://www.apcointl.org/standards/apco-standards-for-download.html>

Telecommunications Relay Service (TRS)⁹ (FCC):

Telephone Relay Service (TRS) is a telephone service that allows persons with hearing or speech disabilities to place and receive telephone calls. It is a Federal Communications Commission mandate that TRS be

available in all 50 states, the District of Columbia, Puerto Rico and all U.S. territories for both local and long-distance calls. There are no costs to the TRS user.

The phone number, 7-1-1, is the universal number for access to the relay service. All relay conversations are confidential. No records of any conversations are maintained by the relay service. This service is offered to hearing-impaired individuals as well as those in need of voice over or hearing over services.

If a caller needs to use American Sign Language, the relay service can view and translate the message sent through visual calls such as Face Time or other visual means. The relay interpreter then voice calls the PSAP. It is important to remember that the interpreter does not clarify or enhance the communications. The interpreter is simply the conduit between the caller and the ECP. As with the TDD, it is important to wait for the caller to complete his/her portion of the call prior to asking questions or seeking clarification. Only one person at a time may “talk.”



For detailed information on the Minnesota Relay Service, please see the following website:

www.mn.gov/commerce/consumers/your-phone/minnesota-relay/

Selective, Default and Alternate Routing:

The MESB maintains standards for the 9-1-1 network. It is important to have a basic understanding of the technology that determines how a call is routed to the PSAP. Routing is the means of delivering a 9-1-1 call to the correct PSAP based on location. There are three routing mechanism: selective, default, and alternate routing.

Selective Routing:

Each county has a specific 9-1-1 routing plan. 9-1-1 calls are automatically routed, as specified by the county plan, to the PSAP that provides dispatching services for the public safety agencies serving the area from which the 9-1-1 call is placed. To ensure that calls are not impacted by equipment malfunctions, redundant routing equipment is in place so that if one router malfunctions, the other switching device will continue to route all calls that originate in the 9-1-1 system.

Default Routing:

The system is designed so that if the normal means of routing a call malfunctions, a default routing plan, as adopted by the county, will be used to route the call to an alternate location. This means that the call will be sent to a specified location in the event of a major malfunction in the routing network.

Alternate Routing:

On rare occasions, system failures may occur. Failures can be caused by local PSAP equipment failures, telephone line failures or other catastrophic events. If the PSAP is unable to receive 9-1-1 calls, per the county plan, 9-1-1 calls will be routed to another PSAP or the agency's backup location. Alternate routing is authorized by the initiating PSAP. The telephone service provider shall have the alternate PSAP information on file to complete the transfer of calls.

Additional information regarding 9-1-1 network service standards can be found in Chapter 4 of the PSAP manual found online at: www.mn-mesb.org

Call Transfers:

PSAPs are equipped with one button transfer capability or a 3-digit star code to transfer calls between PSAPs. The PSAP initiating the transfer shall announce to the receiving PSAP that there is a call being transferred. The PSAP receiving the transfer will receive the correct ANI & ALI. The first call taker will be able to remain connected as a third party to the call. When they go offline, the caller will remain connected to the transfer location.

Text-to-9-1-1:

The SECB developed and approved a standard and protocols for handling text-to-9-1-1 calls:

The purpose of this operational standard is to standardize the method of receiving and processing Short Message Service (SMS) text-to-9-1-1 calls throughout the State of Minnesota. Use of this operational standard will promote the standardization of text-to-9-1-1 call handling among jurisdictions across the state. The purpose of text-to-9-1-1 is to provide a means of communication between the caller and the Public Safety Answering Point (PSAP) when it is not feasible for callers to make a traditional voice call.^{vi} (SECB)

RTT (Real Time Text) is now available. This is a setting that the cell phone user can select on their individual device. RTT may come in as a TTY call. Real time texts allows the call taker to see an incoming text letter by letter as the message is being typed. Most will appear as a silent 911 call and answering applications may not automatically detect the message as an incoming TTY call. If a silent call is received part of the answering protocol should include a query with your TTY. RTT will eventually be delivered the same way as a voice call which will allow the call taker to hear background noise.

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To comply with this standard, the ECP must review the standard in its entirety to understand the capabilities, constraints, call processing considerations and protocols. This standard can be found at:

<https://dps.mn.gov/divisions/ecn/programs/911/Documents/NG911/text-to-911-state-standard.pdf>

The MESB also developed and approved a standard and protocols for handling of text-to-9-1-1 calls in the metro region. The ECP must comply with both the SECB and MESB standards. The MESB standard is found at: <http://www.mn-mesb.org/9-1-1-communications-centers/psap-resources/>

Telematics:

Telematics is a computerized system of monitoring driver and vehicle performance. It is often referred to as the “black box” of the automobile.

On-Star and Ford’s RESCU are just two of the brand names for telematics. While the ECP most often interacts with telematics as a result of an accident or vehicle theft, telematics actually has four parts:

1. Concierge services provide the vehicle owner such services as remote vehicle unlock, road or weather update.
2. Global Positioning is beneficial in locating one’s vehicle in the event of an accident, in locating a stolen vehicle or locating a vehicle suspected in a criminal activity. In the event of criminal activity, a search warrant may be required to obtain vehicle location information.
3. Cellular phone interface which allows for hands free calling.
4. Data collection is important in the event of an accident. Data on point of impact, speed, break engagement, number of potential victims based on seatbelt activation may indicate the type of public safety response needed. This is the first step in the chain of survival.

In the event of an accident, telematics may notify either a central call center or the PSAP directly. The telematics will provide the latitude and longitude of the vehicle and open a cellular call with the driver. The central call center will notify the appropriate PSAP with the accident information. In some situations, the call center can transfer the driver directly to the PSAP.



APCO Standard 1.114.1-2017 outlines the best practices for both the telematics call centers and the ECP. For thorough understanding of this standard and its impact on public safety see: www.apcointl.org/standards.html

Logging Recorders:

The excited uttering of a caller to an ECP during a 9-1-1 call is important evidence in many criminal cases. As

such, audio loggers capture this evidence. The conversations between the ECP and the victim or caller is recorded and retained for a minimum of 31 days. ECP personnel are often subpoenaed to court to testify to the information found on the taped conversation.

Each PSAP has a logging recorder. The technology is available for various types of loggers. The most widely used is an audio logger. Loggers record all 9-1-1 calls coming into the center. Some centers have enhanced loggers which also capture the keystrokes typed into the CAD system by the ECP. Logs must be kept a minimum of 31 days per the Minnesota Historical Society, which mandates records retention. Agencies can choose to increase the retention period by contacting the Historical Society to document the preferred retention period.

All 9-1-1 calls are considered private data with a few exceptions. This means that a copy of the voice recording is not public; the written call transcript is public. There are exceptions to this rule such as releasing the recording with written permission of the caller or as evidence in criminal or some civil cases. Rules covering 9-1-1 calls are found in MSS 13.82. Subd.4:

Subd. 4. Audio recording of 911 call.

The audio recording of a call placed to a 911 system for the purpose of requesting service from a law enforcement, fire, or medical agency is private data on individuals with respect to the individual making the call, except that a written transcript of the audio recording is public, unless it reveals the identity of an individual otherwise protected under subdivision 17. A transcript shall be prepared upon request. The person requesting the transcript shall pay the actual cost of transcribing the call, in addition to any other applicable costs provided under section [13.03, subdivision 3](#). The audio recording may be disseminated to law enforcement agencies for investigative purposes. The audio recording may be used for public safety and emergency medical services training purposes.^{vii} (Minnesota Revisor)

Computer Aided Dispatch:

Computer Aided Dispatch (CAD) software is one of the primary technologies used in public safety communications. While it is an aid to the ECP, it does not replace basic knowledge of emergency communications. CAD systems are used to document call information such as:

- Location of the incident
- Caller name and address
- Call classification
- Call details
- Other agency specific information

When interfaced with MDCs, Automatic Vehicle Location (AVL) and mapping, the ECP can view in real time, responding unit status, unit location, and location of the incident via automating mapping. Many CAD systems are programmed to make unit recommendations, give location history and warning information. The CAD system will automatically time stamp each interaction the ECP or responding units has with the CAD system. These records become part of the initial case report.

In addition, some agencies use CAD information for statistical reporting. The information found in CAD can determine average response time. Number of calls based on time of day and day of week for scheduling of both responders and ECP personnel.

Mobile Data Computers (MDC):

The MDC is the companion piece to the CAD system. The MDC is used in response vehicles where the responders can to view call information and perform other duties as outlined by agency protocols.

Automatic Vehicle Location:

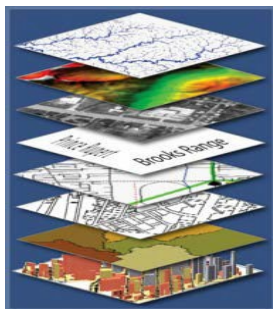
Automatic vehicle location (AVL) combined with GIS mapping interface provides the ECP with visual indicators of responding unit's location and direction of travel. In addition, some AVL will provide administrators with travel rate and other unit information.

Graphic Information Systems (GIS):

According to the MESB website:

GIS (Geographic Information Systems) is computer software that maps both visible (roads) and invisible (population density) characteristics of a place and allows users to interact with the information. It does so by displaying both the location of an object (such as a cell tower) and information about that object (the tower's owner).

What kinds of information can GIS map? Anything with a location attached. By bringing together information that was previously stored in separate, often incompatible, forms GIS helps form a more complete understanding of the agency's service area which, in turn, assists the ECP in making more informed decisions. ^{viii} (MESB)



More information related to GIS and its impact in the PSAP may be found at:

www.mn-mesb.org/9-1-1-service-providers/what-is-gis/

Mass Community Notification:

There are two components to mass community notification. The first is the federal Emergency Alert System. The Integrated Public Alert and Warning System (IPAWS) is a Federal Emergency Management Agency (FEMA) sponsored program which allows federal, state and local public safety entities to send emergency messages via multiple medias. Local agencies work with Minnesota Homeland Security and Emergency Management (HSEM) to activate messages. While the ECP has limited contact with this community notification technology, it is important to have a basic understanding of the system. Detailed information on IPAWS can be found at: www.fema.gov/media-library/assets/videos/77356

Locally, agencies contract with specialized data providers for mass community notifications. Local PSAPs may use a computerized auto-dialer to deliver a prerecorded message for such emergency situations as chemical spills, endangered missing person reports, or other critical situations. While these systems are designed for landline phones, most systems have an auto registration feature that allows cell phone users the ability to register their cell phone and address to be included in the notification system.

[Insert agency-specific information on community notification systems]

Criminal Justice Information System (CJIS):

The Criminal Justice Information System (CJIS) is a division of the FBI which makes criminal justice information available nation-wide. CJIS houses the National Crime Information Center (NCIC) which provides information on stolen and recovered property and missing persons. CJIS is also the repository for designated criminal history information. Specialized training and background checks are needed to access this system. ECPs are often certified through the Minnesota Bureau of Criminal Apprehension (BCA) for access into these systems. After the initial training, the ECP must recertify every two years.

NLETS:

According to the NLETS website:

NLETS, is a private not for profit corporation owned by the States that was created more than 50 years ago by the 50 state law enforcement agencies. The user population is made up of all of the United States and its territories, all federal agencies with a justice component, selected international agencies, and a variety of strategic partners that serve the law enforcement community-cooperatively exchanging data.

The types of data being exchanged varies from motor vehicle and drivers' data, to Canadian and Interpol database located in Lyon France, to state criminal history records and driver license and corrections images. Operations consist of more than 1.6 billion transactions a year to over 1 million PC, mobile and handheld devices in

the U.S. and Canada with over 45,000 user agencies and to 1.3 million individual users.^{ix} (NLETS)

MNJIS:

According to the BCA's website:

The BCA's Minnesota Justice Information Services, or MNJIS, facilitates the access to and exchange of information between sources of criminal justice data. MNJIS also provides technology, training and services for Minnesota criminal justice agencies, better enabling their use of criminal justice information to solve crimes, prosecute offenders and protect Minnesotans and all who visit our state. MNJIS works under the direction of the Criminal and Juvenile Justice Information Advisory Group.^x (BCA)

All public safety employees who are required to have access to MNJIS/NCIC must be trained within six months of hire and recertify every two years. Information contained in MNJIS and NCIC, including information found within a driver's license, is for criminal justice purposes only.

[Insert agency technology information]

Section Review

1. Describe the differences between basic 9-1-1, enhanced 9-1-1 and NG9-1-1.
2. When creating a call for service, what piece of information MUST be verified with the caller?
3. Deaf and hard of hearing individuals may use a different language than standard English to communicate. What is it? How may it be different?
4. What part/parts of an audio log of a 9-1-1 call are public?
5. Community notification takes two forms. What are they?
6. What are the two pieces of information needed in a CAD call prior to dispatching responders?
7. How are MNJIS and CJIS related? How do they differ?

ⁱ Public Broadcast System (PBS), "The History of 911: America's Emergency Service, Before and After Kitty Genovese." www.pbs.org/independentlens/blog/history-of-911-americas-emergency-service-before-and-after-kitty-genovese/. Accessed December 27, 2017.

ⁱⁱ Minnesota Department of Public Safety (DPS), "9-1-1 History." <https://dps.mn.gov/divisions/ecn/programs/911/Pages/history.aspx>. Accessed December 27, 2017.

ⁱⁱⁱ State of Minnesota, 2017 Minnesota Statutes, Chapter 403, 911 Emergency and Public Safety Communications. www.revisor.mn.gov/statutes/cite/403.02. Accessed December 27, 2017.

^{iv} Metropolitan Emergency Services Board (MESB), "The Road to Next Generation 9-1-1." www.mn-mesb.org/wp-content/uploads/6-what-is-ng-911.pdf. Accessed December 27, 2017.

^v Federal Communications Commission, "Speech to Speech Relay Service." www.fcc.gov/consumers/guides/speech-speech-relay-service. Accessed January 2, 2018.

^{vi} SECB, Minnesota 9-1-1 Standard Number 1.3.0, "Text to 9-1-1 Statewide Operational Standard." <https://dps.mn.gov/divisions/ecn/programs/911/Documents/NG911/text-to-911-state-standard.pdf>. Accessed January 5, 2018.

^{vii} State of Minnesota, 2017 Minnesota Statutes, Chapter 13, Government Data Practices. www.revisor.mn.gov/statutes/2007/cite/13.82. Accessed January 5, 2018.

^{viii} Metropolitan Emergency Services Board, "What is GIS?" www.mn-mesb.org/9-1-1-service-providers/what-is-gis/. Accessed January 5, 2018.

^{ix} NLETS, "What We Do." www.nlets.org/about/what-we-do. Accessed January 6, 2018.

^x Bureau of Criminal Apprehension, "Minnesota Justice Information Services." <https://dps.mn.gov/divisions/bca/bca-divisions/mnjis/Pages/default.aspx>. Accessed January 5, 2018.

6. Emergency Management

Scope:

Emergency management is often associated with Federal Emergency Management Agency (FEMA). This section will introduce the ECP's role in emergency management. The ECP will be required to successfully complete the required ICS on-line classes prior to completing this section.

Learning Objectives:

1. To become acquainted with emergency management components
2. To learn the role the ECP plays in emergency management
3. To successfully complete the following ICS (Incident Command System) on-line classes
 - a. IS 100.B: Introduction to Incident Command System (3 Hours)
 - b. IS 200: ICS for Single Resources and Initial Action Incidents (3 Hours)
 - c. IS 700.A: National Incident Management System, an Introduction (3 Hours)
 - d. IS 800: National Response Framework, an Instruction (3 Hours)
 - e. IS 144: Telecommunicators Emergency Response Taskforce (3 Hours)
4. To become knowledgeable regarding the Metro Minimum Training Standards for TERT
5. To become acquainted with the local emergency operations plans

Emergency Management – Three-Fold

Many people associate emergency management with hurricanes, tornados, and other natural disasters; however, the topic of emergency management is more than simply response. For the ECP, emergency management has three parts. The first is the overall view of emergency management, the second is the role the ECP plays in emergency response and finally, how does the communication center prepare for its own emergency situations.

Emergency Management Overview:

Today's headlines report on FEMA responding to the most recent natural disaster. Red Cross, Salvation Army and other private agencies report assisting with food and shelter. Everyone hears about response. But there is more to emergency management. Emergency management is cyclical; it is composed of five separate but interlocking phases.



Emergency Management Cycle

Preparation:

The US Department of Homeland Security, FEMA defines preparedness as "a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action to ensure effective coordination during incident response." This cycle is one element of a broader National Preparedness System to prevent, respond to, and recover from natural disasters, acts of terrorism, and other disasters.¹

Prevention:

Prevention involves identifying potential threats. Locally, threats may include weather related situations, chemical spills, terrorism and other hazards. Each potential threat is evaluated for its impact on the community. Plans are devised to mitigate the threat. Response plans are developed. Resources are identified. Responder training is conducted to ensure all involved are aware of their area of responsibility. This is also a time to identify potential issues with the response plan.

Mitigation:

The goal of mitigation is to reduce the risk to life and property. This can be accomplished through regulations, local ordinances, education and training. This is a proactive measure to prevent or minimize risks. Emergency managers work with local agencies, businesses and people to identify ways to reduce or eliminate potential threats.

One simple example of mitigation is having an emergency kit in a vehicle. Having food, blankets, flairs, etc. in a vehicle may mitigate the risk of bodily harm if a person is snowbound in their vehicle. On a large scale, airports have the means of checking luggage for potential hazards to the flying public. Mitigation is to reduce risk when and where ever possible.

Response:

Response takes many forms. Initially, the ECP will send the appropriate local response to any emergency. During the response phase of emergency management, directions may be given to the public such as evacuation or shelter in place instructions.

In small incidents, the local agency will have command and control of the situation. As the incident expands, additional resources may be needed including local mutual aid, state and federal assistance or that of community resources. This is when the incident command structure expands and becomes more formal. Effective planning and training allow for an efficient and effective response.

Recovery:

In large scale events, recovery may take weeks, months or years. Recovery focuses on how to restore, redevelop and revitalize the health and welfare of the community. It focuses on building a more resilient community. Recovery is bringing life back to normal.

The emergency management cycle can also be shown with only four phases with the preparation and prevention combined into one step. As is emphasized in the incident command structure lessons, emergency management will be sized to meet the needs of the incident.

FEMA strongly encourages all ECPs complete the following emergency management incident command classes. Be sure to follow the instructions to register for the classes. Upon completion of each class, certificates of completion should be printed and given to the appropriate CTO. ECPs should keep a copy for your records.

All classes can be found at: www.training.fema.gov/nims/

1. IS 100.B: Introduction to Incident Command System (3 Hours)
2. IS 200: ICS for Single Resources and Initial Action Incidents (3 Hours)
3. IS 700.A: National Incident Management System, an Introduction (3 Hours)
4. IS 800: National Response Framework, an Instruction (3 Hours)
5. IS 144: Telecommunicators Emergency Response Taskforce (3 Hours)

The ECP's Role:

The ECP's role in emergency management is to provide clear communications for all responders. Plain language is required. Any use of 10 codes or agency specific language must be avoided. The ECP must be aware that in a mutual aid situation or a multi-jurisdictional event, clear concise communications will assist in assigning the correct resources to the correct need.

Communications is often listed as the weakest point in emergency management. This is not necessarily due to the actions of the ECP. However, the ECP must be aware of all required policies and procedures regarding the ARMER radio system. As an ECP, one is often required to assign radio talk groups, patch together talk groups and redirect responders to the correct radio resources. To ensure all state ARMER users are aware of

the assigned talk groups, the communication unit leader (COML), or their designee, must fill out the ICS 205 (which is discussed in depth in the radio communications section) for each operational period. All users are thus able to see which resources are in use by whom and for which operational period.ⁱⁱ (MESB)

In addition to the radio usage, the ECP is a very valuable part of the initial response. The ECP has responsibility for determining response priorities during the first few minutes or hours of an event. These are the tasks for which the ECP has daily responsibility. However, as an incident develops, the information that is gathered in the call taking and dispatching of each response becomes part of the official documentation for the event. The calls for service document type and scope of the incident, resources used, personnel assigned and other valuable details. In the event that the State of Minnesota's Department of Emergency Management or FEMA becomes involved, this documentation becomes invaluable in determining the level of assistance needed and/or available to responders and the public. These documents become part of the emergency management case file. Accurate record keeping is important for resource allocation and reimbursement.

Telecommunicators Emergency Response Taskforce (TERT):

APCO defines a TERT team as, "A group of trained telecommunications operations and support personnel able to respond to and work with another agency to receive, process, dispatch and monitor calls for assistance."ⁱⁱⁱ (APCO)

As mentioned in Chapter 5 – ARMER Radio Communications, the metro region has a Communications Response Task Force (CRTF). The CRTF is an ICS trained all-hazards personnel resource that may be used by an agency to assist in the PSAP, EOC, command post or in the field.

This special team is comprised of a communications unit leaders (COML), communications technicians (COMT), and an Incident Dispatch Team (IDT). COMLs are responsible for developing the plans for effective use of communications resources, equipment and facilities. COMLs supervise the communications technicians (COMT), incident dispatchers and others in the communications unit.

COMTs are trained technical personnel with special knowledge in the areas of local communication systems, frequencies, spectrums, technology and other radio technology. They are specifically assigned to provide technical support to the COML, the communications unit, the incident dispatch team and field responders.

The IDT is comprised of ECPs from around the metro region. They represent multi-discipline PSAP personnel who are ready to deploy to augment incident management at an incident or event. By agreement with Minnesota Homeland Security Emergency Management (HSEM), the metro region's IDT serves as Minnesota's Telecommunications Emergency Response Taskforce (MN-TERT) under the National Joint TERT Initiative (NJTI). TERT is a state to state PSAP mutual aid personnel resource that operates under the Emergency Management Assistance Compact (EMAC). MN-TERT is recognized nationally.^{iv} (MESB)

For further information on the TERT initiative can be found on the following websites:

- National Joint TERT Initiative: www.njti-tert.org
- Emergency Management Assistance Compact: www.emacweb.org
- Incident Dispatcher Resource Center: www.incidentdispatch.net
- Minnesota HSEM: <https://dps.mn.gov/divisions/hsem/Pages/default.aspx>

- SAFECOM: www.dhs.gov/safecom
- FEMA: www.fema.gov
- APCO: www.apcointl.org
- NENA: www.nena.org

ECP and the PSAP:

The ECP must also be aware of the emergency operations plans for the PSAP itself. In emergency management, the rule of three deep applies not only to personnel, but also to plans and procedures for continuity of operations. Within the PSAP there are emergency plans in place for everything from a failure in the phone system or radio system to building evacuation. It is important for each ECP to understand emergency plans for one's own PSAP.

The continuity of operations plans for **[insert agency name]** is:

[Insert agency continuity of operations plan (COOP) or additional agency specific information]

Section Review

1. What are the five major areas of emergency preparedness?
2. How important is understanding of the role of emergency in the communications center?
3. The ECP is required to successfully complete several FEMA classes. What is most important element you learned in each class?
4. How does completing the IS classes improve your understanding of emergency management?
5. Discuss with your trainer agency specific language which may impact communications in a mutual aid event.
6. If you are asked to get a fire resource called a tanker, are you going to dispatch?
 - a. A truck filled with water
 - b. A fire engine that holds water
 - c. A plane capable of dropping water

ⁱ Federal Emergency Management Agency, "Plan and Prepare for Disasters." www.dhs.gov/topic/plan-and-prepare-disasters. Accessed December 5, 2017.

ⁱⁱ MESB, "Metro Region Communications Response Task Force." www.mn-mesb.org/metro-area-armer-system/crtf/. Accessed December 5, 2017.

ⁱⁱⁱ APCO/NENA, "Standard for Telecommunicator Emergency Response Taskforce (TERT) Deployment." https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/APCO-NENA_ANS_1_105_2-2015_T.pdf. Accessed December 8, 2017.

^{iv} MESB, "Minnesota Metro Region Communications Response Taskforce Informational Brochure." www.mn-mesb.org/wp-content/uploads/Metro-Region-CRTF-Information-Brochure-Feb2018.pdf. Accessed December 5, 2017.

7. CALL PROCESSING

Scope:

The scope of this chapter is to learn the basics of call processing for routine calls, emergency calls and low frequency/high risk calls. NENA, APCO, FBI, FEMA recommendations will be introduced to the ECP to give a global view of potential calls which the ECP may encounter.

Learning Objectives:

1. To understand the importance of the NENA call answering standard
2. To understand the impact of terminology used in conversations with the public
3. To learn the basic interrogation questions to enable the correct public safety response
4. To be introduced to outside resources for specialty calls such as missing children and AMBERAlerts
5. To learn the global scope of such calls as hazardous materials, terrorism, and other low frequency/high risk calls

Call Taking Standardsⁱ (NENA)

The National Emergency Number Association Standard 56-005 states that 90% of 9-1-1 calls shall be answered within ten seconds with 95% of calls answered within 20 seconds. Calls are to be answered in the order of 9-1-1 calls first, followed by the 10-digit phone lines with the 10-digit administrative phone lines to be answered last. It is important for the ECP to remember that in emergency situations for the caller time appears to pass slowly. While ten seconds is a short period, the caller also experiences silence during the call processing time or experience an automatic ring back that the ECP does not hear. This adds to the high emotions of many callers.

The standard further recommends that all 9-1-1 calls be answered with “9-1-1.” There may be more verbiage after the 9-1-1 such as “What is your emergency?” “What is the location of your emergency?” or other agency specific language. For non-emergency calls, the ECP’s agency will determine the call answering standard.

Non-Standard 9-1-1 Calls:

There are several types of 9-1-1 calls which do not result in standard emergency call processing:

Abandoned calls/disconnects: The ECP shall attempt to place a return call to determine if assistance is needed. If the call goes unanswered, the phone is busy or is directed to voicemail, the ECP’s agency standard operating procedures will dictate whether further action is needed.

Silent Calls: Public Law 101-336 covers persons with disabilities. This law requires that the PSAP be equally accessible to Deaf and hard of hearing persons as it is to others. As such when the ECP receives a silent call, the ECP must activate the TDD to ensure that the line is truly silent. TDD callers may be waiting for a call answering message via TDD to begin conversation with the ECP. A silent call is not silent until after the TDD

is engaged and no message is relayed. If no communication occurs, then the call should be processed under the ECP's agency protocol.

Misdials: A 9-1-1 misdial is when a caller stays on the line and admits that they did not intend to dial 9-1-1. Some common misdials include receiving calls for 4-1-1 (information) or calls from multi-line phone systems where the caller needs to dial 9 for an outside line, followed by a 1 for long distance. Others may include "pocket dialing" when a cell phone dials 9-1-1 if an emergency button is accidentally engaged.

Prank calls: If the ECP believe or has reason to believe that a call is prank. The call should be processed as an emergency call. Unless a responder is on scene or there is other verification that the call is a prank, caution on the side of safety by treating the call as real.

Unintentional 9-1-1 calls: A call is considered unintentional when the ECP can hear normal background sounds such as normal conversations, television or radio. ECPs should rule out that these calls are from Deaf or hard of hearing persons by the use of the TDD.

Call Processing

The ECP is much like a journalist. With the journalist, they are taught the questions of: who, what, where, when and how. For the ECP, all case entries have the same essential elements:

1. **Where?** The first element of the location of the emergency. This is often determined by asking, "What is the location/address of the emergency?" Please note that if the ECP asks, "What is your address?" the answer may not be where the help is needed but where the caller lives. Verify the location by asking it twice or by electronic means (or according to agency policy). The location and call type will determine who needs to respond. This is akin to the real estate adage, LOCATION, LOCATION, LOCATION!
2. **Call back number.** By obtaining the call back number, the ECP can reconnect with the caller if the call is disconnected. This is also helpful if there is a need to trace a phone's location and/or subscriber's information.
3. **What is the emergency?** Is this call police, fire or EMS related? Gathering detailed information on the situation begins to paint a picture for the responders. The ECP needs to quickly, concisely describe the emergency so that public safety responders can begin to formulate a safe response to the emerging situation. Any hazards such as weapons or drugs must be documented.
4. **When?** Is this an in-progress call? Did it happen 2 hours, 2 days or 2 months ago? In-progress calls take a higher priority than time delayed calls. High priority calls are those in which the speed of the response may highly impact the outcome of the call.
5. **Who?** If possible, gather the caller's name and location along with any witness information. While this information is sometimes difficult to gather, it may impact the outcome of the call.

Structured Call Taking Protocols:

Many PSAPs purchase and implement structured call taking protocols. NENA Standard 56-006 outlines the rationale for a structured call taking protocol program. Structured call taking protocols provide a uniform, consistent means of handling emergency calls. These improve the efficiency of daily call taking and give

guidance to events of low frequency, and high impact. Together with the quality assurance piece, the structured call taking protocol provides the PSAP and ECP with a high level of consistent service across the entire center. An established protocol does not mean that sequencing must be followed every time, as a caller may provide critical information in a different order.

ECPs should follow questioning sequencing order per their agency policy. Many PSAPs have chosen to integrate their standardized protocol system and CAD to provide an interactive solution with real time efficiencies for the ECP.

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Structure call protocols process calls in accordance with acceptable levels of care. They prioritize calls and responses based on the severity of the call rather than simply call type. The protocols process calls in a manner consistent with the preservation and protection of victims and responders alike. They can support preplanning of large scale events. The protocols can also be used in quality assurance review to enhance the training needs of the ECP.

Structured call processing protocols ask the same questions in the same manner during the case entry – or start of the call. Location, phone number, type of emergency will lead the ECP to choose the closest call type. It then directs the ECP to as call type specific questions. Based on the responses, the algorithm will determine the severity of the call and responder level. For large scale events, it will assist the ECP in call interrogation which assists with gathering vital details.

With some structured call taking protocol systems, the ECP is required to pass an approved skills and knowledge certification training and exam. The ECP must be recertified within a specific time frame, normally every two years. This ensures compliance with all policies, procedures and instructions that are housed within the program.

[Insert agency specific structured call protocols, if applicable]

Section Review

1. What is the NENA telephone answering standard? Why are these standards important?
2. If the ECP receives a “silent” 9-1-1 what actions must the ECP take prior to disconnecting the call?
3. What are the two pieces of information needed to dispatch the correct public safety responders?
4. What piece of information should always be verified?
5. What purpose do standard call protocols serve?

ⁱNENA, “NENA Call Answering Standard/Model Recommendation.”
https://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/NENA_56-005.1_Call_Answering.pdf.
Accessed March 3, 2018.

Missing, Abducted, Exploited and Trafficked Persons

The National Center for Missing and Exploited Children (NCMEC) has assisted locating over 200,000 missing children since the center's inception. APCO and NENA, together with NCMEC, has developed APCO Standard 1.101.3-2015ⁱⁱ (APCO/NENA). This standard defines missing, abducted, exploited and trafficked persons. It also gives detailed call protocol for each call type.

There are two different types of abductions. The first is nonfamily abduction. This is defined as the unauthorized taking, luring, confining or concealing of a child younger than 18 years of age by someone other than a family member. In Minnesota one of the most well-known nonfamily abductions was that of Jacob Wetterling. Jacob was 11 years old when he was abducted at gun point while riding his bike with his brother and a friend. He remained missing for nearly 27 years. His body was discovered in 2016 after his abductor confessed to the abduction and led authorities to Jacob's body.

The second type of abduction is family abduction. This is where the abductor has a family relationship with the child. With this type of abduction, the custody rights, including visitation rights of another parent or legal guardian are violated.

In addition, there are two types of runaway children. Endangered runaways are children under 18 who are missing of their own accord. The ECP may encounter these types of missing persons reports more often than any other. Runaway children are also called thrown-away children. These children don't have anyone looking for them after they leave their home. In some instances, they have been asked to leave home or are not allowed to return home. While these children are often not reported as missing, they often encounter law enforcement.

Lost, injured or otherwise missing children are those for whom there is insufficient information to determine why the child is missing. If a child under the age of ten is missing, even of their own accord, they are considered at risk and vulnerable to exploitation.

Exploited and trafficked persons classifications are all covered under federal statutes. The violations include:

- Possession, manufacture and distribution of child pornography
- Online enticement of children for sexual acts
- Child sex trafficking
- Sex tourism involving children
- Child sexual molestation (not in family)
- Unsolicited obscene material sent to a child
- Misleading domain name – deceives child into viewing harmful materials
- Misleading words or digital images on the internet
- Extrafamilial sexual exploitation

As with any call to 9-1-1, the ECP must follow the standard call intake procedures. Questions include, but are not limited to, location of the emergency, nature of the emergency, caller name, call back number, name and description of the missing person with an approximate time of the last known contact with the victim. The ECP is required to immediately enter the missing child into NCIC.

The National Center for Missing and Exploited Children provides free on-line training for ECPs. The course

is entitled, “Telecommunications Best Practices for Missing and Abducted Children.” This course is approximately five hours long. This training may be divided into several sessions. Topics include:

- Nature of the problem: missing, abducted and sexually exploited children
- Best practices and operational protocols
- NCIC and effective data management
- Resources for the communications center

To access this training go to: <http://www.missingkids.com/ourwork/training/telmac>

The registration information is at the bottom of the page. This training is offered through Fox Valley Technical College’s Blackboard Online Learning Systemⁱⁱⁱ (NCMEC).

[Insert agency specific information, if applicable]

Section Review

1. Describe the two types of abductions.
2. Describe the two types of runaways.
3. Under what age is a child considered vulnerable to exploitation even if missing of their own accord?
4. In addition to the location and type of call, what information is needed to assist officers with this type of call?
5. What resources are available through the National Center for Missing and Exploited Children (NCMEC)?

ⁱⁱ APCO/NENA, "ANS 1.101.3-2015, Standard for Public Safety Telecommunicators When Responding of Missing, Abducted and Sexually Exploited Children."

www.missingkids.com/content/dam/ncmec/en_us/documents/911standards.pdf. Accessed March 22, 2018.

ⁱⁱⁱ National Center for Missing and Exploited Children (NCMEC), "Telecommunications Best Practices for Missing and Abducted Children." www.missingkids.com/ourwork/training/telmac. Accessed March 22, 2018.

AMBER Alert

The AMBER Alert system began in 1996 when Dallas-Fort Worth broadcasters joined with local law enforcement to develop an early warning system to assist in locating abducted children. AMBER stands for America's Missing: Broadcast Emergency Response. AMBER Alerts were named after Amber Hagerman who was abducted while riding her bike in Arlington, Texas; she was later found brutally murdered. The AMBER Alert system is used in all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands. Canada, Mexico and several European countries also have versions of the AMBER Alert system.

On April 30, 2003, Public Law 108-21 was passed by the 108th Congress. This statute was enacted to "prevent child abduction and the sexual exploitation of children and for other purposes"^{iv}(AMBER). This legislation ensured that the federal government would support the AMBER Alert system through development of a national coordination network, issuing minimum standards for issuance and dissemination of alerts through the AMBER Alert communications network and provided grants so that all states could develop and support the AMBER Alert system.

In Minnesota, the BCA activates AMBER Alerts when two criteria are met:

1. The AMBER Plan should be activated when a child, 17 years of age or younger, is abducted and there is reason to believe the victim is in imminent danger of serious bodily injury or death.
AND
2. There is information available to disseminate to the public which could assist with the safe recovery of the victim and/or apprehension of the suspect.^v(DPS)

How to Activate an AMBER Alert:

When a law enforcement agency decides to request activation of the AMBER Alert system, the law enforcement agency must contact the BCA. The BCA reviews the circumstances of the case and available information. Upon confirming that the AMBER Alert requirements have been met, the BCA activates the Minnesota Crime Alert Network (MCAN) and the State Emergency Alert System (EAS).

Once activated, the EAS system and MCAN immediately delivers the AMBER Alert to all participating radio and television stations in Minnesota. Once both messages are received, participating stations then announce the information every 15 minutes for the first two hours, then every 30 minutes for the next three hours. During this time the BCA also works with the National Center for Missing and Exploited Children to activate a Wireless Emergency Alert (WEA) via cell phones statewide.

If the victim is located or if the AMBER Alert should be cancelled for any reason, the law enforcement agency should contact the BCA immediately. After receiving this information, and with the approval of the Superintendent, Assistant Superintendent or designee, the BCA Operations Center will issue a Minnesota Crime Alert advising that the AMBER Alert has been cancelled.

For more information regarding AMBER Alerts go to: <https://dps.mn.gov/divisions/bca/bca-divisions/administrative/Pages/amber-alert.aspx>

Section Review

1. After whom was the AMBER Alert named?
2. What are the two pieces of information that are needed to issue an AMBER Alert?
3. In Minnesota, how does one activate the AMBER Alert system?
4. Can an AMBER Alert be activated in just one city or county? Explain.

^{iv} U.S. Department of Justice, Office of Justice Programs, “Amber Alert.” www.amberalert.gov/legislation.htm. Accessed March 22, 2018.

^v Minnesota Department of Public Safety, Bureau of Criminal Apprehension, “AMBER Alert Requirements.” <https://dps.mn.gov/divisions/bca/bca-divisions/administrative/Pages/amber-alert-requirements.aspx>. Accessed March 22, 2018.

Railway, Aircraft and Marine Emergencies

Railway Emergencies

The best practices guide for calls involving trains is NENA Standard 013.2-2016, NENA Public Safety Communications and Railroad Interaction Standard Operating Procedures. This standard gives direction to both railroad personnel and the ECP regarding information needed to establish the correct response to a railroad emergency.

Railroad emergencies may include train derailments, hazardous material spills, vehicle or pedestrian accidents, medical emergencies or other emergency situations. All these incidents require that the ECP has knowledge of how to contact the appropriate railway company. By contacting the railroad operations center, the ECP can stop or slow down a train due to an emergency on the tracks or gain valuable information regarding the bill of lading. The bill of lading shows all the cargo that is on the train, in which car it is located and car placement in the train. The Federal Railroad Administration (FRA) requires that the bill of lading be in one of three places: in the caboose (if applicable), in the primary engine or with the conductor.

The FRA has developed a web-based video related to rail safety for law enforcement and ECP training. This training highlights key points such as:

- Locating an incident
- How to determine which railroad to notify
- How to stop a train in an emergency
- How to locate the train crew and victims
- How to locate railroad personnel and railroad documents
- Determining the appropriate response^{vi}

For ECP training see: <https://railroads.dot.gov/>

Click on the section titled, “In the Spotlight.” Scroll down to the video titled, “Rail Safety for Emergency Dispatchers.”

The NENA best practices standards can be found under Standards & Best Practices at: www.nena.org.

[Insert agency specific information regarding local railroads]

Aircraft Emergencies

While the ECP may never have to handle an aircraft disaster, the ECP must be prepared to do so. The initial response to an aircraft disaster is handled by the local PSAP and public safety responders. Calls for an aircraft emergency may be reported by a witness or through the local air traffic control center. As with all emergencies, it is important for the ECP to obtain as much information as possible. The location, the type or size of the aircraft, and the number of engines will assist the ECP in determining the response needed. If the

caller is not at the crash site, the caller's location will become a determining factor in locating the crash site. If the caller is at the crash site, information on the number of victims and information on responder access, hazards such as powerlines, water or threatened population will assist in the recovery efforts.

Another source of information is a call from a crash survivor. As an ECP, one must understand this caller may be disoriented, physically or mentally traumatized, thus unable to give reliable information. If possible, asking for the starting point and destination may assist in locating the caller. Other information such as the plane tail number, the flight number, and the carrier will assist in locating the victims. APCO has published a quick guide for downed aircraft. Some questions include:

- Type of plane, number of engines, airline, flight number
- Location
- Caller's name, phone number and note the wireless carrier if needed
- Ask for their seat number if applicable
- Ascertain details of the emergency – what occurred (if time permits)
- Ask for estimated number of passengers
- Notify the FAA or nearest airport^{vii} (Stieffermann)

In addition, NENA standard 56.02 gives specific call taking information regarding:

- Emergency Calls from an Airborne Aircraft
 - Potential Terrorist Events
 - Non-terrorist Events
- Suspicious Airborne Object or Aircraft
- Aircraft Theft in Progress or Just Occurred

This standard directs when the Federal Aviation Administration (FAA) or North American Aerospace Defense Command (NORAD) Air Defense Sector needs to be notified. It is important to have these resources available if this low frequency, high risk call does occur. The NENA standard may be accessed here:

https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/NENA_56-002_V2.1_NORAD_FAA_.pdf

[Insert agency's nearest airport and FAA information]

Marine/Water Emergencies

Minnesota is known as the land of 10,000 lakes. Unfortunately, this number does not include rivers, ponds, creeks, and any number of water hazards. This makes marine/water emergencies more prevalent than in some areas of the country. It is also important to remember that water/marine emergencies can happen year-round and may include other vehicles besides boats. Minnesota State Statute 387.03 places the county sheriff as the ultimate authority for all water involved incidents. Sheriff's Departments must subsequently report all water related accidents and/or fatalities to the DNR.

Before an emergency exists, it is important to know what resources you may have available. Fire, law enforcement, DNR, U.S. Coast Guard, and the Minnesota State Patrol all may have resources for assistance.

Fire and law enforcement agencies are often the first responders in a water rescue. As an ECP, it is important to know which agencies have water rescue equipment available for immediate deployment. Many fire departments have water rescue gear, from boats to suits to ropes. As this equipment will vary by agency, the ECP should be familiar with these response plans.

The U.S. Coast Guard is often overlooked as a resource. Jurisdictions which include the Mississippi, the Minnesota or the Red River may have Coast Guard connections. Lake Superior also has resources for Coast Guard assistance. It is important to understand that the Coast Guard may not have someone readily in the area. However, if they do, they are very willing to assist.

The Department of Natural Resources may have resources available. The DNR has detailed knowledge of many of the lakes in their jurisdiction. They know the boat landings and many of the landmarks that can assist in locating victims of water/marine emergencies.

While the Minnesota State Patrol usually does not have water rescue equipment readily available, they do have aircraft which can assist in locating the victims. If the call is of a drifting boat or loose barge, the State Patrol may be able to fly over the watercraft to ascertain a better location and to determine if there are victims visible.

As with all calls, location is the most important element of the call for service. However, much like airline disasters, the location of water related calls can be problematic. When asked, “What is the location of the emergency?” the victim may only know what waterway he/she is on. The ECP must then begin a more landmark based interrogation. Questions that may be helpful are:

- What boat landing did you launch from?
- What landmarks to you see?
- How far from shore are you?

If on a river some additional questions are:

- Do you see any mile markers or GIS markers?
- How long have you been on the river? (Gives indication of how far they may have traveled)
- Did you travel with or against the current? (Gives indication of direction)
- Do you see any river hazards such as bridges, locks, dam?

Once the location is determined, the ECP will follow the department’s standard operating procedures regard gathering information on victims, hazards, and other details.

Additional information regard water emergencies can be found in “The Communication Center and Water Emergencies” by Jim Fraser^{viii}, which appeared in the November/December 2015 edition of APCO’s *Public Safety Communications*. This article can be accessed here:

www.nxtbook.com/naylor/PSCS/PSCS0615/index.php?startid=5&q=Water+emergencies#/32

Water emergencies – submerged vehicle:

In addition to boating accidents, the ECP may receive calls regarding submerged vehicles. If this happens, it is important to remember that a vehicle may take several minutes to sink. During this time the ECP can give life-saving directions to the occupants. The ECP should attempt to obtain the location of the accident as quickly as possible. Once the location is determined, the ECP may need to move on to the emergency at hand: how to deal with the sinking vehicle.

As a vehicle sinks, the pressure of the water against the vehicle will impact the ease in exiting the vehicle. The first step is to have the victims unbuckle their seatbelts and those of any passengers, including children in car seats. The windows of the vehicle should be closed at this time to slow the rate water is entering the vehicle. After everyone is unbuckled, the vehicle windows should be lowered. If the vehicle has electric windows, the windows may still work as long as the battery has power. If the window will not open, the caller may need to break the window. This can be done by punching a hole in the corner of the window, using a glass breaking tool, a key, or other sharp object, punch and push the glass out. Victims may also open the door; this is difficult, but not impossible to do. Because of the difference in the water pressure between outside and inside the vehicle, this is a last option attempt to exit the vehicle. If the vehicle has stopped sinking, it may indicate that the water is shallow enough to wade to the shore. If the vehicle is still sinking and the victims cannot make it safely to shore, the victims should climb on to the roof of the vehicle. The victims should remain there if possible, until responders arrive.

Quick guide to use when a caller is in a submerged vehicle^{ix} (Stiefermann):

- Unbuckle the seatbelt and those of passengers. This includes unbuckling children from car seats.
- Roll the window down or break the glass
- Get out and on top of the vehicle if the water is too deep to wade to land

Stiefermann's full article may be accessed here:

<http://www.nxtbook.com/naylor/PSCS/PSCM0414/index.php?startid=33&q=submerged+vehicle#/32>

Section Review

1. In a railway accident, what is the most essential piece of information?
2. Where can the bill of lading be found? Why is it important?
3. How can the ECP stop a train?
4. In an aircraft disaster, is it important to know the size of the aircraft? Explain.
5. Besides aircraft crashes, what types of calls may the ECP receive regarding aircraft?
6. When should the FAA be contacted?
7. In water related incidents, who has ultimate responsibility for responding to this type of call?
8. What are some of the resources that may be used in a watercraft incident?
9. If a vehicle is sinking, what is the first responsibility of the ECP?
10. Explain the method of exiting a sinking vehicle.

^{vi} NENA, "NENA-STA-013.2-2016 PSAP & Railroad Interaction." https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/NENA-STA-013.2-2016_RR_PSAP_.pdf. Accessed February 22, 2018.

^{vii} Stiefermann, Angie, "Worst Case Scenario: Aircraft Emergency," *APCO Public Safety Communications*, May 2014, p.26-27.

^{viii} Fraser, Jim, "The Communications Center and Water Emergencies," *APCO Public Safety Communications*, November/December 2015, pp.32-33.

www.nxtbook.com/naylor/PSCS/PSCS0615/index.php?startid=5&q=Water+emergencies#/32. Accessed March 22, 2018.

^{ix} Stiefermann, Angie, "Escaping a Submerged Vehicle," *APCO Public Safety Communications*, April 2014, pp. 32-33. www.nxtbook.com/naylor/PSCS/PSCM0414/index.php?startid=33&q=submerged+vehicle#/32. Accessed March 25, 2018.

Hazardous Materials

The types of hazardous materials calls are numerous. From calls of pipeline ruptures to major chemical releases, the ECP should know what to anticipate in any calls related to hazardous materials.

Pipelines:

Pipeline ruptures are a common hazardous material call. These calls range from small feeder lines directly into a home to large transport lines. NENA standard [56-507](#) was developed to assist the ECP during the first few minutes of these calls. This standard should be reviewed in depth. Exhibit 1 starting on page 10 of this document guides the ECP through the intake procedure through the initial response needs and contacting the pipeline.

Hazardous Materials:

A hazardous material spill is a low frequency high risk call. The ECP should be aware of hazardous materials that reside or traverse their response area. There are many overlooked hazards. Swimming pools have chemicals that can become deadly if released in a contained area. Lawn care products in high concentrations can become toxic if exposed to water and some are flammable. Gun shops have ammunition which is unstable at high heat such as a fire. In the home, propane grills, furnace, water heaters may all release hazardous materials if not in proper working order. The ECP must remain vigilant of the hazards the emergency responders and public may face.

The goals of a hazardous materials call are the same as with all high-risk calls:

- Protect Lives
- Stabilize the incident

If the ECP knows that the call involved a hazardous material, some additional information may be required. The ECP may consider asking or gathering information regarding:

- Placard identification number
- Number of victims and extent of injuries, if known
- Wind speed and direction. Weather conditions are needed assist in
- Movement of victims
 - Evacuate
 - Shelter in place

FEMA introduces hazardous materials in a five-unit on-line class that may assist the ECP in learning the basics of hazardous materials incidents.

FEMA IS-5.A – Introduction to Hazardous Materials:

Unit 1: Health and Environmental Regulations. This Unit explains the roles of Federal, State, Tribal and local governments in reducing hazardous materials risks, and reviews the key provisions of critical Federal legislation.

Unit 2: Hazardous Materials Identification Systems. This Unit discusses the two major hazardous materials identification systems currently being used in the United States. It also outlines how communities should be able to recognize a terrorist use of toxic industrial chemicals as Weapons of Mass Destruction (WMD).

Unit 3: Identifying Hazardous Materials. This Unit provides an overview of locations in which these materials are commonly found and discusses ways of determining what particular chemicals, with what health effects, exist in these locations.

Unit 4: Hazardous Materials and Human Health. This Unit introduces many of the basic terms used to discuss hazardous materials, problems, and explain how hazardous materials enter and move through the body and the environment.

Unit 5: Preparing for Hazardous Materials Incidents. This Unit explains what local communities can do to increase their emergency preparedness to respond to hazardous materials incidents of any size. It also identifies steps individuals can take to protect themselves during a hazardous materials release.

This training can be found on the following website:

<https://training.fema.gov/is/courseoverview.aspx?code=IS-5.a>

Additional information can also be found at:

<https://www.ready.gov/hazardous-materials-incidents>

<https://www.nxtbook.com/naylor/PSCS/PSCS0318/index.php?startid=18#/42>

Section Review

1. What are the two major hazardous materials identification system currently used in the United States?
2. What information can be found on a hazardous materials placard?
3. Why is weather information important in a hazardous materials spill?
4. Is direction of travel needed in an evacuation situation? Explain.
5. What are the 2 goals of the responders to hazardous material calls?

Weapons of Mass Destruction, Terrorism & Active Shooters

With high risk incidents such as school shootings and attacks in shopping malls and parks occurring more frequently, it is important for the ECP to have some basic understanding regarding weapons of mass destruction and terrorism.

Title 18 U.S.C. §2332a defines weapons of mass destruction (WMD) as:

- Any explosive, incendiary, or poison gas, including the following: a bomb; grenade; rocket having an explosive or incendiary charge of more than four ounces; missile having an explosive or incendiary charge of more than one-quarter ounce; mine; or device similar to any of the previously described devices;
- Any weapons that is designed or intend to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors;
- Any weapon involving a disease organism; and
- Any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

Nature of the Threat:

According to national policy, WMD refers to materials, weapons, or devices that are intended to cause (or are capable of causing) death or serious bodily injury to a significant number of people through release, dissemination, or impact of toxic or poisonous chemicals or precursors, a disease organism, or radiation or radioactivity, including (but not limited to) biological devices, chemical devices, improvised nuclear devices, radiological dispersion devices, and radiological exposure devices.^x

WMD terrorism and proliferation are evolving U.S. national security threats. The Director of National Intelligence has stated that dozens of identified domestic and international terrorists and terrorist groups have expressed their intent to obtain and use WMD—including nuclear materials. Indicators of this increasing threat include the 9/11 attacks, recent mass shootings and multiple attempts by terrorists at home and abroad to use improvised explosives created from basic chemical precursors. The challenge presented by these threats is compounded by the large volume of hoax threats that distract and divert law enforcement agencies from addressing real threats.^{xi}

What to Look For:

It is important for the ECP to understand that the threat of an active shooter or terrorism is real. Attacks can happen anywhere. October 2017, Las Vegas, 59 dead; June 2017, San Francisco, three dead; June 2017, Orange County, five dead; June 2016, Orlando, 49 dead. These are just a few of the mass shootings in the United States in recent history. According to the New York Times, mass shootings with four or more victims occur more than once per day.^{xii} The ECP needs to be mindful of the possibilities of receiving calls involving terrorism or active shooters.

The ECP is required to be familiar with the PSAPs policies and procedures for active shooters or terrorism calls. The ECP can expect that if faced with this situation, the phones will be overwhelmed. The response will

be major. The ECP must be familiar with one's role prior to receiving this type of call. In addition to the basic call interrogation questions, additional information is vital to the responders:

- Ask the caller if he/she/they is in a safe place?
- Do you know the number of shooters?
- Where are the shooter/shooters now?
- Can you describe them?
- What weapons are being used? (Generic information is good)
- Where are you in the building?
- Can you safely exit the building?
- If not, can you hide/barricade yourself in a safe place?
- Are you injured? Is anyone with you injured?

A sample law enforcement guide can be found at:

www.apcointl.org/training-and-certification/guidecards/law-enforcement-guidecards.html

The Department of Homeland Security produced a video for victims called: "Run! Hide! Fight!" This video provides excellent information regarding surviving an active shooter, and can be accessed here:

www.youtube.com/watch?v=p41JA5Zpzz4

The following websites have additional information regarding terrorism and weapons of mass destruction:

<https://www.fbi.gov/investigate/terrorism>

<https://www.fbi.gov/about/leadership-and-structure/national-security-branch/fbi-counterproliferation-center>

<https://dps.mn.gov/divisions/hsem/homeland-security/Pages/homeland-security-advisory-committee.aspx>

Section Review

1. In an active shooter event, is it important to know where the caller is located in the building? Why or why not?
2. What should the ECP tell victims regarding exiting the building during an active shooter event?
3. Why is it important to ask for descriptions of the suspects, if possible?
4. What does “Run! Hide! Fight!” mean?

^x Federal Bureau of Investigation, “Weapons of Mass Destruction”, www.fbi.gov/investigate/wmd. Accessed 07/23/2018.

^{xi} Federal Bureau of Investigation, “Weapons of Mass Destruction”, www.fbi.gov/investigate/wmd. Accessed 07/23/2018.

^{xii} LaFraniere, Sharon, Sarah Cohen and Richard A. Oppel Jr., “How Often Do Mass Shootings Occur? On Average, Every Day, Records Show,” *New York Times*, December 3, 2015. www.nytimes.com/2015/12/03/us/how-often-do-mass-shootings-occur-on-average-every-day-records-show.html. Accessed March 16, 2018.

Fire Calls

With actual fire calls, the ECP must remain cognizant of a fire's ability to grow. While many calls progress in a linear fashion, fires grown exponentially. This means, time is of the essence. The National Fire Protection Association (NFPA) estimates that there is one structure fire reported in the U.S. every 64 seconds. 92% of fire related deaths are the result of home fires. On average, seven people die each day as the result of a home fire^{xiii} (Fraizer).

With these statistics in mind, the NFPA publishes a communication standard for all public safety answering points which process fire calls. The application of the NFPA communication standard to PSAP operations has not been formally adopted in Minnesota, either in statute or SECB or regional standards, but many PSAPs use the requirements in the standard as quality assurance benchmarks in assessing their call-handling operations. In part, NFPA Standard 1221 requires:

- 90% of emergency alarm processing shall be completed within 64 seconds with 95% of calls to be processed within seconds. There are exceptions to this requirement, such use of standardized protocols, foreign languages, and other exceptions. The goal is to process and dispatch fire calls as quickly as possible.
- In addition to call processing times, it is important to send the correct number and configuration of responders. Over assigning or under assigning of apparatus and personnel pose a public safety threat by sending responders in emergency mode (Code 3, with red lights and sirens). Each fire agency should have written standard operating procedures of what type of apparatus is needed for each call type.
- All PSAPs must have a minimum of two dispatchers on duty^{xiii} (NFPA).

While these standards address the operational requirements for fire call processing, the call interrogation has not been addressed. For those PSAPs which do not use call protocols, the following questions may be useful:

- Standard intake questions: location, call back number, caller name (if applicable), type of call.
- What is on fire?
- Do you see flame/smoke?
- What type of building? Single or multiple family home, factory, store, office, etc.
- Structure fires: Do you know if everyone is out of the building?
- Is the fire contained to one area of the building?
- Are there any hazardous materials stored in the building?
- Vehicle fires: Where is the fire? Engine, passenger area, trunk?
- Is everyone out of the vehicle?
- Is there any exposure? Close to a building, in a garage, next to other vehicles?
- Other agency specific questions.

As with all call processing, the ECP must ask questions that will assist in painting the picture of the call for responders. The ECP is the voice of the caller until help is on the scene. Update responders as needed to ensure they have a clear indication of the type of call to which they are responding.

Section Review

1. What NFPA standard covers fire dispatching?
2. What is the difference between linear and exponential growth of a fire?
3. Besides the location, what essential piece of information is needed to assign fire responders?
4. Who determines the standard responses for fire calls?

Optional Exercises

1. Spend a shift or portion thereof with a fire department/station
2. Interview a fire chief regarding the fire department's priority for information gathering

^{xii}Fraizer, Audrey, "Link in the Chain," *The Journal of Emergency Dispatch*, January 2017, <https://jaedjournal.org/link-fire-chain/>. Accessed April 16, 2018.

^{xiii} NFPA, "NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems." www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1221. Accessed April 10, 2018.

Medicals

It is the responsibility of the ECP to ensure that in all medical emergencies, the correct resources are assigned to handle the emergency. This means that one must ask the correct questions to ensure a proper response. For the ECP, giving pre-arrival instructions or post-dispatch instructions is based on agency protocol and level of training.

Pre-arrival instructions are directions given to the reporting person to assist in the stabilization of the patient prior to responders' arrival. These can be such instructions as CPR, placing pressure on wounds, assisting with child birth. Post-dispatch instructions are those given to aid the responders in easily finding the location, having additional information available and scene safety.

To assist in determining the severity of the medical emergency the following interrogation questions may be used:

- Obtain and verify the patient's location
- Obtain the reporting person's name and call back number
- What is the nature of the problem? Tell me exactly what happened?
- What is the gender of the patient?
- What is the age of the patient?
- Is the patient conscious?
- Is the patient breathing? It is important to ask the conscious and breathing separately as it indicates different medical emergencies

Based on the answers, the ECP will determine the call type and responds configuration. If the ECP is trained in pre-arrival instructions such as CPR or rescue breathing, the ECP should begin these instructions immediately after starting responders. If the ECP is not trained in pre-arrival instructions, the ECP may give CPR instructions if certified to do so and the agency permits. All relevant patient information should be shared with the responders. HIPPA does not prohibit the ECP from sharing information that is vital to the patient's care.

The dispatcher may give post instructions as required such as:

- Open the door
- Turn on the outside lights
- Secure any pets
- Gather the patient's medications
- Other instructions as needed

As with any other in-progress calls, medical emergencies are fluid. Responses may be change as the situation warrants.

On or before July 1, 2021, every public safety answering point must maintain a telephone cardiopulmonary resuscitation program by either:

1) providing each 911 ECP with training in cardiopulmonary resuscitation: or

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2) transferring callers to another public safety answer point with 911 ECPs that have received training in cardiopulmonary resuscitation.

[https://www.revisor.mn.gov/laws/2019/1/5/%5E\(%3FPlaws.2.10.0%5B0-9%5C.a-zA-Z%5Cs/%5C/%5D+\)%24#laws.2.10.0](https://www.revisor.mn.gov/laws/2019/1/5/%5E(%3FPlaws.2.10.0%5B0-9%5C.a-zA-Z%5Cs/%5C/%5D+)%24#laws.2.10.0)

An established process must be in place to review the quality of CPR instructions given.

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Section Review

1. Is it appropriate to ask the age and gender of a patient? Explain.
2. How does the questions of conscious and breathing differ?
3. What is the difference between pre-arrival instructions and post-dispatch instructions?
4. In thinking about medical emergencies, what is most concerning to you?

Optional Exercises

1. Ride with a paramedic team for a shift or partial shift.
2. If not currently certified, attend a CPR certification class.

Deaf and Hard of Hearing Callers

In 1992, Title II of the Americans with Disability Act required equal access to 9-1-1. Administred by the Department of Justice, this requires that all citizens have access to 9-1-1 regardless of disability. In this case equal access means that the response time, response quality, hours of operation and all other features be available to Deaf, hard of hearing, and/or speech impaired persons. It also requires the PSAP to establish, implement and document testing procedures to ensure all ECPs are adequately trained and skilled in the use of the TDD/TTY, including the handling of TTY calls and the ability to transfer to other agencies. Per the U.S. Department of Justice (DOJ), testing must be conducted semi-annually.



The ECP must be able to:

- Effectively recognize incoming TTY calls
- Effectively process TTY calls
- Use proper TTY protocols
- Type in English and ASL gloss format
- Use TTY equipment properly

TTY etiquette requires appropriate language. Some of the most common language includes using the following:

- Q or QQ to indicate a question has been asked
- GA is go-ahead. This means that the other person on the call can respond.
- HD indicates hold or wait on the line
- SK or SK to SK or SKSK (Stop, Stop to Stop, StopStop) indicates the conversation is ending.

If the ECP has not received a GA or SK from the caller, the ECP must wait on the line until the caller has completed his/her thought. The use of TTY communication is very slow. The ECP should expect that these calls will take longer to process.

In addition to the language above, abbreviations may also be used. The ECP must not use abbreviations unless the caller has used them. Clarity is the key to processing these calls. Some other common abbreviations are:

- NBR = number
- BSY = busy
- HOSP = hospital
- HLP = help
- MED = medical
- ASAP = as soon as possible
- U or UR = you, your or you're
- CD or CLD = could
- MSG = message
- PLS = please
- R = are
- SHD = should
- TMW = tomorrow

The ECP should also pay close attention to the communication style of the caller. In some instances, Standard English will be used while in others American Sign Language will be used. American Sign Language does not have a written language; however, it does have a different structure. Examples:

- Time is references first
- The main thought follows the time
- Descriptive words follow the main thought
- Does not include verbs tenses. (work, working, worked)
- Does not include connecting words (and, or)

Other requirements:

- Silent 9-1-1 calls must be queried to meet ADA requirements
- Some TTY callers may press various TTY keys to emit a tone to advise the ECP of an incoming TTY call
- Some equipment advises the caller when the phone is ringing in the PSAP. This may encourage the caller to begin typing which results in the ECP not receiving the entire message
- Some TTY equipment is equipped with a voice announcer which tells the ECP that the incoming call is a TTY caller

Variations on TTY calls:

- Voice Carry Over (VCO) – This allows the caller to speak directly to the ECP, but needs the ECP to type their portion of the conversation

- Hearing Carry Over (HCO) – Hearing carry over allows with caller to hear the ECP’s portion of the conversation, but needs to type a response
- Telecommunications Relay Service (TRS) – This is the use of a third-party caller to relay information between the caller and the ECP. Minnesota Relay by be reached at 7-1-1.



Photo used courtesy Sorenson Communications

Section Review

1. Who administers the American Disability Act with regards to equal access in the PSAP?
2. Skills and knowledge testing for the ECP must be held how often?
3. What do the abbreviations GA, Q, SK mean? Why are they important
4. There are three variations to the standard TTY call. What are they?
5. How is the call processing time different for TTY calls versus hearing callers?

8. Stress Management

Scope:

Stress is part of everyday life. In this section, the ECP will be introduced to the history, causes, symptoms and strategies for dealing with stress.

Learning objectives:

1. Learn the definition of stress management and post-traumatic stress disorder
2. Identify the signs and symptoms of stress.
3. Learn how to combat stress
4. Become acquainted with additional resources for stress management

Definition:

Stress is defined as a state of mental or emotional strain/tension resulting from adverse or very demanding circumstances. It is often thought of as the fight or flight response to critical incidents. “Stress management is an automatic physical, mental and emotional response to a challenging event and are a normal part of everyone’s life. When channeled positively, stress can lead to growth, action and change. But negative stress can lessen one’s quality of life.” (Mayo Clinic)

Critical incident stress is often correlated with public safety stress management. It has been found to be very common and very treatable. In the general population, studies have shown that approximately 4% of men and 10% of women will experience Post Traumatic Stress Disorder (PTSD) sometime in their lifeⁱⁱ (Friedman)

As an ECP, one faces stress daily. The stress comes in forms of a series of extraordinarily busy shifts, traumatic calls, uncertainty of one’s abilities to handle a given call, as well as the challenges of work/life balance. While the mental health research has been conducted extensively for police, fire and EMS, researchers have only recently begun to include 9-1-1 professionals in the study of stress and stress management. Originally the adage of “out of sight, out of mind” was applied to 9-1-1 professionals. It was believed that if one did not see an event, one was not impacted by the stress of the event. Mental health professionals are now acknowledging that 9-1-1 ECPs are, in fact, being challenged by high impact stress. It is estimated that PTSD percentages increase to the rate of approximately 18% to 24% in emergency communication professionalsⁱⁱⁱ (Lilly) Left untreated, symptoms will impact daily life.

Historical Context of Stress Management^{iv} (Friedman):

In “History of PTSD in Veterans: Civil War to DSM-5,” Matthew J. Friedman provided a thorough overview of the history of PTSD and how it has been viewed and diagnosed over time. Stress and stress management have been discussed for as long as there have been humans. Throughout history, authors have written about traumatic experiences and resulting symptoms. The study of life altering stress has a long history. Today, this

stress is often labeled as PTSD. PTSD can be the result of one traumatic event or the result of a high level of sustained stress. With some, this stress has an immediate impact on daily life. While for others, the stress may build over days, weeks or months.

In the 1760's, PTSD was referred to as "nostalgia," with symptoms ranging feeling of sadness, to anxiety to sleep interruptions. During the Civil War, PTSD was described as a Soldier's Heart or irritable heart which was identified by a rapid pulse, anxiety or trouble breathing. These symptoms were often treated with drugs while the soldiers were sent back into battle. For civilians, the term used was "railway spine," as travel by railroad was becoming more common, as were railway accidents thus causing anxiety and sleeplessness.

In World War I, the term used was "shell shocked." Often soldiers taken off the front battle lines for a few days of rest then returned to combat. Shell shocked became battle fatigue or combat stress reaction during World War II. Soldiers were treated using the Proximity, Immediacy, Expectancy (PIE) system. This required treating combat soldiers as close to the battle front (proximity), as quickly as possible (immediacy) and with the articulated expectation of full recovery (expectancy). Treatment by PIE was believed to be the most efficient treatment to return soldiers to the battlefield.

During the Vietnam era, there was a correlation found between the stress soldiers encountered, and the stress civilians encountered when faced with an acutely stressful incident. It was made clear that PTSD is not simply a soldier's malady.

Critical Incidents^v (Metro CISM Team):

ECPs are faced with critical incidents daily. They are the first responders to hear the cry of a parent whose child had just died. They hear the gunshots of a suicide victim. They stay on the phone to give a loved one vital CPR instructions in the hopes of saving a life. They talk with people in crisis daily. While the expectation is for the ECP to handle the incident and move on, the stress of those events become part of one's memory. For an ECP, critical incidents include:

- Suicide of a co-worker
- Mass casualty incidents
- Responder involved shootings
- Assaults
- Catastrophic injury/major illness – either personally, professionally or familymember

Other events which may be a critical incident:

- Major incident involving children
- Large media responses
- Dramatic/intense family situations
- Work environment, protocol violation, low staffing, legal/discipline issues, etc.
- Personal relatable incidents – emotionally and/or physically "hits close to home"
- Cumulative stress events

Symptoms:

Stress can be a positive when the result is growth, learning a new skill or improving self- confidence. Long term stress or a sudden acute stress, however, impacts one's quality of life. There are symptoms that can indicate whether one is experiencing critical stress or PTSD. While we all experience the symptoms of stress, prolonged or reoccurring symptoms may indicate the need for intervention. Symptoms include:

- Behavioral
 - Restlessness
 - Irritability and moodiness
 - Anti-social behavior
 - Increased alcohol consumption
- Physical
 - Vomiting, Chills
 - Headaches
 - Disrupted sleep
 - Muscle tremors
 - Chest pain
 - Weight gain
- Cognitive
 - Poor concentration
 - Confusion or uncertainty
 - Nightmares
- Emotional
 - Depression and anxiety
 - Intense anger
 - Grief
 - Guilt

Strategies for Dealing with Stress:

While stress is a normal life event, undue stress needs to be addressed. There are strategies that an ECP can employ to deal with critical stress and PTSD. Strategies include:

- **Breathing** – This is the single most important strategy. When one is experiencing extreme stress, one begins shallow breathing. This results in greater stress on one's body. Taking 2 or 3 deep, abdominal breaths, each hour assists in lowering blood pressure and relaxing one's body. Deep breathing releases endorphins which gives a greater feeling of well-being. BREATHE!
- **Remember** – Deliberately recalling memories for a limited amount of time helps one's brain. This allows one to become acclimated to the memory without being overwhelmed by it
- **Maintain** – Maintain a healthy life style – healthy eating, exercise, rest, seek the support of family,

friends and trusted co-workers

- **Attend** – Attend a critical incident stress debriefing. Often agencies will provide critical incident stress management (CISM) debriefings for all those involved in a specific incident. This is not an incident debriefing in which each action and reaction is reviewed. This is an opportunity to review the call with other involved personnel to discuss the feelings and personal reactions to the triggering event. By discussing one's feelings with others who have also experienced the incident, one may see the incident from a different perspective. CISM debriefings are a peer to peer supportive environment. None of what is shared within these debriefings is shared with others; no information is shared with supervisors, management, or other peers.
- **Seek** – If needed, seek assistance through the agency's employee assistance program. Usually this contact is through the Human Resources Department. Your employer is concerned about your health and well-being. Ask for help when needed.

Stress Management:

Stress is a normal natural part of life. As an ECP, one is exposed to continued stress involved in call processing, critical incidents, schedule fluctuation, and home/work balance. Maintaining a healthy lifestyle, eating healthy, getting enough sleep, having a positive support system will all assist in minimizing stress. As needed, attending critical incident stress debriefings, seeking assistance through the agency's employee assistance programs will all enable the ECP to have a long, successful career in the emergency telecommunications field.

Additional Resources:

- Metro CISM Team, "Critical Incident Stress" www.metrocism.org/critical-incident-stress
 - See links to: "Tips for Managing and Preventing Stress" and "A Guide to Managing Stress in Crisis Response Professions"
 - Watch videos
- The Call^{vi}, "Stress-Related Health Problems in 9-1-1 Telecommunicators" and "PTSD and Pre-Employment Screening," Winter, 2015, www.nxtbook.com/naylor/NENQ/NENQ0415/index.php?startid=10#/10
- The Call, "Recognizing the Signs of Burnout and Tips to Preventing It in the Future", Fall, 2015, www.nxtbook.com/naylor/NENQ/NENQ0315/index.php?startid=14#/16
- The Call, "Life Balance: Is It Achievable?," Fall, 2014, www.nxtbook.com/naylor/NENQ/NENQ0314/index.php?startid=18#/20
- The Call, "Research with 9-1-1 Telecommunicators: What Recent Studies Have Shown About Health and Its Predictors," Spring 2014, www.nxtbook.com/naylor/NENQ/NENQ0114/index.php?startid=30#/32
- The Call, "Stress in the 9-1-1 Center," and other articles in this edition, Fall 2013, www.nxtbook.com/naylor/NENQ/NENQ0313/index.php?startid=18#/20
- Agency Human Resources Department – Information regarding Employee Assistance Programs

Section Review

1. What is the definition of stress management?
2. How stress management different from Post-Traumatic Stress Disorder?
3. Name four possible triggers for life altering stress.
4. What are the four symptomatic areas impacted by critical stress?
5. List three techniques for addressing stress?
6. What is CISM?
7. What role do they play in critical incidents?
8. What resources available through your Human Resources Department?

ⁱ Mayo Clinic Staff, "Stress Management – Overview." www.mayoclinic.org/tests-procedures/stress-management/about/pac-20384898. Accessed October 31, 2017.

ⁱⁱ Friedman, Matthew J. MD, PhD, "History of PTSD in Veterans: Civil War to SDM-5." www.ptsd.va.gov/public/ptsd-overview/basics/history-of-ptsd-vets.asp. Accessed October 31, 2017.

ⁱⁱⁱ Lilly, Michelle M., PhD, "Stress-Related Health Problems in 9-1-1 Telecommunicators," *The Call*, Winter, 2016, www.nxtbook.com/naylor/NENQ/NENQ0415/index.php?startid=10#/10. Accessed October 31, 2017.

^{iv} Friedman, Matthew J. MD, PhD, "History of PTSD in Veterans: Civil War to SDM-5." www.ptsd.va.gov/public/ptsd-overview/basics/history-of-ptsd-vets.asp. Accessed October 31, 2017.

^v Metro CISM Team, "Critical Incident Stress." <https://metroicm.org/critical-incident-stress>. Accessed November 4, 2017.

^{vi} The Call Magazine by the National Emergency Number Association, Winter 2016. <http://www.nxtbook.com/naylor/NENQ/NENQ0415/index.php?startid=10#/10>. Accessed October 31, 2017.

9. Quality/Performance Standards Management

Scope:

This section focuses on how the organization ensures a uniformly high level of service to all its customers. Common tools for quality assurance and improvement will be introduced. Initial training feedback tools may include: daily observation reports (DOR), skills testing, and quality assurance evaluations.

Learning Objectives:

1. To become familiar with the various forms of feedback
2. To understand the importance of performance standards reflected in:
 - a. Daily Observation Reports
 - b. Skills testing
 - c. Performance review
3. To become familiar with:
 - a. Quality Assurance
 - b. Quality Control
 - c. Quality Improvement

Background

Whether one is attending school or is employed, one is subjected to performance evaluations. Performance evaluations run the gamut from informal discussions to formal written performance evaluations. Emergency communications continually evolves to meet the expectations of the public, the needs of the responders and changes in technology. It is important to maintain high performance standards to meet these challenges.

A quality assurance program assists the agency in maintaining a high standard of service by reviewing calls for service from the time a call is presented to the ECP through dispatching the call to responders. Some agencies may include call processing, radio traffic, and support activities from call inception to completion. The quality assurance program is based on the agency's written standards and legal requirements. The goal is to instill a high level of training and to ensure conformance to documented standards. Basic, core competencies are locally defined to achieve the desired response to operational expectations.

Quality assurance programs also serve to ensure that the individual ECP and agency liability is held to a minimum. Policies and procedures are in place to ensure the citizens of the community receive the best possible service in the most efficient, effective and professional manner. Quality assurance programs are designed to keep standards of performance high.

Feedback

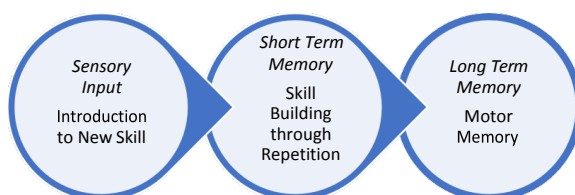
Feedback is simply defined as a means of providing positive reinforcement for positive performance or providing a guidance to improve performance. The APCO/NENA ANS 1.107.1.2015 Standard for the Establishment of a Quality Assurance and Quality Improvement Program for Public Safety Answering Points defines, in depth, the need for feedback as a means of ensuring a high quality of call processing.ⁱ (APCO/NENA)

Feedback is often difficult to hear because one often correlates feedback with criticism. Receiving feedback requires the ability to keep one's emotions in check. The assumed negativity of feedback often causes one's fight or flight responses to activate. Be aware of defensive emotions as the goal of quality improvement is to provide a means maximizing an ECP's skills and abilities. Feedback is not intended to be personal nor negative. Feedback can provide helpful insight in skill building. As repetition is a necessary step in learning, feedback provides for finetuning skills.ⁱⁱ (Baird)

Initial Training – Daily Observation Reports:

During the initial training phase, daily observation reports (DOR) are used to track the ECP's progress. The DOR documents important topics, skills and behavior required to progress through the training program; they also ensure that all training topics have been introduced, demonstrated and accomplished. Written by the trainer, DORs are reviewed daily with the trainee. The DOR becomes part of the training documentation with the progression of each skill being noted. Goals are then set for the next training period. Again, the goal is to achieve the basic mastery of the skills necessary to be a successful ECP.

During this initial training, attendance becomes extremely important. Skill building requires repetition. Repetition requires consistent attendance. Building new skills requires moving information from the initial sensory input (new information) to the short-term memory and finally to the long-term memoryⁱⁱⁱ (Richards). Repetition allows information to be properly processed and stored for quick recall during critical incidents. Repetition consolidates information which allows it to move from the hippocampus or short-term memory to the permanent storage located in the cortex of the brain.



The DORs assist not only the trainee, but also the trainers. Trainees often have multiple trainers. Each trainer will review the previous DORs to ascertain the current skill level of their new trainee which results in

continuity in training. New topics can be introduced. Areas of concern are reviewed. Milestones are celebrated.

[Insert agency DOR form]

Skills Testing

Within the initial training period there are several written skills tests. These tests are based on training modules such as emergency management, NCMEC, NCIC and other agency defined skill tests. Tests are used to evaluate individual and agency compliance with local, regional, state and national standards. Testing continues throughout the employment as recertification is required for NCIC, security and ADA requirements. For the agencies which utilize call processing protocols, testing is required to ensure standards compliance.

Performance Standards

Performance standards provide specific written directives and operational standards. These are measurable, observable standards. Performance standards are based on the job description, not the individual. The standards are specific indicators of success or need for additional training. The term for evaluations based on performance standards are called SMART.

Specific,
Measurable,
Agreed upon,
Realistic
Timely.

The agency's current evaluation form is:

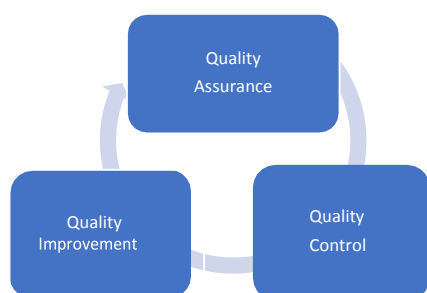
[Insert agency performance evaluation form]

Quality Assurance, Control, Improvement

Quality Assurance and Quality Improvement for PSAPs is covered under a joint APCO/NENA ANS 1.107.1.2015. The entire standard should be read and reviewed. It can be found at:

https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/APCO-NENA_ANS_1.107.1.2015_Q.pdf

Quality assurance, quality control and quality improvement are continuous processes of evaluation, compliance and improvement. While the ECP is often the focus of quality assurance, the agency is also assessed and in need of continual improvement. Changes to processes are based on new technologies, standards, and expectations.

**Quality Assurance:**

All the training in the world is only as good as the quality assurance program that supports it. Consistent, written standards, on-going evaluations and reinforcing proper procedures and protocols provide the support needed to achieve a center with highly trained, professional employees.

Quality Control:

Quality control involves reviewing a specific number of calls taken by each ECP. Often it is 2% of all calls, or a specific number of a specified type of call which are focused upon. Each call is reviewed by listening to the audio log of the call while reviewing the CAD or incident event documentation. All calls are reviewed twice. The first review is to assure that all relevant information has been gathered. The location, caller name, phone number, type of call and basic call details are reviewed for accuracy. The important information to be covered is documented in the addendums of the ACPO/NENA standard. If a call protocol system is being used, such as APCO or Priority Dispatch, a standardized protocol review is used. A second review is completed to insure all details were covered and if all acceptable communication standards were utilized.

Each call is evaluated in writing with each component of the call receiving a weighted score. For example: verifying the address of the incident weighs more than using the proper greeting. Each goal score and actual score is documented. A final determination, or score, is given after all components of the call are reviewed. Calls either meet standards or exceed standards. For those calls which fall short of acceptable standards, feedback is given for quality improvement. Each call evaluation is reviewed by the ECP and the evaluator so input from the ECP may be added as needed. If a call falls below the acceptable protocol compliance level, a plan to approve the specific areas which need improvement will be developed to assist the ECP.

Quality Improvement:

Quality improvement is two-fold. The first is for the individual ECP. This is the opportunity to fine tune skills. As a new employee, the ECP has an immense amount of information to learn, new skill development and often a new work environment in which to adjust. The quality improvement program gives the ECP feedback based on measurable standards. It strives to be as fair and impartial as possible. Measurable standards take supervisor preferences, shift personalities and the emotional impact of the call out of the evaluation. Quality improvement both praises the accomplishments of the ECP and gives specific directions and goals for his/her improvement. This section is focused on individual education and growth as an ECP.

The second objective of quality improvement is for the entire agency. This is where protocol standards are monitored and evaluated. Quality improvement for the agency may include celebrating achieved goals, modifying protocols, updating standards and, most importantly, providing department wide standards and training. As with individual quality improvement, the goals of department training are to be attainable, measurable and timely. By ensuring that standards and goals reflect the current industry best practices, the liability of both the agency and individual are minimized.

Section Review

1. Describe the different types of performance reviews:
 - a. Daily Observation Reports
 - b. Skills Testing
 - c. Performance Review
2. How are new skills moved through the brain?
3. Name the three Q's.
4. Describe the two goals of quality improvement?
5. Identify the components of SMART goal setting.

ⁱ APCO/NENA. "ANS 1.107.1.2015 Standard for the Establishment of Quality Assurance and Quality Improvement Program for Public Safety Answering Points." https://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/APCO-NENA_ANS_1.107.1.2015_Q.pdf. Accessed November 20, 2017.

ⁱⁱ Baird Group, "10 Tips for Giving and Receiving Feedback Effectively." www.baird-group.com/articles/10-tips-for-giving-and-receiving-feedback-effectively. Accessed November 19, 2017.

ⁱⁱⁱ Richards, Regina G., "Making It Stick: Memorable Strategies to Enhance Learning." <http://www.1donline.org/article/5602/>. Accessed November 16, 2017.

10. GLOSSARY

Abandoned Calls	Calls which are disconnected prior to being answered at the PSAP
ACD	Automatic Call Distribution
ADA	American with Disabilities Act
AHJ	Authority Having Jurisdiction
ALI	Automatic Location Identification
ANI	Automatic Number Identification
ANS	American National Standards
APCO	Association of Public Safety Communications Officials
ARMER	Allied Radio Matrix for Emergency Response/800 MHz Radio
ASL	American Sign Language
AVL	Automatic Vehicle Location
BCA	Bureau of Criminal Apprehension
CAD	Computer Aided Dispatch
CAD	Computer Aided Dispatch
CDR	Call Detail Record
CALEA	Commission on Accreditation for Law Enforcement Agencies
CISM	Critical Incident Stress Management
CJIS	Criminal Justice Information System
COML	Communications Unit Leader
COMT	Communications Unit Technician
COOP	Continuity of Operations Plan
COW	Cell on Wheels
CPR	Cardiopulmonary resuscitation
CRTF	Communications Response Task Force
DEM	Department of Emergency Management
DOJ	Department of Justice
DOR	Daily Observation Report
DOT	Department of Transportation
DPS	Department of Public Safety
Duty	The legal obligation to act
E 9-1-1	Enhanced 9-1-1

EAP	Employee Assistance Program
EAS	Emergency Alert System
ECC	Emergency Communications Center
ECN	Emergency Communications Network
ECP	Emergency Communications Professional
ECP	Emergency Communication Professional
EMS	Emergency Medical Service
EOC	Emergency Operations Center
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
GIS	Graphic Information System
GPS	Global Positioning System
HCO	Hearing Carry Over
HCO	Hearing Carry Over
HIPAA	Health Insurance Portability and Accountability Act
HR	Human Resources
HSEM	Homeland Security Emergency Management
IACP	International Association of Chiefs of Police
IAED	International Academies of Emergency Dispatch
ICE	Immigration Customs Enforcement
ICS	Incident Command System
IDT	Incident Dispatch Team
IM	Instant Messaging
IPAWS	Integrated Public Alert Warning System
LAN	Local Area Network
Language Line	Translation services for the PSAP provided by the State of Minnesota
Lat/Long	Latitude/Longitude
Liability	The condition of being subject to an obligation
MDC	Mobile Data Computer4
MESB	Metropolitan Emergency Services Board
MNJIS	Minnesota Justice Information System
MSAG	Master Street Address Guide
NANP	North American Numbering Plan
NCIC	National Crime Information System
NCMEC	National Center for Missing and Exploited Children
Negligence	Failure to act
NENA	National Emergency Number Association

NFPA	National Fire Protection Association
NFR	No Record Found- Reference ALI/ANI
NG 9-1-1	Next generation 9-1-1
NIMS	National Incident Management System
NLETS	National Law Enforcement Telecommunications System
NRS	NENA Registry System
NSA	National Sheriffs' Association
NTSB	National Transportation Safety Board
PIO	Public Information Officer
POTS	Plain Old Telephone Service
PSA	Patient Service Area or Public Service Announcement - dependent on context
PSAP	Public Safety Answering Point
PTSD	Post-Traumatic Stress Disorder
PTT	Push to Talk
QA	Quality Assurance
QC	Quality Control
QI	Quality Improvement
RACES	Radio Amateur Civil Emergency Service
RMS	Records Management
SMART	Specific, Measurable, Agreed Upon, Realistic, Timely
SMS	Short Message Service -- 160 characters or less
TERT	Telecommunicators Emergency Response Taskforce
TRS	Telephone Relay Service
TTY/TDD	Teletypewriters
txt	text
VCO	Voice Carry Over
Vicarious liability	Being responsible for another's actions - Supervisor for employee
WHP	Wireless Home Phone
WPH 1	Wireless Phase 1
WPH 2	Wireless Phase 2

Unassigned Future Issue List (not prioritized):

- Working with the MN Sheriff's Association to reach consensus on identity theft / fraud jurisdiction issues
- Leadership mentoring for staff
- Backup and work load sharing options for PSAPs
- Mental health call processing standard
- Cell phone location ping process standard
- 9-1-1 call routing and ALI data error reporting standard
- Telecommunicator licensing
- Telephone CPR Instruction requirements/training

**Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
Network Report
October 17, 2019**

Agenda Number 6.C.

1. Text-to-9-1-1:

Washington and Scott Co. are the only remaining primary PSAPs in the metro area that have not yet implemented text capabilities on their answering applications. Both PSAPs are planning to implement text messaging concurrent with their next 9-1-1 answering application upgrade.

2. Firewall Implementation:

The team working on the ESInet firewall implementation project is now focusing on turning up some of the greater MN PSAPs. It is not known at this time when the team will come back to the metro area. The MESB will pass on additional firewall implementation dates as they become available.

3. Other PSAP Activity:

North Memorial is expected to turn-up a new Solacom 9-1-1 answering application on Monday, October 14. This implementation is geo-diverse with one server at the hospital in Robbinsdale and the other server at the PSAP location. The Solacom application will include text-to-911 capability.

Metro Transit is establishing their emergency coordination center as a PSAP on the 9-1-1 system. They expected to go live with a Solacom answering application in November. They will take a very limited number of emergency calls from their emergency phones on station platforms but are expected to take a significant number of transferred 9-1-1 calls from the primary PSAPs. Being on the 9-1-1 system will allow the Transit PSAP to receive and rebid for caller location as well as receive the ANI of the caller, provided the primary PSAP transfers the call to the Transit PSAP on the 9-1-1 system.

The U of M is moving the PSAP to their new location on campus, but the move has been delayed because the old telecommunications demarcation equipment must be replaced first. No target date has been set for the move.

4. NG9-1-1 ESInet:

MESB staff worked with ECN to prepare a 911 System Ingress RFP for re-homing the telecommunications service providers to vendor neutral datacenters and convert the 911 calls to an NG9-1-1 format for delivery to the 911 service provider core services. The RFP closes this month and evaluation of the vendor responses will begin.

The MESB is focusing on giving our PSAPs better continuity of operations (COOP) options as well as enabling work load sharing for the PSAPs that are interested in working together. We want to ensure that our ESInet infrastructure can support shared/hosted and cloud-based applications and not limit the use of the ESInet to just handling 9-1-1 traffic. We are working now with ECN to consider ESInet options that would rehome our PSAP ESInet connections to redundant, diverse datacenters that can become the hubs for delivery of shared/hosted and cloud-based applications to all the metro PSAPs such as CAD, CAD-to-CAD interoperability, logging, as well as 9-1-1 answering applications.

In April 2018, NENA published a new NG9-1-1 ESInet Design document that outlines new modifications to the existing ESInets in use today. The new design focuses on increasing reliability and resiliency by incorporating multiple network service providers using different network protocols (e.g. MPLS, Ethernet, cable broadband Internet, wireless carrier broadband Internet). The MESB will continue to work with ECN to develop an implementation strategy to bring the metro area ESInet configuration into compliance with the NENA design recommendations.

Metropolitan Emergency Services Board
9-1-1 Technical Operations Committee
9-1-1 Data Report
October 17, 2019

1. Importance of GIS for 9-1-1:

- a. MESB encourages continued **communication and planning between PSAPs and County GIS Departments** for ongoing geospatial dataset maintenance (road centerline and address points) to be used in statewide NG9-1-1 core services. The datasets also form the foundational data used in PSAP CAD and mapping systems, as well as multiple other uses beyond public safety. 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**.

2. Statewide GIS Data Standards:

- a. The metro county GIS departments are targeting the end of 2019 to trial migrating the regional road centerline to the **Minnesota Centerline Data Standard v1.0** schema approved by the Minnesota Geospatial Advisory Council (GAC). Full regional dataset availability in the GAC schema is targeted for Q1 2020.
- b. In September, the GAC Standards Committee did an initial review of a proposed state **Emergency Service Provider Boundary Polygon Standard**. Recently, MnGeo is reconsidering their approach for aggregating statewide emergency service boundaries and what they would like to see provided by the counties/regions. This may impact the GAC schema. The GAC Standards Committee chair put consideration of proposed standard on hold to give MnGeo more time for their internal discussions.
- c. The SECB NG911 Committee has created a workgroup to develop **standardized statewide emergency service agency names** which MnGeo will then incorporate into domains for the emergency service provider boundary polygon dataset. The workgroup has not yet met. Recently, MnGeo is reconsidering if they need these.

3. Regional GIS Data Aggregation:

- a. **Centerline (MRCC):** The MetroGIS/Met Council continues to process updates of the MRCC nightly to the MN Geospatial Commons website. Each metro county's most recent centerline data that has been uploaded to the portal and passed validations is included in the regional dataset. All ten metro counties are using this process for MRCC updates.
- b. **Address Points:** The MetroGIS/Met Council continues to process updates of the Regional Address Point dataset (in the statewide schema) nightly to the MN Geospatial Commons website. Each metro county's most recent address points that have been uploaded to the portal and passed validations are included in the regional dataset. All ten metro counties are using this process.
- c. A **MetroGIS project proposal** is under consideration to begin a dive into key **address and geospatial data lifecycle processes** to document inter-agency data federation models, processes and roles to support the ongoing production of regional data suitable for NG9-1-1 system consumption. The proposal would be considered among other potential MetroGIS projects for 2020.

4. Regional PSAP/ESZ Boundaries:

- a. MESB is now contributing geospatial data to the **Minnesota Geospatial Commons**. The 10-county regional PSAP and Emergency Service Zone boundaries with metadata are available for download via the Commons. The datasets will be updated there as boundaries change or at a minimum of quarterly. Information about this public availability of the PSAP boundary polygons has been shared with Mobile Positioning Center, Text Control Center, and VoIP Positioning Center vendors and they will be directed to the Commons for future downloads of metro's PSAP boundary polygons.
- b. **Recent changes to regional PSAP/ESZ boundary polygons:** Boundary adjustments were made for annexations in Chisago and Scott Counties and some alignments between Chisago, Isanti, Kanabec and Pine Counties.

5. Regional 911/GIS Data Synchronization:

- a. MESB, County GIS departments, and PSAP data coordinators continue analysis and investigation of errors resulting from regional geocoding validations.

6. Statewide NG9-1-1 GIS Project:

- a. The State of Minnesota (DPS-ECN and MnGeo) conducted an **informational meeting about the statewide NG9-1-1 GIS project** on 9/19/19 in the MESB Boardroom. Approximately 45 PSAP managers and GIS representatives participated. Collaboration, ongoing funding, and visibility of the GIS effort in support of 9-1-1 were key themes of the meeting. Sandi Stroud, a new Assistant Director of MnGeo, was introduced and brings 9-1-1 GIS experience.
- b. Reps from the **Association of MN Counties (AMC)/MN County IT Leadership (MNCITLA)** organizations have been in contact with the metro county GIS managers and MESB staff. They are gathering information on the GIS effort in support of NG9-1-1.
- c. Metro counties continue to have interest in **availability of normalized collar-county GIS datasets** from MnGeo/ECN. MnGeo is turning up a viewer for the statewide datasets. MESB has requested access information and will share it with metro partners once it is received. MnGeo does not have a specific date yet on when they will make the collar county datasets available back on the NG9-1-1 portal (in GAC schemas) for download.

7. Regional Data Viewer:

- a. MetroGIS/Met Council has updated their **Regional Data Viewer** prototype that was designed to facilitate communications and QA/QC of the regional geospatial datasets central to the business needs of E9-1-1 and NG9-1-1. The viewer will be a good reference tool for PSAP Data Coordinators in MSAG maintenance work and those seeking to validate 9-1-1 addresses. Variations could also display data of interest to users in the broader public safety community. Demonstration and expanded user testing are being planned by MetroGIS, with input from MESB.

8. Wireless Cell Sector/Routing Data:

- a. MESB provided Intrado the audit results of **Sprint wireless ALI data** after their VoLTE deployment. The audit identified approximately 15% of the sectors needed correction from what MESB had previously sent to Intrado. Intrado is investigating training, programmatic and process solutions to the issues on their end.

- b. **T-Mobile completed activation and testing of wireless ALI data updates** supplied by MESB to clean and standardize their data. PSAPs should be seeing a substantial improvement in the data content/format consistency of T-Mobile wireless ALI displays. Previously, MESB performed similar work with the cleanup of Verizon, AT&T Mobility, and Sprint data. In the process of their data clean-up, T-Mobile identified an underlying issue with LTE sectors in the 1900 frequency band causing the data not to update. Danny Neds of T-Mobile is continuing to work internally on a resolution.
 - c. **MESB is processing wireless routing updates for all carriers on behalf of the metro PSAPs.** If PSAPs get wireless routing requests directly from T-Mobile, Comtech, or Intrado, please forward them to mesbgis@mn-mesb.org. MESB staff will handle the request and educate the employee on the correct process.
 - d. 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.
9. **New Class of Service Codes (WDL2, WDL1, WCVC, and VNOM)** are ready in the CenturyLink/West ALI system to be activated in Minnesota. Per ECN, the SECB NG9-1-1 Committee will determine activation timing. The committee has not yet done so. Based on our PSAP survey, MESB staff has communicated to CenturyLink and ECN that the metro PSAPs need a minimum of a 60-day notice prior to activation of the new codes to prepare their CAD/mapping systems (where needed.) It is recommended that those PSAPs who will need modifications to their CAD or mapping systems to handle these new Class of Service Codes proceed with those updates. ECN staff has said the activation will likely be by the end of 2019.
10. Under a **NG9-1-1 Federal Grant**, ECN has received \$2.8 million for GIS data development. ECN's application for that grant included monies for Sherburne County's GIS dataset development, as well similar work in other Greater Minnesota counties. ECN's application also included some monies to support a metro region pilot project surrounding regional GIS-derived MSAG creation and ongoing maintenance processes. Both efforts would collaborative efforts between the counties, PSAPs, MESB, MetroGIS/Met Council, and potentially vendor services. As with other grants, MESB would perform fiscal and project coordination.
11. **Quarterly MSAGs** have been distributed to PSAPs and GIS contacts.