

MAINE STATE LEGISLATURE

The following document is provided by the
LAW AND LEGISLATIVE DIGITAL LIBRARY
at the Maine State Law and Legislative Reference Library
<http://legislature.maine.gov/lawlib>



Reproduced from electronic originals
(may include minor formatting differences from printed original)



Emergency Communications in Kennebec County – Fragmented Network Presents Challenges; Quality and Rate Issues Need to be Addressed to Optimize Public Safety

Report No. SR-PSAP-09

Issues OPEGA noted during this review:

- PSAP centers are making blind transfers to dispatch centers (pg. 23)
- Emergency Communications Centers are not handling 9-1-1 calls consistently (pg. 24)
- CMRCC needs more active supervision on call center floor (pg. 25)
- Dissatisfaction persists among CMRCC customer groups (pg. 26)
- ECC rate methodologies are inconsistent and not comparable (pg. 27)
- Costs of handling 9-1-1 cell phone calls are not equitably covered (pg. 28)
- PUC rate case on DPS rates did not address root causes of higher rates (pg. 29)
- CMRCC has vacant space (pg. 29)

a report to the
Government Oversight Committee
from the
Office of Program Evaluation & Government Accountability
of the Maine State Legislature

February
2010

GOVERNMENT OVERSIGHT COMMITTEE

Senator Deborah L. Simpson, Chair
Senator Richard A. Nass
Senator Joseph C. Brannigan
Senator Bill Diamond
Senator Earle L. McCormick
Senator A. David Trahan

Representative Dawn Hill, Chair
Representative Everett W. McLeod, Sr.
Representative Bruce A. Bickford
Representative David C. Burns
Representative Peggy A. Pendleton
Representative Margaret R. Rotundo

OFFICE OF PROGRAM EVALUATION & GOVERNMENT ACCOUNTABILITY

Director Beth Ashcroft, CIA

Staff

Jennifer Henderson, Principal Analyst
Wendy Cherubini, Senior Analyst
Scott Farwell, Analyst
Matthew Kruk, Analyst
Etta Begin, Administrative Secretary

Mailing Address:

82 State House Station
Augusta, Maine 04333-0082
Phone: (207) 287-1901
Fax: (207) 287-1906
Web: <http://www.maine.gov/legis/opega/>
Email: etta.begin@legislature.maine.gov

ABOUT OPEGA & THE GOVERNMENT OVERSIGHT COMMITTEE

The Office of Program Evaluation and Government Accountability (OPEGA) was created by statute in 2003 to assist the Legislature in its oversight role by providing independent reviews of the agencies and programs of State Government. The Office began operation in January 2005. Oversight is an essential function because legislators need to know if current laws and appropriations are achieving intended results.

OPEGA is an independent staff unit overseen by the bipartisan joint legislative Government Oversight Committee (GOC). OPEGA's reviews are performed at the direction of the GOC. Independence, sufficient resources and the authorities granted to OPEGA and the GOC by the enacting statute are critical to OPEGA's ability to fully evaluate the efficiency and effectiveness of Maine government.

Legislators, committees, or members of the public should make their requests for reviews to members of the Committee or OPEGA directly.

Copies of OPEGA's reports are free.
Reports are available in electronic format at:
<http://www.maine.gov/legis/opega/>

Hard copies of reports may be obtained by contacting OPEGA at:
(207) 287-1901

Office of Program Evaluation & Government Accountability
82 State House Station • Augusta, ME • 04333-0082

Table of Contents

Introduction	1
Questions, Answers and Issues	1
In Summary	3
The Process of Handling 9-1-1 Calls	4
The Emergency Communications Network for Kennebec County	6
Current Network of PSAP and Dispatch Providers	6
Adequacy of Rural Coverage in Kennebec County	10
Assessing the Quality of Emergency Communication Services	11
Best Practices for Ensuring High Quality	11
How the PSAPs Serving Kennebec County Compare to Best Practices	13
Quality of Call Handling	14
Costs Included in Communication Center Rates	16
Rate Setting Methodologies	16
Comparing the Operating Costs of the Two PSAP Centers	17
CMRCC Services that Benefit their Non-Customers	18
Funding Streams for Emergency Communications Centers	19
Funding Streams for ECCs	19
How Funding in Maine Compares to Other Models Nationally	20
Impacts of Communities Moving Between ECCs	21
Impact on CMRCC When Municipalities Switch to Other ECCs	21
Factors Driving Municipalities to Change Their ECC	22
Benefits Expected and Realized from Consolidation	22
Recommendations	23
Agency Response	30
Acknowledgements	31
Appendix A. Letters from Kennebec County Senate Delegation and Joint Standing Committee on Utilities and Energy	33
Appendix B. Scope and Methods	36
Appendix C. Detailed Criteria for High Performing ECCs from Matrix Consulting	37
Appendix D. Detailed Discussion of Potential Rural Coverage Issues from Matrix Consulting	41
Appendix E. CMRCC Detailed Rate Schedule for Fiscal Years 2010 and 2011	44
Agency Response Letters	

Acronyms Used in This Report

- ALI** – Automatic Location Identification – address information displayed when a caller dials 9-1-1
- ANI** – Automatic Number Identification – calling party phone number information displayed when a caller dials 9-1-1
- CAD** – Computer Aided Dispatch – system used to support dispatching calls
- CMRCC** – Central Maine Regional Communications Center – operated by DPS
- DPS** – Department of Public Safety
- E9-1-1** – Enhanced 9-1-1
- ECC** – Emergency Communications Center
- EMD** – Emergency Medical Dispatch
- EMS** – Emergency Medical Services
- ESCB** – Emergency Services Communication Bureau – an agency within the PUC
- FY** – Fiscal Year
- GOC** – Government Oversight Committee
- OPEGA** – Office of Program Evaluation and Government Accountability
- PSAP** – Public Safety Answering Point – location that receives and processes 9-1-1 calls
- PUC** – Public Utilities Commission
- QA/QC** – Quality Assurance/Quality Control
- RCC** – Regional Communications Center
- SCRCC** – Somerset County Regional Communications Center
- VoIP** – Voice over Internet Protocol - a technology that allows you to make voice calls using a broadband Internet connection instead of a regular telephone line

Emergency Communications in Kennebec County – Fragmented Network Presents Challenges; Quality and Rate Issues Need to be Addressed to Optimize Public Safety

Introduction

The Maine Legislature’s Office of Program Evaluation and Government Accountability (OPEGA) has completed a review of Emergency Communications in Kennebec County¹. This review was requested by the Kennebec County Senate Delegation and the Legislature’s Utilities and Energy Committee (see Appendix A). OPEGA focused on the emergency communications centers (ECCs) in Kennebec County as a case study for the ECCs in the State as a whole. It was completed with the assistance of Matrix Consulting Group - a consultant with expertise in emergency communications. See Appendix B for complete scope and methods.

Questions, Answers and Issues

1. What does the current network of Public Safety Answering Points (PSAP) and dispatch service providers for Kennebec County customers look like? Does the current configuration provide adequate coverage for rural communities?

see page 6 for more on this point

The current network has become fractured as each community has sought to balance cost and quality to secure a good value. Five primary emergency communications centers (ECCs) serve Kennebec County: three providing only dispatch services and two that provide both PSAP and dispatch services. All Kennebec communities have access to ECC service and the network presents no public safety issues unique to rural communities.

2. Are there differences in the quality of services provided by the Department of Public Safety’s Central Maine Regional Communications Center (CMRCC) compared to other entities that are serving customers in Kennebec County? If so, what factors are creating those differences? Is public safety being jeopardized?

see page 11 for more on this point

OPEGA compared Kennebec’s two larger ECCs to best practices and found both have room for improvement. The need for improvement in the areas of standardized protocols and quality assurance practices was evident from the call handling issues OPEGA noted while listening to a sampling of calls. To the extent that call handling issues result in errors or affect timely response, public safety is not optimized. CMRCC, in particular, should also make improvements to supervision of staff.

¹ OPEGA conducted this review at the direction of the joint legislative Government Oversight Committee (GOC) of the 124th Legislature, in accordance with 3 MRSA §§991-997.

3. How do cost structures and rate methodologies differ between CMRCC (the regional PSAP) and other entities that provide PSAP and dispatch services to customers in Kennebec County? Are costs being equitably allocated to those who are benefiting from the services?

see page 16 for
more on this point

CMRCC is the only ECC with a formal rate methodology that includes all operating costs in its rates. Other centers either charge what CMRCC did prior to its 2009 rate increase, or they charge rates based roughly on the incremental costs they incur when taking on external customers. CMRCC has higher costs in the area of personnel and also has additional costs associated with services it provides that benefit both customers and non-customers. As a result, CMRCC's rates are higher than the other four centers.

4. What are the funding streams for each of the PSAP and dispatch service providers and how are they affecting the cost of providing service and/or the rates charged to customers? Are there more efficient and/or equitable ways to fund the provision of PSAP and dispatch services?

see page 19 for
more on this point

Funding is relatively consistent among all centers other than CMRCC, which is the only ECC funded solely through rates charged to customers. Other centers get some rate revenue from external customers, but are mostly funded with municipal and county revenue. No centers get surcharge revenue to cover any operating costs, even if those costs are directly related to PSAP service. This is similar to other states, although a few do use E9-1-1 surcharges for operating costs. Establishing special districts and collecting revenue through those districts is another possible option for funding emergency communications services.

5. What are the impacts on the State, County and municipalities in Kennebec County from towns not participating in the CMRCC or from towns changing service providers? Are there factors other than cost and service quality driving the changes?

see page 21 for
more on this point

CMRCC loses revenue each time a customer leaves, but some of the workload remains because CMRCC receives all cell phone calls for Kennebec County regardless of which ECC municipalities utilize. CMRCC operates as an enterprise fund, so its revenue must cover all expenses. As a result, when customers leave, costs must be cut or rates must be raised for remaining customers which include several State agencies. OPEGA's survey results show cost and quality are the primary factors driving municipalities to change providers.

6. What benefits have been realized from Statewide PSAP consolidation and how do they compare to what was expected?

see page 22 for more on this point

The Legislature's intent in consolidating PSAPs was to keep the E9-1-1 surcharge low. To date, that goal has been met. However, stakeholders expected a variety of other benefits from consolidation that have not emerged and, in many cases, the opposite of what they were expecting has occurred.

OPEGA identified the following issues during the course of this review. See Pages 23 – 30 for further discussion and our recommendations.

- PSAP centers are making blind transfers to dispatch centers
- Emergency Communications Centers are not handling 9-1-1 calls consistently
- CMRCC needs more active supervision on the call center floor
- Dissatisfaction persists among CMRCC's customer groups
- ECC rate methodologies are inconsistent and not comparable
- Costs of handling 9-1-1 cell phone calls are not equitably covered
- PUC rate case on DPS rates did not address root causes of higher rates
- CMRCC has vacant space

In Summary

The network providing emergency communication services in Kennebec County is currently fragmented as the majority of municipalities are receiving their PSAP and dispatch services from different providers - some have more than one dispatch provider. Fragmentation means there is an inherent time delay in emergency response because 9-1-1 calls must be transferred among emergency communications centers. It also increases the possibility of errors in call handling that can impact public safety.

This fragmentation has resulted from a combination of past efforts to consolidate PSAP services and the choices municipalities have made about their service providers based on cost and quality of service considerations. The recent rate case conducted by the Public Utilities Commission (PUC) only reviewed the costs and rates of the ECCs operated by the Department of Public Safety (DPS). It did not address or resolve rate disparities among all emergency communication centers. Allowing rate disparities to continue could lead to further fragmentation and additional unintended consequences for the emergency communications network.

The significant disparities in current rates charged by the ECCs are mainly rooted in:

- differences in rate methodologies between centers, driven by differing philosophies on which costs incurred by their centers need to be borne by external customers;
- costs DPS ECCs incur that other centers do not, some of which are directly related to a State government role that benefits all Maine citizens; and
- the requirement that DPS treat its ECCs as an enterprise fund, collecting revenues adequate to cover all operating costs.

There are perceived and actual differences in the quality of service provided by the two largest ECCs serving Kennebec County. They appear to be related to differences in call handling policies and protocols established at each center, as well as staffing levels – particularly in regards to the supervision of call takers and dispatchers. These differences aside, however, both centers need to improve their call handling. CMRCC specifically needs to take steps to address the level of supervision in the center and to reduce the level of dissatisfaction among its customers.

Although consolidation of PSAPs has kept the E9-1-1 surcharge down as the Legislature intended, it has also had unintended consequences. Potential future changes to Maine’s emergency communication functions should be considered in light of their potential impacts on the effective and efficient operation of the network as a whole. For example, future plans for improvement might consider technology that would allow for seamless sharing of information between centers, improving the network’s efficiency. New funding mechanisms for covering the costs of some, if not all, of the Maine’s emergency communications services might also be explored.

Regardless of whether any systemic changes or technological investments are planned, implementing OPEGA’s recommendations now should mitigate the quality and cost issues the network is currently experiencing.

The Process of Handling 9-1-1 Calls

It is important to distinguish between the three separate functional pieces of answering a single 9-1-1 call. The first function is PSAP: the process of answering a 9-1-1 call, verifying the telephone number and location and routing the call appropriately. The second is call taking: the act of querying a caller to get pertinent details about the event so that appropriate responders can be sent. The final function is dispatch: finding the appropriate response units that are available and directing them to the scene. These functions are illustrated in Figure 1.

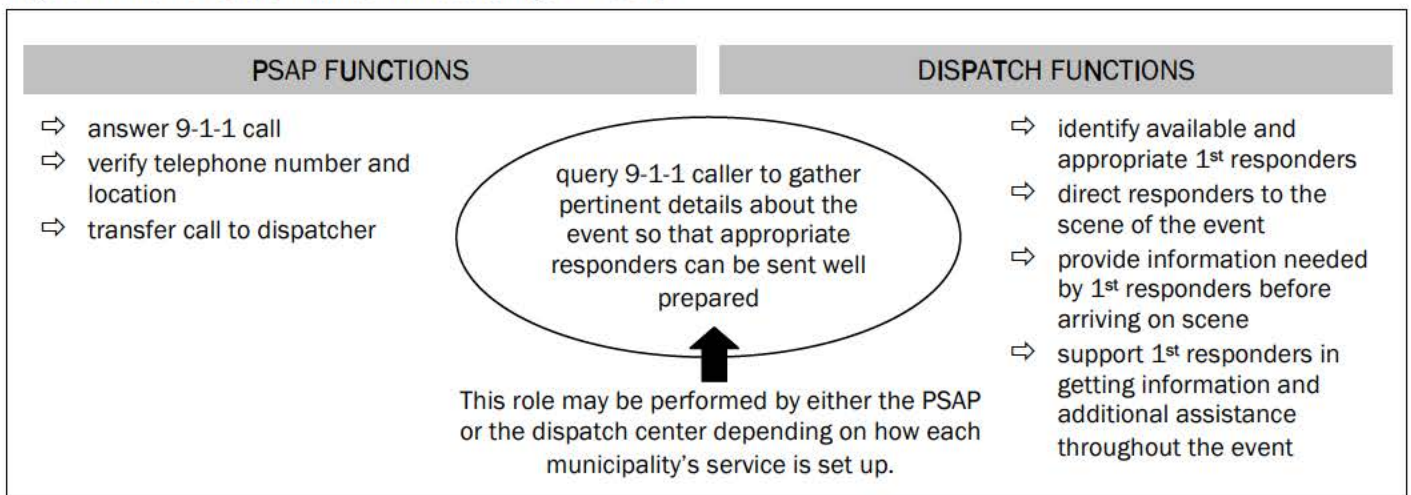
ECCs that serve as PSAPs all have a computer system that brings information about each call to a call taker’s screen. For landline calls, the ANI/ALI (Automatic Number Identifier/Automatic Location Identifier) system displays the name, telephone number and location including street address. For cell phone calls, ANI/ALI displays the cell phone number and the longitude/latitude of the caller’s location. E9-1-1 surcharge funds pay for these computer systems.

The ANI/ALI information automatically accompanies calls that are transferred to another ECC with PSAP functionality, although the receiving location still must verify the information. ECCs that only provide dispatch service do not receive any ANI/ALI information electronically when calls are transferred from the PSAP center. They just receive the calls and any information provided to them over the telephone by the PSAP call takers.

Kennebec County PSAP and Dispatch centers all use their own CAD (Computer Assisted Dispatch) systems to record information gathered from callers. However, these systems are not compatible so information can not be automatically shared between centers.

Depending on the arrangement between the service provider and the customer, the three functions are sometimes handled within the same ECC, sometimes by the same individual. Other times the PSAP operator must transfer the call to a separate dispatcher within the same center or at another center. The call taking function may be performed by the same emergency communications center that provides PSAP service, or by the center that provides dispatch services.

Figure 1. The Functions Involved in Processing 9-1-1 Calls



In the case of medical emergencies, the call taking and dispatch functions involve the use of the Emergency Medical Dispatching (EMD) protocol. EMD requires the use of card sets or computer software purchased from a vendor which the call taker is required to follow verbatim. Using EMD limits the liability of any center that uses it. Legislation requiring standardized EMD was passed in 2005 and implemented statewide in 2007.

EMD serves three purposes. The first is triaging calls for medical service to determine the level of response needed. This is not as critical in Maine because the rural nature of much of the state means there are limited options for emergency medical facilities and transport modes.

The second purpose of EMD is to give the caller instructions about what to do to immediately help the victim until first responders arrive. This is very useful in Maine because of its rural nature. The directions can range from very basic assistance to complex guidance for performing CPR or assisting in the delivery of a

baby. The final purpose of EMD is to ensure that every call for medical assistance is handled in a consistent manner and that details which could impact effective response are not overlooked.

The Emergency Communications Network for Kennebec County —

Current Network of PSAP and Dispatch Providers

There are currently two emergency communications centers providing PSAP services to the municipalities in Kennebec County. They are the Central Maine Regional Communications Center (CMRCC) operated by the State Department of Public Safety, and the Somerset County Regional Communications Center (SCRCC) operated by Somerset County. These two centers also provide dispatching services for some entities along with the other primary dispatching centers: the Waterville Police Department, the Augusta Police Department, and the Winthrop Police Department.

A few additional emergency communication centers are involved in providing dispatch services to Kennebec County, but have such limited involvement that they were not a focus of this review. Waldo County's communication center and Delta Ambulance each provide dispatch services for one town in Kennebec County. Togus VA provides its own dispatching services, but does not dispatch for any customers.

Three Kennebec County municipalities currently have pending requests with the PUC's Emergency Services Communication Bureau to transfer services to Lincoln County 9-1-1. Two of them are currently served by CMRCC and one is served by SCRCC. If the requests are granted, there would be three PSAP centers serving Kennebec County municipalities.

Figure 2 illustrates how wired (or landline) calls originating in Kennebec County are routed. The figure shows which ECC is contracted to provide PSAP and which ECC is contracted to provide dispatch for calls originating in each municipality. Figure 3 on the following page shows which ECCs handle cell phone calls.

From the illustrations it is evident that there are three primary ways 9-1-1 calls are divided among various communications centers:

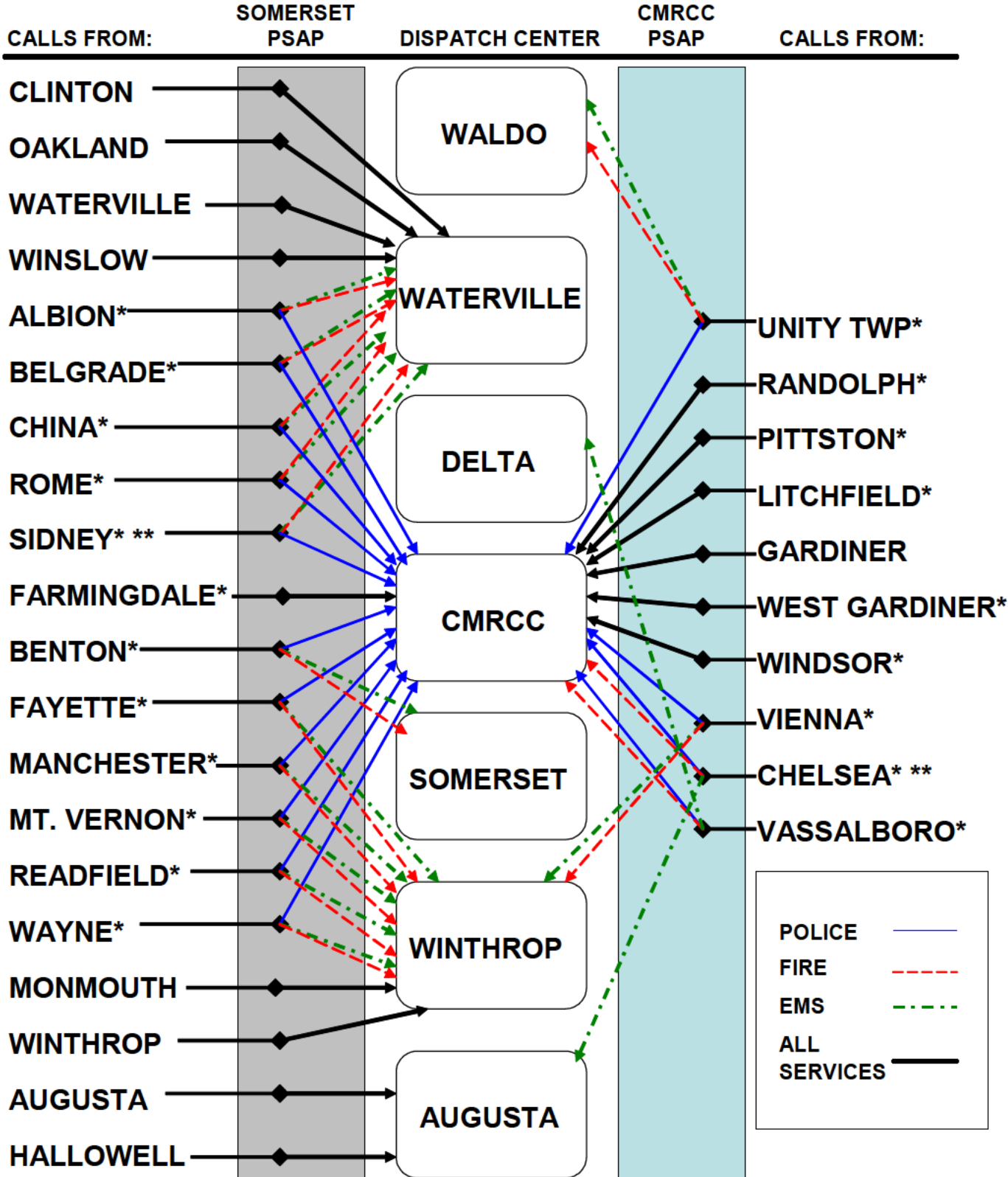
- PSAP and all dispatch functions are handled in one center;
- PSAP in one center and all dispatch functions in a different center; or
- PSAP in one center, law enforcement dispatched from another center, and fire and rescue dispatched from a third center.

With so many municipalities opting not to have PSAP and dispatch functions in a single center, the network has become fragmented. This fragmentation results in delays associated with the time it takes to transfer calls and additional complexity that lends itself to an increased potential for mistakes. Delays in response time can be further compounded for emergencies in which law enforcement, EMS, and fire responses are all necessary. Under these circumstances multiple dispatch centers may need to be contacted to dispatch appropriate units. This increases the delay and the potential for mistakes as multiple centers become involved.

An example of the most complicated setup which could result in the longest delay is the town of Albion. The town has PSAP services provided by SCRCC, law enforcement dispatch done by CMRCC (police service is provided through combined efforts of Maine State Police and the County Sheriff's Office), and fire and EMS dispatch done by Waterville PD. A total of three centers could potentially be involved in one emergency, i.e. a vehicle accident with injuries and fluids leaking from the vehicle. On the opposite end of the spectrum is the town of Windsor, which receives all PSAP and dispatch services from one center: CMRCC.

By statute, the Public Utilities Commission's Emergency Services Communications Bureau (ESCB) plays a role in determining which ECCs will serve as PSAPs and in reviewing and approving municipality requests to change PSAP providers. The PUC typically grants those requests if the municipality assures there will be no impact on public safety and the PSAP confirms that it can handle the increased workload without additional PSAP equipment. The ESCB currently plays no role regarding municipal selections of dispatch service providers.

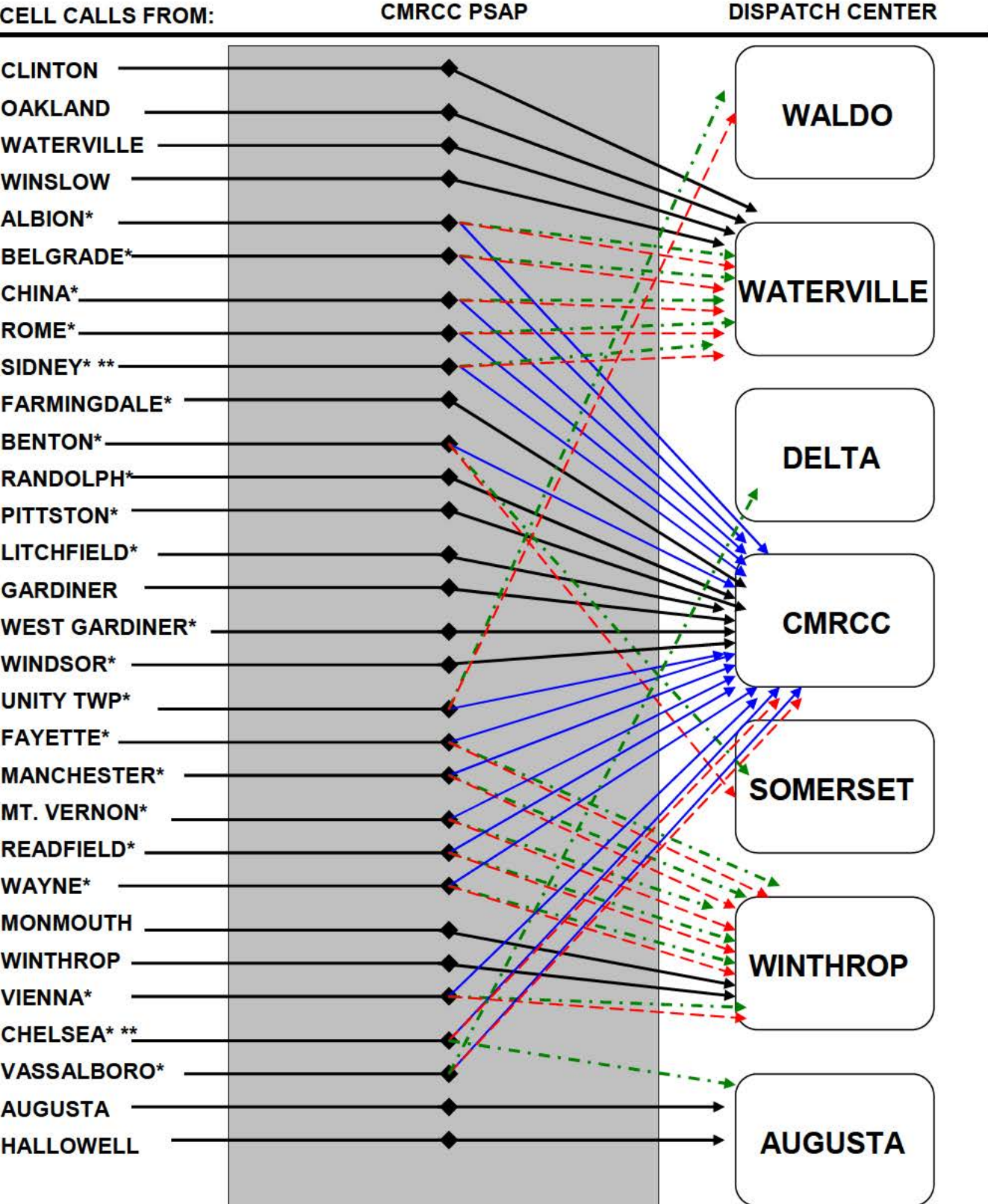
Figure 2. Diagram of ECCs Handling Landline Calls Originating from Kennebec County Municipalities



*These municipalities' law enforcement services are provided by the Maine State Police and Kennebec County Sheriff's Office.
 **Depending on the emergency location, Fire or EMS calls from these municipalities may be handled by one of two different dispatch centers.
 Source: Developed by OPEGA based on data provided by the PUC and confirmed by the ECCs.

Figure 3. Diagram of ECCs Handling Cell Phone Calls Originating in Kennebec County Municipalities

Note: The legend shown with the landline diagram on the facing page also applies to this diagram.



*These municipalities' law enforcement services are provided by the Maine State Police and Kennebec County Sheriff's Office.
 **Depending on the emergency location, Fire or EMS calls from these municipalities may be handled by one of two different dispatch centers.
 Source: Developed by OPEGA based on data provided by the PUC and confirmed by the ECCs.

Adequacy of Rural Coverage in Kennebec County

Assuring residents who live in rural and remote areas access to emergency services (police, fire, medical) has been a growing concern across the United States and an issue of academic and professional study. A review of available literature shows the areas of concern for both rural and urban service delivery relate to six key elements, some of which can be impacted by the ECCs, and some that cannot. The ability of a PSAP or dispatch center to impact each element is summarized in Table 1.

Table 1. Elements Critical to Rural Coverage that Can Be Impacted by ECCs

Elements Critical to Rural Coverage	ECCs Are Able to Impact
Emergency Responders Available	No
Radio Systems / Infrastructure	No
E9-1-1 Technology	No
9-1-1 Center Staffing	Yes
Call Taking/Dispatch Protocols	Yes
Quality Assurance /Quality Control	Yes
Source: Matrix Consulting Group.	

Of the six key elements relating to both urban and rural service, only three—ECC Staffing, Call Taking/Dispatch Protocols and Quality Assurance/Quality Control—can be impacted by the ECCs. Maine’s centers may have challenges in these areas, but these challenges are not unique to serving rural communities and are likely also present in serving urban areas. For example, call taking and dispatch protocols can be complicated in rural communities where different responses may be needed for different types of calls. However this issue also exists in urban communities, which may have the capacity to respond to different types of situations with different responders and/or equipment.

Another challenge faced by ECCs serving rural communities around the country is the issue of non-available responders. In rural areas, responders are primarily volunteers who may work a great distance from their volunteer station. ECCs must be prepared to manage calls when primary responders are unavailable. This often means locating responders from surrounding communities. This challenge is compounded given the large geographic areas of many rural communities.

The elements that are most critical to quality rural coverage are also the elements that are, for the most part, out of the control of the ECCs. These include E9-1-1 technology, radio systems and infrastructure, and the availability of emergency responders. Appendix D describes the potential issues that can arise in each of these areas regarding rural coverage. The extent to which rural communities are satisfied in these areas is not a reflection of the quality or availability of PSAP or dispatch services.

Assessing the Quality of Emergency Communication Services —

Although the majority of this report deals with all five of the ECCs that support Kennebec County municipalities, for this section OPEGA only performed detailed reviews of the two centers that act as PSAPs: CMRCC and SCRCC. This was done both because they are the only centers performing PSAP services, and because they are the only centers large enough that one could expect them to be operating on par with other centers around the nation using best practices.

Best Practices for Ensuring High Quality

Defining quality when assessing the performance of Emergency Communications Centers (ECCs) is challenging. Some elements of the definition are clear, such as having few errors in identifying and triaging incoming calls from the public and that few errors are transmitted to the emergency responders. However, a high performing agency can also be identified through the steps it takes to mitigate the possibility that errors will occur – and the steps in place to identify, address and prevent reoccurrence of any errors that do occur.

Figure 4 below depicts the six key components that every high performing ECC should have in place to assure the delivery of high-quality service to its client agencies and to the public. Each of these elements, alone, provides some level of assurance regarding the quality of service delivery. Highlights of each component follow, and a full description of these six components is in Appendix C.

Figure 4. Key Components to Assure Delivery of High-Quality ECC Service



Source: Matrix Consulting Group.

Recruitment and Selection of Staff

High performing ECCs will aggressively seek recruits both internally and externally. Candidates will be selected using a formal evaluation methodology and a broad spectrum of tools including: interviews, background checks, skills assessments and health assessments as deemed necessary given the position's responsibilities. Recruits should be aggressively culled, both during selection and during training, to ensure that only the best candidates make it through to working in the center.

Training of Staff

High performing ECCs focus a great deal of attention on the initial and on-going training of staff in their ECC. This includes developing a formal training program for new recruits to cover skill areas incrementally in classroom sessions followed by job shadowing and daily and weekly assessments of trainees. Once staff are fully trained and operational, the center should provide continuing education. This training will focus on a variety of topics including those identified by client entities, those identified by supervisors, and issues identified through the ECC's own quality assurance processes.

Interaction with Client Agencies

Proactive relationships with client agencies are critical to a high performing ECC. This includes providing a liaison for each type of service the ECC provides and developing user groups which convene regularly to discuss issues, assist in planning efforts, and participate in discussions of procedures and protocols.

Policies, Procedures and Protocols

It is critical that all participants have a clear and documented understanding of how the ECC will handle calls. Calls of the same type must be handled in the same manner regardless of who will be dispatched. Providing the information using the same pattern allows responders to more easily listen for critical information as it is broadcast. Formal protocols with structured questions support consistent call service and should be developed in consultation with client agencies so specific needs can be accommodated. Both call taking and dispatch should be handled on the CAD system to reduce errors.

Supervision of the Center

Supervision is a critical link to assuring high performance by call centers. Instead of being tied up with administrative tasks in back offices or busy covering breaks for call takers, supervisors should be free to actively supervise on the call center floor. They should listen to call handling in real time, provide counseling and feedback promptly, and be available to provide support to call takers during high stress or high call volume times.

Quality Assurance/Quality Control (QA/QC)

Quality Assurance processes are used to monitor how well the other key elements for service quality are working. It should include checks for compliance with protocols and call scripts. Call notes recorded by staff should be compared with recordings of the information the caller provided. Calls should be reviewed to ensure that the call taker provided quality customer service to both the callers and responders as assessed by tone of voice, level of assistance and consistency.

How the PSAPs Serving Kennebec County Compare to Best Practices

Kennebec County's network necessitates transferring a large number of calls from one PSAP to another or to a dispatch only center which also increases the risk of errors and of calls being lost or dropped. This inherent risk makes it doubly important that other best practices are in place to minimize mistakes. OPEGA compared the operations of the two ECCs that provide PSAP services for Kennebec County to the best practices outlined in the previous section. This comparison indicated that although both the SCRCC and the CMRCC employ some of the key elements for providing quality services, there is also room for improvement in many of the six broad components.

Of the best practices for recruiting and selecting staff, both ECCs report that they aggressively seek staff, interview applicants, and conduct background checks. CMRCC additionally requires that applicants take a polygraph test once a conditional offer of employment is given. The centers both report culling recruits who do not perform well, but do not use formally predictive tests or skill assessments.

Trainees from both centers become certified by attending training offered by the ESCB at the Criminal Justice Academy. Aside from that, however, the training for new call takers at both centers is primarily "on the job," not formal, and trainees are not subject to daily or weekly assessments by supervisors. However, SCRCC has negotiated a 1 year probationary period, and CMRCC may extend the 6 month probationary period for an additional 6 months if needed, so an informed decision can be made regarding whether it appears a trainee will be successful. SCRCC reports that trainees are assessed monthly. Assessments at CMRCC vary depending upon the individual trainer.

Both ECCs provide their staff with ongoing continuing professional education opportunities to keep their skills up to date. OPEGA noted that CMRCC's training budget is limited, which means continuing education is often conducted in-house. SCRCC has a larger training budget and the Director reports sending staff to outside training such as domestic violence and suicide prevention to promote networking with others in their field.

When it comes to client interactions, CMRCC seems more reactive than proactive. Supervisors respond to complaints by client agencies and make quarterly telephone calls to each client, but there are no specifically identified liaisons. CMRCC explained that it originally had a Kennebec County user group that met monthly, but few attended and these meetings are now held quarterly. OPEGA received differing explanations from CMRCC and its clients as to why attendance at the monthly meetings diminished.

SCRCC has very informal methods for interacting with client agencies. Although there is an established liaison for all services, there have been no formal user groups or other formal communications established for Kennebec County clients to date. The director reports a more formal relationship with Somerset County communities than with those in Kennebec County, who are more recent clients.

The two centers are very similar in the area of policies, procedures and protocols, and both could benefit from enhancement in this area. Structured questions are

limited to emergency medical calls, and there are no formal protocols for fire or law enforcement calls. Client agencies are generally not consulted except for direction on resource utilization, for example what type and number of units to send on what types of calls. Both centers could also be more consistent in their call handling. However, they do adhere to the best practice of using a modern CAD system to handle all calls.

Supervision is challenging for both centers, but is particularly problematic for CMRCC where there are only two supervisors to cover all shifts 24 hours a day, 7 days a week. This results in many shifts each week with no supervisor. Even when they are on duty, supervisors are not actively involved in on-floor supervision or monitoring of call taking and dispatching with adequate regularity. This is because supervisors are required to attend off-site meetings during parts of their shifts and they have other administrative duties to attend to, such as interacting with client agencies as described above.

SCRCC has had a somewhat more optimal supervision model, with three supervisors on staff to date, and a fourth beginning in January 2010 to ensure on-site supervision for every hour of every shift. Supervisors at SCRCC are usually at a call station on the call center floor. From there they can listen to the room in general, tap into individual calls as they are answered and dispatched, and provide support during major events. The center's director reported that one supervisor takes each dispatcher aside for five minutes a week to talk about how things are going and address any performance issues.

Both agencies have room for improvement in the area of quality assurance procedures. SCRCC reports that a supervisor listens to 60 emergency medical calls a month or 4 per dispatcher. At CMRCC a supervisor listens to one fire and one law enforcement call per call taker each month in addition to the required emergency medical calls. Based on OPEGA's review of call tapes from both centers for two days, it appears that their quality assurance programs could be enhanced to better ensure compliance with protocols such as announcing calls and overall call handling.

Quality of Call Handling

OPEGA listened to recorded calls from both centers providing PSAP services for two complete 24-hour periods. June 1, 2009 and December 1, 2009 were selected in order to take into account seasonal variability and possible major events. Somerset County Regional Communications Center was not able to provide the June 1 call data because they had lost all call data for a three month period due to a technical issue². As a result, OPEGA reviewed calls from SCRCC for April 1 and December 1.

On a positive note, OPEGA observed that both centers followed up on 9-1-1 hang ups. However, areas where each center should improve the quality of call handling were also noted. These included:

- inconsistent call handling;

²SCRCC discovered this technical issue as a result of OPEGA's request. The SCRCC Director reports that immediate corrective action was taken.

- blind transfers from PSAP to dispatch; and
- at CMRCC in particular, a weak command of calls.

SCRCC displayed satisfactory command of calls, but had some issues with inconsistent call handling and making blind transfers. In addition to a high incidence of blind transfers, overall service was weakened at CMRCC by wide variability in the handling of calls and a lower level of control or command on the calls. The lower level of command is evidenced when the caller, instead of the call taker, is guiding the call. This can result in wasted time or failure to obtain all the pertinent information.

Inconsistent call handling was demonstrated when detailed call taking did not always include requests for ancillary information such as suspect descriptions. Another issue was failing to consistently verify information such as caller telephone

number and location as part of the initial conversation with a caller, or at all. This is problematic because the unverified information may be relied on and be inaccurate, or the call may be disconnected and the call taker will be unable to get back in contact with the caller.

A separate problem is making blind transfers, in which the call is transferred to the dispatching entity without any accompanying information. CMRCC sometimes compounds this problem by not remaining on the line to ensure the caller is connected to dispatch. This is problematic for two reasons.

First, if the PSAP does not announce the call with the accompanying telephone number and location, then the dispatch center has no information to allow them to follow up if they are disconnected from the caller before they can get much further. Second, if the PSAP disconnects before dispatch picks up, the dispatch center has no way of knowing where the call was transferred from and, therefore, who they should go back to if there's a problem with the call - for example, if it was transferred to the wrong dispatch center.

OPEGA did not hear any calls in which it was obvious that the call had been transferred to the wrong dispatch center. However, such a transfer would be hard to catch because of the limited number of calls reviewed and because some transfers were disconnected before the receiving center answered.

Example of an Proper Transfer from PSAP to Dispatch

PSAP Call Taker: "9-1-1, what's your emergency?"

9-1-1 Caller: "There's a house on fire!"

PSAP Call Taker: "What's your phone number and the location of the fire?"

9-1-1 Caller: "I'm at 212-2122. I'm standing in front of the building. I'm in Windsor, on Main Street, I think."

PSAP Call Taker: "Okay. I'm going to transfer you to a dispatcher now."

PSAP call taker connects to the appropriate dispatch center.

Dispatcher: "Hello. What's your emergency?"

PSAP Call Taker: "This is John from CMRCC. I have a caller on the line with a structure fire in Windsor at phone number 212-2122."

Dispatcher: "Okay, caller...."

PSAP call taker disconnects once dispatcher and call taker are connected.

Example of a Blind Transfer from PSAP to Dispatch

PSAP Call Taker: "9-1-1, what's your emergency?"

9-1-1 Caller: "There's a house on fire!"

PSAP Call Taker: "What's your phone number and the location of the fire?"

9-1-1 Caller: "I'm at 212-2122. I'm standing in front of the building. I'm in Windsor, on Main Street, I think."

PSAP call taker transfers call to the appropriate dispatch center, and disconnects.

Dispatcher: "Hello. What's your emergency?"

9-1-1 Caller: "I already told you! There's a house on fire!"

Dispatcher: "What's your phone number and the location of the fire?"...

The quality issues noted in OPEGA's review of recorded calls echoed the complaints client agencies had about service they receive. Although the majority of survey responses reported at least adequate satisfaction, many pointed out issues with blind transfers and variability in call handling. Issues like these, and the others pointed out in this section, can jeopardize public safety when they result in responders being inappropriately prepared or at the wrong location because they received poor or insufficient information. These issues can also delay response times in critical emergency situations, exacerbating issues presented by fragmentation of the network.

Costs Included in Communication Center Rates

Rate Setting Methodologies

Of the five emergency communication providers that serve Kennebec County municipalities, only CMRCC appears to have a formal rate setting methodology. Two of the others charge the rates CMRCC used to charge prior to its most recent rate increase. The final two charge fees that they feel are adequate to cover the additional costs incurred as a result of expanding their services to include external customers. The methods used by each of the five centers are summarized in Table 2 as described by the management of each center.

A few centers noted they based their rates on the additional costs (incremental costs) they would incur to support their new customers' calls; things such as new positions, equipment, or overtime. They did not indicate their rate setting methods took into account assigning any portion of overhead expenses to customers. Therefore, it appears their rates may not reflect the total cost of the services they provide and that their residents are subsidizing the new customers to some degree.

PL 2007, Chapter 622 required the PUC to establish fees to be charged by DPS for acting as a PSAP and to ensure that the fees reasonably reflect services provided. To accomplish this, the PUC used the DPS budget for FY2008 as a starting point and reviewed any budgetary additions proposed by DPS for the coming biennium that would change the revenue requirement and, therefore, require an adjustment to the established rates. The law did not require the PUC to set rates for other ECCs or to compare rates and rate methodologies among all ECCs in Maine. Consequently, the PUC's work did not get to the issues at the root of the variances in rates among ECCs.

After completing the rate setting process, PSAP and dispatch rates to be charged to municipalities in the coming biennium were set 41.75% higher than the base year. DPS cannot adjust the rates at CMRCC or any of its other ECCs by itself; the PUC's approval is required. Furthermore, DPS is the only service provider that has to go through rate approval even though it operates in a market where customers (municipalities) get to choose among centers.

Provider	Rate Methodology	PSAP Rate	Dispatch Rate
CMRCC	CMRCC charges the same rate as all the DPS ECCs. This per capita rate has a detailed methodology that was approved by the PUC. See CMRCC's current detailed rate schedule in Appendix E.	\$3.54/capita with EMD	From \$2.13/capita to \$11.34/capita
Somerset	The intent is for fees to cover whatever additional costs Somerset incurs from taking on new business, such as overtime, equipment, or new positions. However, there was no formal backup documentation to support these fees. Fees are set by the County Commissioners.	\$1.00/capita or \$1.75/capita with EMD	n/a
Waterville PD	Charges flat fees to a handful of neighboring towns with full time police departments and a per capita fee to more recently added client towns without full time independent police departments (PDs). The per capita fee was developed informally based on the populations of the new customers, their call volume, the types of emergency services they provide, and the additional costs the center would incur from absorbing their calls.	n/a	\$2.50/capita for fire/EMS Flat rates to 3 communities with Fire/EMS and full time PD
Augusta PD	Per capita fees are charged based on what the DPS ECCs used to charge before their fees increased in 2009. There appeared to be no formal analysis done in support of these fee levels.	n/a	From \$1.50/capita to \$8.00/capita
Winthrop PD	Per capita fees are charged based on what the DPS ECCs used to charge before their fees increased in 2009. There appeared to be no formal analysis done in support of these fee levels.	n/a	From \$1.50/capita to \$8.00/capita
Note: Dispatch rates vary based on the type and size of the dispatched entity. Source: Data provided by the management of each center.			

Comparing the Operating Costs of the Two PSAP Centers

OPEGA asked each of the five ECCs that serve Kennebec County for a copy of their most recent budget. Four were able to provide budgets for OPEGA's review. One was not because the center is part of the city's total police department budget and does not have its own dedicated budget. The information gathered about each center's costs is summarized in Table 3.

CMRCC is the only communication center that is required to support itself entirely with fees. Some other centers do not have dedicated budgets and are funded as part of the police department they are connected to. Others appear to have dedicated budgets that are primarily supported by local taxes with revenue from fees acting as supplemental support.

Table 3. Summary of Budgetary Information for the ECCs that Support Kennebec County Municipalities	
Provider	Costs
CMRCC	In FY09, the budget for all 4 DPS ECCs totaled about \$8 million and expenditures allocated to CMRCC in the State's accounting system were about \$1.8 million. The DPS ECCs' costs must be covered entirely by fees collected from customers because they function as an enterprise fund.
Somerset	Budget for 2009 was approximately \$1.2 million. Revenue from fees charged for providing PSAP and dispatch services to municipalities totaled \$115,000. The remainder of the budget was funded by county general fund taxes.
Waterville PD	The budget for the dispatch center was about \$430,000 in 2009. Revenue from fees goes to city's General Fund and were approximately \$125,000 in 2009.
Winthrop PD	Budget is about \$200,000 annually, and fees cover about \$40,000 of this amount.
Augusta PD	This dispatch center does not have a dedicated budget, but is included in the budget for the overall Augusta police department. The center is supported by city funds and brings in revenue from fees.
Source: Data provided by the management of each center or obtained by OPEGA from the State's accounting data warehouse.	

OPEGA also noted during interviews with management of each center that CMRCC and SCRCC staff appear to function, for the most part, only as communications specialists. The other three dispatch centers, however, have the added financial benefit of using their communications staff to fill additional roles when they are not actively dispatching a call. This likely saves the town money because no additional staff needs to be hired to perform functions like assisting walk-in customers at the police department.

Based on this information it appears that CMRCC's fees are higher than those of other centers serving Kennebec County, in part, because CMRCC has to support its costs solely through fees charged to those who use its services and because of its rate methodology. However, comparison of CMRCC's personnel costs to those of SCRCC also indicates that CMRCC has higher personnel costs. Although the hourly rates for CMRCC and Somerset are comparable, CMRCC costs are significantly higher due to more costly benefits and because of a 15% annual stipend paid in addition to hourly salaries.

CMRCC Services that Benefit their Non-Customers

In meeting with the various dispatch centers, it was discovered that CMRCC bears some additional costs associated with services it is required to provide that may benefit their customers, but also benefit non-customers. These benefits primarily concern handling of cell phone calls and providing contingency backup services.

As shown in the diagrams on pages 8 and 9, landline calls are routed to the PSAP that serves the municipality from which the call originates. However, all cell phone calls originating from any Kennebec

CMRCC currently receives cell phone calls from all municipalities in the following counties:

- Kennebec
- Knox*
- Waldo*
- Sagadahoc
- Franklin*
- Somerset*

*U.S. Cellular calls originating in these counties are being routed to the regional PSAP within that county rather than CMRCC.

County municipality, as well as the municipalities in five other counties, go to CMRCC regardless of which ECC the municipality contracts with for PSAP services. As a result, almost 79% of calls received by CMRCC are from cell phones.

The second benefit CMRCC provides is standing as the statewide backup for all PSAPs statewide. According to the PUC's ESCB, this function, requiring both space and equipment (equipment covered by the E9-1-1 surcharge), is necessary even if county communications centers wish to provide mutual backup for each other. CMRCC is the ultimate backup in case all other backups fail.

Both of these services benefit a broad group of Maine citizens. However, the cost that DPS incurs in providing them is divided up only among the municipalities who are clients of the DPS ECCs.³ Any municipalities who choose not to use DPS ECCs are getting these benefits for free. The result is that costs of these services are not distributed equitably among those who benefit from them.

Currently the DPS ECCs take the vast majority of cellular calls statewide, although over time this may change. SCRCC has begun receiving cellular calls originating in Somerset County from one cellular service provider and has expressed an interest in having more cellular calls coming directly to them.

For CMRCC the cell phone issue is particularly problematic as the volume of cell calls continues to grow. As customers have left CMRCC, the center has not experienced a commensurate decrease in calls and has not been able to reduce staff levels. The impact of this situation on CMRCC is described on page 21.

Funding Streams for Emergency Communications Centers

Funding Streams for ECCs

As discussed in the section on costs (see page 16), most of the ECCs serving Kennebec County municipalities receive their funding from a combination of fees and municipal or county taxes. The exception is CMRCC, which is supported solely by fees from client entities (state agencies and other towns or counties). None of the centers receive any E9-1-1 surcharge funding, although for those that are PSAPs, equipment and some software is provided by the PUC using the E9-1-1 surcharge.

Under 25 MRSA §2927, the ESCB is responsible according to for expending the E9-1-1 surcharge funds on appropriate items. According to the PUC, the surcharge pays for: PSAP

The E9-1-1 Surcharge

The implementation and maintenance of the statewide Enhanced 9-1-1 system is funded by a monthly surcharge on all subscriber wire line and wireless telephone numbers in Maine. The statute governing the surcharge can be found in 25 MRSA §2927.

Source: the PUC Emergency Communications Bureau website

³ DPS includes the costs of all four of its ECCs in determining its customer rates. Rates are standard among all four ECCs.

equipment, network, and database; ESCB staff at the PUC; equipment training for PSAPs; a basic training class for dispatchers; Emergency Medical Dispatch training; and some software. None of the surcharge is allocated to PSAP center operating budgets. Instead, the PUC uses the E9-1-1 funds to purchase the items listed above, some of which are then given to the PSAP centers.

The PUC interprets statute as preventing the surcharge from paying for the staff required for PSAP call taking and believes a statutory change would be needed to allow the funds to be used for such purposes. As a result, the personnel costs associated with PSAP services must be completely funded by the PSAP centers. In the case of the DPS ECCs, this means those costs must be passed on in full to client entities.

How Funding in Maine Compares to Other Models Nationally

There are three primary categories of funding mechanisms available in most locales around the country, including Maine: surcharge fees, general funds, and taxes imposed by special districts. Surcharge fees applied to telephone handsets are the most common. These can be applied to landlines, cell phone and VOIP (voice over internet) phones. These surcharges are most often applied by state governments, but can be applied by localities (either in their entirety or in conjunction with base surcharges applied by the states).

The use of fees imposed on telephone services are very frequently, across the United States, limited to supporting the acquisition and maintenance of telephonic infrastructure. Less often, these fees are also used to support operational costs associated with answering and handling 9-1-1 telephone calls.

Quite often, across the United States, fees imposed are controlled at the county level. These are typically collected by the states and then passed through to the counties – proportionally based on either population or on the number of land / cell / VOIP lines registered within the county. Less often these funds are controlled at the state level – and allocated based on grant requests made by the local PSAPs. This latter approach is essentially the one used by the State of Maine – where funds are collected and allocated by the State. Less typical is the role that the State of Maine has chosen to play in determining which agencies will be funded as PSAPs – rather than allowing the localities to determine what role, if any, they will play in serving as a PSAP.

The State of Maine has determined, as a matter of public policy, that it will determine which entities should be funded as PSAPs – this has been a consistent public policy approach since the inception of universal E9-1-1 service in Maine. The current funding mechanisms and the restrictions on fund use - the acquisition and maintenance of infrastructure and capital - are consistent with national policies and approaches. As a result of policies like these, most communities around the country also rely on general fund subsidies for the operations of the centers. This is also true of Maine's ECCs which must charge customers for their communications services in order to fund their operations. The sources of general fund revenues vary widely from state to state and may include income taxes, sales taxes, property taxes, fees and other surcharges.

The third most common source of revenues for ECCs across the country is taxes imposed by special districts. These may be property taxes or per parcel taxes, and they are most often used to support multi-jurisdictional agencies. The use of these dedicated revenues from special districts enables the revenue stream to be stable while not relying on each community to meet its funding obligations – instead the funding obligation is placed directly on the service recipient. Examples of special districts currently operating in Maine include the Bangor and Portland Water Districts.

While there is an obvious policy linkage between telephone handsets and the charging of surcharges for E9-1-1 services, the linkage is less clear for emergency communications services. These have tended to be funded as a general fund obligation – much the same as other public safety services (police, fire and EMS).

Maine is not the only state to grapple with the challenges that must be faced as these funding mechanisms are considered – the most significant of which include the following:

- changing relationship between landlines and other forms of telephone service – most particularly cell phones;
- the need to develop new sources of revenue that can provide for interoperability between communities; and
- development of revenue sources that can provide for multi-agency emergency communications (consolidated centers).

Impacts of Communities Moving Between ECCs ---

Impact on CMRCC When Municipalities Switch to Other ECCs

Most of the movement in Kennebec County to date has involved clients leaving CMRCC in favor of other service providers. CMRCC operates as an enterprise fund and is required to cover all costs through rate revenues. Revenue lost from customers leaving must be made up through reducing costs or increasing rates to remaining customers.

The center can not just adjust its rates, because they are set by the Public Utilities Commission and apply to all ECCs operated by DPS. Therefore the rate is not affected by customers leaving until a new rate setting process has been completed.

Addressing revenue loss at CMRCC can mean reducing personnel or cutting other expenses. Cutting personnel costs is particularly difficult given the fact that CMRCC still has to answer all cell phone calls for the lost customers (see page 18). Having revenues reduced, without an equivalent decrease in workload, affects CMRCC's ability to address changes needed to enhance services or quality - now and in the future.

Factors Driving Municipalities to Change Their ECC

OPEGA surveyed decision makers in Kennebec County, including town managers, police chiefs, fire chiefs, and EMS directors to learn what factors had most strongly influenced those who had chosen to switch from CMRCC to another ECC. Our survey results indicated the primary factors influencing most decision makers were the cost and quality of services they felt they were receiving. In open-ended questions many decision makers also expressed frustration or confusion about the consolidation of PSAPs and the associated costs and savings incurred by the varied entities involved.

Although decision makers seemed generally glad they could choose which ECC they wanted to contract with, the sheer number of resulting changes has been problematic. Changes made in an attempt to secure the best mix of cost and quality have contributed to the complexity and fragmentation of the current PSAP and dispatch network. Additionally, the fact that municipalities can choose a new ECC at any time, upon approval of the PUC, has made it difficult for centers like CMRCC to manage resources and staffing levels with any sort of stability. A final problem is that in an already complex system, every additional move or change, particularly if they occur frequently, presents additional risk for errors as call takers attempt to learn and follow new protocols.

Benefits Expected and Realized from Consolidation

The benefits expected from the consolidation of PSAPs varied considerably among different stakeholder groups. Based on a review of legislative history and debate it appears legislators expected that fewer PSAPs would result in cost savings in technology that would keep the E9-1-1 surcharge low. This expectation seems to have been at least partly met. In 2001 the surcharge was \$.50 per line, but in 2009 it was only \$.37. Although it is slated to increase in July, 2010 to \$.52, the surcharge has not risen for some time. Whether this can be attributed directly to consolidation is unknown.

Municipal decision makers who completed OPEGA's survey reported very different expectations for consolidation. Their expectations included cost savings for their communities; improvements in service levels, technology and dispatcher quality; enhanced coordination among emergency service providers; and reduced response time. However, despite their substantial expectations, 18 of the 24 municipal officials and public safety chiefs who responded reported realizing no benefits at all from PSAP consolidation, and several noted higher costs, lower service quality and delays in calls due to separating PSAP from dispatch.

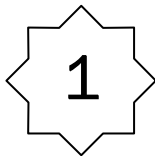
The level of dissatisfaction with the consolidation appears to be, in part, based on differing views of exactly what "cost savings" it could be expected to produce. Although the surcharge has stayed low, which is one type of cost savings, many stakeholders seemed to believe other costs would be reduced. Those who expected reductions in the amounts municipalities pay for ECC services, and subsequently the cost to local taxpayers, have been distressed to find that their costs have

actually increased since consolidation. Regardless of whether the consolidation itself is to blame, those who have experienced increased costs are frustrated.

The consolidation of PSAPs and subsequent shift of municipalities from CMRCC to other ECCs has also had a few consequences that do not appear to have been intended or expected by any stakeholders. One has already been discussed in a previous section, namely that CMRCC must cover its costs with a constantly changing customer base. The other problem, however, is that CMRCC was designed with the capacity to handle all of the work associated with consolidating PSAP and dispatch functions for many municipalities. That anticipated level of consolidation did not materialize and now, even CMRCC's original municipal customers have been gradually leaving. As a result, the center has been left with a physical space that is much larger than seems necessary.

Recommendations

The recommendations that follow are specific to issues of quality, cost and rates that exist in the emergency communications network as of the fall of 2009. These issues should be addressed regardless of whether the Legislature decides to take any action regarding the emergency communications network based on the PUC's February 2010 report concerning the optimal network configuration. In addition, although this project focused specifically on emergency communications centers in Kennebec County, the issues identified could also be present in other ECCs in Maine and the recommendations should be applied to other ECCs as appropriate.



PSAP Centers Must Announce All Calls When Transferring to Dispatch

While listening to recorded 9-1-1 calls received by CMRCC and SCRCC, OPEGA noted that both centers are making blind transfers, in which the call is transferred to the dispatching entity without any accompanying information. In the case of CMRCC, the PSAP operator is sometimes transferring without waiting to ensure the caller is connected to dispatch. This is problematic.

A proper announcement at transfer might include something such as: *"This is John from CMRCC. I have a caller at phone number 212-2122 with a structure fire in Windsor."* If a PSAP does not announce calls with the accompanying telephone number and location, the dispatch center has no way to follow up if they are disconnected from callers before they get much further. For example, a caller reporting a domestic dispute may get disconnected before the dispatcher is able to gather any information. If the call has been transferred blindly, the dispatcher does not know where to send first responders and may not know how to re-establish contact with the caller.

Blind transfers are also problematic when the PSAP disconnects before dispatch picks up. In this scenario, the PSAP operator has not assured the caller got connected. In addition, the dispatch center has no way of knowing where the call was transferred from and, therefore, who they should go back to if there is a

problem with the call. For example, if a call is transferred to the wrong dispatch center.

Both CMRCC and SCRCC have policies in place directing PSAP call takers to announce calls to dispatchers when calls are transferred. It would appear that staff are not always adhering to those policies.

Recommended Management Action:

Management of CMRCC and SCRCC should take steps to ensure all calls are announced. Management actions to ensure transfers are always announced might include providing training and procedural guidance to call takers. Additional quality assurance (QA) reviews of all types of calls should also be performed to determine whether blind transfers are still occurring and whether additional broad or targeted actions are necessary to eliminate them. This improved QA will also allow management to identify and address any other call handling issues that may arise.



Calls Should Be Handled Consistently Among All ECCs

OPEGA observed notable inconsistency in the way calls are handled between the two largest ECCs and even within the same ECC. This variance is apparent both in the way calls are answered and transferred, and in the types of information gathered through the querying of callers.

Both CMRCC and SCRCC have protocols in place for answering and transferring calls to dispatching entities. However, protocols differ from one center to another and call takers in both centers do not always adhere to them. Standardizing the protocols between the two centers, and assuring staff adhere to them, would result in dispatchers receiving standard information, preferably provided in a consistent order, regardless of which PSAP is transferring the call. It would also mean that callers have similar experiences with emergency communications regardless of which center takes the call.

In addition, ECCs have no protocols, call scripts or other structured guidance for dispatchers to assure that the minimum specific information needed, or desired, by law enforcement and fire first responders is gathered from callers. For medical emergencies, statute mandates that dispatch centers must use emergency medical dispatch (EMD) programs. Such commercially available programs include caller interrogation questions (i.e. a script), pre-arrival instructions, and protocols matching the severity of the incident with an appropriate emergency response. As all Maine dispatch centers utilize this system, a caller should have the exact same experience regardless of the center receiving the call, and the same information should be elicited from callers and available to first responders.

OPEGA noted the structured call interrogation inherent in the EMD protocols successfully elicited a complete and standard set of information from callers. This thoroughness was absent in calls for law enforcement and fire responses. The development of similar scripts to follow in gathering caller information on these other types of emergency calls would improve the handling of calls, ensure critical

information for first responders is obtained, and, ultimately, improve and ensure public safety.

Recommended Management Action:

The management of CMRCC and SCRCC should seek to standardize their existing protocols regarding how calls are answered and transferred to the dispatching entities with the goal of providing consistency for callers and dispatchers. Both centers should also take actions necessary to assure that call takers adhere to the agreed upon protocols.

Additionally, the management of CMRCC and the other entities that provide dispatch for law enforcement and fire first responders in Kennebec County should seek to develop structured questions for dispatchers to use that would prompt them to obtain from callers the key information desired by those first responders in specific types of emergencies, i.e. burglary, residential structure fire. We suggest that first responders be consulted in determining what information is most critical for them to have and that the structured questions be consistent among ECCs to the extent possible.

Recommended Legislative Action:

The Legislature should consider whether a Statewide approach to standardizing the protocols of all ECCs is desirable. OPEGA acknowledges that getting all emergency communications centers, first responders, and municipalities to develop and agree on standard protocols and call scripts for each of several potential emergency events may be a challenge. The PUC’s Emergency Services Communication Bureau may be ideally situated to assist the Legislature in achieving the suggested standardization regarding call answering, call transfers and interrogation of callers. It is the State entity responsible under statute for implementation and operation of the State’s Enhanced 9-1-1 system.

We note that there are commercial products similar to EMD that can purchased for handling fire and law enforcement calls but these products can be expensive and may be more extensive than what is needed. They are not the only option for moving toward more standardized, structured caller interrogation and other creative solutions may be more cost-effective.



Management and Supervision of Call Takers Should be Improved at CMRCC

Supervision is a critical factor in assuring high performance by call centers. Maintaining a supervisory presence on the call center floor has been particularly problematic for CMRCC where there are a number of shifts each week with no supervisor on duty. Even when they are on duty, CMRCC’s supervisors are often attending off-site meetings, completing administrative tasks or interacting with client agencies. As a result, they have less time and opportunity to monitor call taking and dispatching activity in the center and actively provide essential on-floor supervision and support.

This lack of front-line supervision may be one factor contributing to the staff's inconsistent adherence to established policies and protocols for handling calls as described in Recommendations 1 and 2. Although senior call takers are on the call center floor in the role of acting supervisors, they do not possess the authority necessary to fully perform the role and are not themselves being actively supervised.

CMRCC management was not aware of the prevalence of call handling issues we observed until OPEGA brought them to their attention and they listened to the calls themselves. This raises concerns about whether supervisors and management are indeed close enough to the day-to-day operations in the center and whether channels of communication between supervisors and management are effective.

Recommended Management Action:

DPS reports that it recognizes the need for more supervisors and has made past efforts to add supervisory positions. Certainly, additional supervisors would make it physically possible to cover more shifts and bring supervisory coverage levels more in line with those at SCRCC. Regardless of whether positions are added, however, the Department should review the current supervisory roles, responsibilities, and staffing patterns. Steps should be taken to increase supervisory coverage of shifts and promote more active, on-floor supervision at CMRCC, and its other centers, as necessary. Additionally, DPS administration should address management's apparent misperception of how calls at CMRCC are actually being handled. Necessary steps should be taken to ensure that management stays sufficiently abreast of day-to-day operations in the center and is in a position to proactively address any issues appropriately and promptly.



CMRCC Should Take Additional Steps to Address Customer Dissatisfaction

The survey responses that OPEGA received from municipal decision-makers and first responders, including those from State agencies (i.e. the Maine State Police), showed significant dissatisfaction among the current clients of CMRCC. The center scored lower than other ECCs serving Kennebec County in all areas of perceived quality and in overall satisfaction. Dissatisfaction with CMRCC was also noted in subsequent interviews with dispatch centers.

Some of this dissatisfaction may be rooted in the quality and cost issues OPEGA identified during the course of this review. Historical feelings about PSAP consolidation generally have also undermined the working relationships between CMRCC and the other ECCs serving Kennebec County municipalities. Nonetheless, as a service provider, CMRCC should take responsibility for improving its relationship with both State and municipal customers.

Recommended Management Action:

The center should refocus its attention on the satisfaction of its State and municipal customers. The quality issues identified by OPEGA should be promptly addressed. Follow up on validated customer complaints should include sufficient monitoring

by management to ensure that the same problems do not recur. Regular substantive dialogue with customers should include soliciting input regarding operational or policy changes being contemplated and reporting back once a decision has been made. This effort should be carried out by management, not supervisors, and include individual meetings and regular communications with municipal public safety directors, town managers and the leadership of client State agencies.

In addition, given CMRCC's role since the PSAP consolidation, management and staff at the center might assess their attitudes and philosophies about customer service. Taking steps to change organizational cultural may also lead to improved relationships with customers and a reduction in customer dissatisfaction.



Differences in Rate Methodologies Need to be Resolved

Significant differences exist in the methodologies being used to establish the rates that ECCs charge to their external customers. These differences in rate methodologies are one of the key factors in the current rate disparities that are affecting municipal choices in service providers. Resolving differences in rate methodologies should help reduce network fragmentation.

DPS' rates for municipalities are based on a methodology designed to cover the full costs, direct and indirect, associated with operating the ECCs by passing those costs on through rates to both internal (i.e. other State agencies) and external customers. The indirect costs include such things as rent, utilities, insurance and fees paid to other State agencies for financial and technical support.

According to DPS, the requirement to begin covering its costs in this way was the result of PL 2003 Chapter 678. Historically, DPS ECCs were a function of the Maine State Police and the funding for it was split between the General Fund and the Highway Fund. The legislation created a new bureau within DPS for this function – the Consolidated Emergency Communications Bureau - that was set up as an enterprise fund. Currently, about 78% of the costs of DPS ECCs continues to be supported by revenues received from State agency customers.

Meanwhile, SCRCC bases its rates for external customers on only those costs associated with additional direct service staff needed to handle the increased workload. All other costs, direct and indirect, are covered by county tax revenues. The external customer rates charged by the remaining, smaller ECCs are not based on actual costs at all.

Recommended Legislative Action:

The Legislature should consider whether DPS should move to a rate methodology similar to that of SCRCC. Under that scenario, all ECC costs for staffing, infrastructure, and related overheads needed to adequately serve State government agencies, i.e. Maine State Police, would be covered by State appropriations. Rates for external customers, i.e. municipalities, would only seek to cover additional costs incurred by the ECCs to handle additional workload. Such a change would require revisions to 25 MRSA §1534. The Legislature should require DPS to provide an

analysis of the impact such a change would have on State government funding and rates being charged to municipalities as part of its deliberations.

The Legislature might also consider other options for encouraging all ECCs to use similar methodologies for setting PSAP and dispatch rates with the goal of reducing rate disparities that are causing network fragmentation. All ECCs might use either a full-cost methodology like CMRCC does, an incremental methodology like SCRCC uses, or a different methodology that falls somewhere in between. Which methodology is most preferable may depend on what actions the Legislature takes in response to the PUC's study of the optimal configuration of the PSAP network and the long-term goals for the emergency communications system.



Costs of Handling 9-1-1 Calls From Cell Phones Should be Covered More Equitably

Currently, CMRCC receives all cell phone calls that originate in Kennebec County and five other counties regardless of whether or not DPS is receiving revenue from the towns in which the calls originate. This means the municipalities that are paying customers of CMRCC, and other DPS-run centers, are essentially subsidizing the cost of taking cell phone calls that originate in municipalities that are not customers. Cell phone calls currently make up about 79% of CMRCC's call volume. Staffing to handle that volume represents a significant cost that drives up CMRCC's rates. When a municipality switches its PSAP service from CMRCC to another provider, it involves landline calls only. Cell phone calls continue to be taken by CMRCC. CMRCC loses the revenue, but still retains a workload associated with that municipality.

Recommended Management Action:

The PUC's ESCB should explore the options for more equitably funding or distributing the costs of handling cell phone calls and make proposals to the Legislature as necessary. Possible options include:

1. Establishing a funding source other than rate revenue to cover costs associated with handling cell phone calls. Some possibilities for other funding sources include State funds, a portion of the revenue from the existing E9-1-1 surcharge, or a new surcharge on cell phones.
2. Redirecting cell calls to the ECCs that serve the municipalities in which they originate. Under this scenario a 9-1-1 cell phone call that originated in Waterville (regardless of where the cell phone caller lives) would be routed to the ECC that Waterville pays to handle its 9-1-1 emergency calls. ECCs that take on the cell phone calls may end up revising their rates to reflect the changed workload.

7

The PUC's Role in Rate-Setting Should be Revisited

PL 2007 Chapter 622 required the PUC to set rates for the DPS ECCs but it did not require the PUC to set rates for other ECCs or to compare rates and rate methodologies among all ECCs in Maine. Consequently, the PUC rate case for DPS ECC rates conducted in 2008 did not address the root causes of the rate disparities among ECCs that we identified through this review.

In addition, despite the fact that it has four competitors, CMRCC is the only ECC in Kennebec County that currently has its rates set by the PUC. This limits CMRCC's ability to adjust rates as needed when its customer base or costs change as well as its ability to take action to address service quality when those actions involve increased costs. This is a constraint that other ECCs do not have.

The Department of Public Safety estimates its response to the PUC rate-setting case took approximately 1080 hours of high level staff time over the course of 27 weeks representing a cost of \$59,400. There were also two staff from the Attorney General's office supporting DPS. The AG's Office conservatively estimates that it spent approximately 520 hours representing a cost of \$27,515. These costs are in addition to the effort and cost expended by the PUC itself.

Recommended Legislative Action:

The Legislature should reconsider the PUC's role in setting rates for DPS' emergency communications centers. The Department of Public Safety's budget is already reviewed and approved by the Legislature during session and we have identified the root causes of DPS' higher rates in this review. The Legislature could eliminate the requirement for the Department's rates to be set by the PUC and deal with the root causes OPEGA identified in a legislative forum. Alternatively, the PUC's role could be expanded to include reviewing rates for all ECCs and that forum could be used to specifically address the rate disparities. Either of these two options would require statutory changes to 25 MRSA §1535.

8

Vacant Space at CMRCC Should be Minimized

OPEGA observed that CMRCC is currently using only about half of the space in its call center which is maintained as a secure location and is specially designed to accommodate the call center function. Some amount of the vacant space is needed to allow CMRCC to serve the role of Statewide backup for the emergency communications system. However, some of it is also related to the fact that the center did not acquire, or maintain, as many customers as expected as a result of the consolidation.

There are currently 26 operator stations within the call center. Sixteen of them are required for the center to serve its assigned role of Statewide backup and are outfitted with equipment paid for by the E9-1-1 surcharge. On a day to day basis only 6 of those 16 stations are used by CMRCC operators. Ten stations are constantly vacant and are not required for CMRCC's backup role.

With the network as it is currently configured, unused space that is not required to provide for backup may be adding an extra, and unnecessary, cost that CMRCC must pass on to its customers. The total the Department spends on leasing space for CMRCC is approximately \$70,000 per year and the lease period does not end until 2019.

Recommended Management Action:

DPS management should re-assess their space needs as the network evolves. If it continues to seem unlikely that CMRCC will acquire the level of external customer workload that was originally envisioned, DPS should work with the Department of Administrative and Financial Service's Division of Leased Spaces to optimize the use of space through the remainder of the lease period and potentially seek to reduce space when the period has ended.

Agency Response

In accordance with 3 MRSA §996, OPEGA provided the Department of Public Safety, the Public Utilities Commission, the Somerset County Regional Communications Center and the Waterville, Winthrop and Augusta Police Departments with an opportunity to submit comments on the draft of this report. The response letters can be found at the end of this report.

Acknowledgements

OPEGA would like to thank the management and staff of the following communications centers for their cooperation during this review:

- Department of Public Safety's Central Maine Regional Communications Center;
- Public Utilities Commission Emergency Services Communication Bureau;
- Somerset County Regional Communications Center;
- Augusta Police Department Dispatch Center;
- Waterville Police Department Regional Communications Center; and
- Winthrop Police Department Dispatch Center.

We would also like to thank the first responders and municipal decision makers who completed our surveys, and the management and staff in the following agencies for their assistance in providing information and perspective:

- the Attorney General's Office; and
- the Legislature's Office of Program and Fiscal Review, Office of Policy and Legal Analysis, and Office of Information Technology.

We also appreciate the technical expertise and national perspective the Matrix Consulting Group brought to this project.

Appendix A. Letters from Kennebec County Senate Delegation and Joint Standing Committee on Utilities and Energy



*3 State House Station
Augusta, ME 04333-0003
(207) 287-1540*

April 28, 2009

Senator Deborah Simpson, Senate Chair
Representative Dawn Hill, House Chair
Government Oversight Committee
115 State House Station
Augusta, ME 04333

Dear Sen. Simpson and Rep. Hill:

As Senators of the Kennebec County Delegation, we are requesting that OPEGA conduct a program evaluation of the Public Safety Answering Point (PSAP) and the emergency dispatch services.

In the 122nd session, the Utilities Committee required the Public Utilities Commission (PUC) to consolidate PSAP activities into 26 regional centers. The result has been successful in some parts of the state, but not as successful in others. Kennebec County is a prime example of problems with implementation. Last year, there was a bill to remove Waterville from the Kennebec County PSAP because the cost of the consolidated services was higher than Waterville's cost for running their own PSAP. While the bill ultimately failed, it did reveal several inconsistencies in cost and structure across the state. At the end of last session, L.D. 2279 required the PUC to investigate and set the rates of the Kennebec County PSAP. The PUC accomplished this over the summer. However, there still remain many questions by the communities that are part of the Central Maine Communications Center (CMCC), the PSAP for Kennebec County, about cost, effectiveness and efficiency.

This past weekend, the Kennebec Journal reported that E-911 calls to the CMCC were apparently not sent to a dispatch center. The first call was for an inebriated person on the side of the road. They did not respond. One hour later, a second call came in; the person had been hit and killed. In addition, the Kennebec County Sheriff indicated there were other complaints about the poor quality of service from the CMCC PSAP in relation to dispatch and other services.

This past summer, there were several other issues in Cumberland and Penobscot County further demonstrating the seriousness and urgency of this issue, which is endangering public safety statewide. These lapses in public safety are simply unacceptable and demand an immediate evaluation.

Government Oversight Committee

Page 2

April 28, 2009

There are 26 PSAPs in Maine set up by the Emergency Service Communications Bureau which is an agency within the Public Utilities Commission. The County or a municipal government operates twenty-two of them and the Department of Public Safety operates four.


We are seeking an in-depth program evaluation of the consolidated PSAP systems and dispatch services. The issues that should be addressed include:

- Cost structures for PSAP and dispatch
- Coverage for rural communities, especially in Kennebec County
- Connection between dispatch services and PSAPs
- Efficiency and effectiveness of multiple, unconnected dispatch centers to the consolidated PSAPs
- Original projected cost savings compared to actual savings
- Dropped calls and missed dispatch connections, resulting in potential serious public safety issues
- An assessment of the impact of consolidation on Kennebec County, and other counties where towns elected not to participate in the regional PSAP


The legislature has attempted to deal with this conflict in expectations, costs and reality with legislation, studies, committee hearings, and a rate investigation by the PUC. Because of the intergovernmental nature of this service involving state government, county government and local government, OPEGA is ideally suited to investigate this intergovernmental service. As an independent agency charged by the legislature with evaluation of cost and effectiveness of government services, OPEGA is probably the only program within state government that can resolve the multiple issues that cross committee jurisdictions of public safety, utilities and state and local government.

The bottom line is people's lives are at stake. We cannot wait for additional errors to occur before taking action. Thank you for your consideration, and we look forward to working with you as this process moves forward quickly.

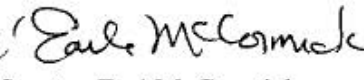
Sincerely,



Senator Elizabeth Mitchell
District 24



Senator Lisa Marrache
District 25



Senator Earl McCormick
District 21

Enclosure

SENATE

BARRY J. HOBBS, DISTRICT 5, CHAIR
PETER B. BOWMAN, DISTRICT 1
ROGER L. SHERMAN, DISTRICT 13

LUCIA A. NIXON, LEGISLATIVE ANALYST
KRISTEN GOTTLIEB, COMMITTEE CLERK



RECEIVED JUN - 3 2009

HOUSE

JON HINCK, PORTLAND, CHAIR
HERBERT C. ADAMS, PORTLAND
RICHARD D. BLANCHARD, OLD TOWN
STACY T. DOSTIE, SABATTUS
SEAN FLAHERTY, SCARBOROUGH
DAVID A. VAN WIE, NEW GLOUCESTER
JOSEPH A. WAGNER, LYMAN
KENNETH C. FLETCHER, WINSLOW
STACEY ALLEN FITTS, PITTSFIELD
MICHAEL D. THIBODEAU, WINTERPORT

STATE OF MAINE

ONE HUNDRED AND TWENTY-FOURTH LEGISLATURE

COMMITTEE ON UTILITIES AND ENERGY

June 2, 2009

Honorable Deborah L. Simpon, Senate Chair
Honorable Dawn Hill, House Chair
Government Oversight Committee
State House Station 82
Augusta, ME 04333

Dear Senator Simpson and Representative Hill:

We are writing on behalf of the Joint Standing Committee on Utilities and Energy to endorse the letter submitted to you by Senator Elizabeth Mitchell, Senator Lisa Marraché and Senator Earl McCormick, dated April 28, 2009, in which they request that OPEGA conduct a program evaluation of Public Safety Answering Points (PSAP) and emergency dispatch services. Our committee is very aware of the ongoing concerns and controversies over costs and related issues connected with PSAP consolidation, and we strongly concur with the Kennebec County Senate Delegation that an in-depth independent program evaluation by OPEGA is needed as soon as possible. In addition to the issues identified in the 4/28/09 letter from the Kennebec County Senate Delegation, our committee recommends that OPEGA examine the issue of how and when municipalities may change PSAP locations and the cost of such changes to other municipalities and the State.

We have enclosed for your reference a copy of LD 555, *An Act to Promote Public Safety Answering Point Efficiency*, which was recently voted Ought-to-Pass-as-Amended by our committee, and a copy of the committee amendment. As amended, LD 555 requires the Public Utilities Commission, Emergency Services Communications Bureau (ESCB) to submit a report to our committee by February 1, 2010, regarding the optimum configuration of PSAPs. It also requires that prior to any future reduction in the number of PSAPs, the ESCB must make a finding regarding the need for the reduction based on an analysis of costs and benefits for ratepayers, the affected municipalities and the State.

Again, we strongly endorse the Kennebec County Senate Delegation's request for a program evaluation of PSAPs and emergency dispatch services by OPEGA, and we thank you, in advance, for your attention to these important issues.

Sincerely,

Barry J. Hobbs
Senate Chair

Jon Hinck
House Chair

Appendix B. Scope and Methods

Although the request for this review was brought to the GOC by legislators representing Kennebec County, the concerns prompting their request were somewhat statewide in nature. Given the timeframe in which this review needed to be completed, OPEGA decided to focus on PSAP and dispatch providers serving Kennebec County municipalities as a case study. In the end, while many of the details in this report are specific to Kennebec County, the broader issues uncovered in this review have a statewide application.

Maine's emergency communication network is in flux, and this report presents a snapshot of a point in time, the fall of 2009, at which point there were five emergency communications centers (ECCs) serving Kennebec County: Central Maine Regional Communications Center, Somerset County Regional Communications Center, Waterville's Police Department, Augusta's Police Department, and Winthrop's Police Department. Our work focused on:

- interviewing the managers of the five emergency communication centers that serve Kennebec County municipalities;
- observing operations in the five communication centers;
- surveying key municipal and emergency response decision makers in Kennebec County, including town managers, fire chiefs, police chiefs and emergency medical service (EMS) directors;
- surveying first responders, including fire, police and EMS;
- reviewing the policies and procedures in place at the five communication centers serving Kennebec County;
- listening to recordings of calls received over 48 hours at each of the two PSAP centers serving Kennebec County;
- reviewing budgets, staffing levels and the rate methodologies used by communication centers;
- interviewed staff of the Public Utility Commission (PUC) concerning the E9-1-1 surcharge and their in process review focused on determining the optimal number of PSAP centers for Maine; and
- comparing our observations on call handling, service to rural areas and quality measures for the communication centers to best practices and professional and academic literature.

Early in this review, OPEGA decided to contract with a consultant to partner on the project. This seemed necessary both because it would provide the resources to ensure the project could be completed within the short timeframe allotted, and because of the expertise to be gained from a consultant that has worked with PSAP and dispatch centers nationally. OPEGA selected Matrix Consulting Group through an RFQ process and has worked in conjunction with Matrix throughout the fieldwork for this review.

Legislation passed in 2009 (LD 555 Public Law 2009 Chap. 219) directs the PUC's Emergency Services Communication Bureau to report to the Legislature by February 1, 2010 on:

- the optimum configuration of public safety answering points in Maine;
- how to implement and regulate the optimum configuration, including the regulation of changes to PSAP locations initiated by municipalities, taking into consideration the cost implications for municipalities and the State; and
- the benefits and consequences of expanding the Statewide E9-1-1 surcharge to fund all E9-1-1 system costs.

OPEGA has attempted to time the release of this report as a complement to that of the PUC in hopes that the information in this report about quality, costs, and customer satisfaction will be beneficial context as the Legislature considers an optimum configuration. A complete work plan describing the specific methodologies for this review follows.

Appendix C. Detailed Criteria for High Performing ECCs from Matrix Consulting

Development of High Quality Service Delivery in High Performance E9-1-1 / Emergency Communications Operations

Defining “quality” when assessing the performance of E9-1-1 / Emergency Communications Centers (9-1-1/ECC) is challenging. Some elements of the definition are clear (i.e., that there are few errors in identifying and triaging incoming calls for assistance from the public, and that few errors are transmitted to the emergency responders). However, a high-performance agency can also be identified through the steps that it is taking to mitigate the possibility that errors will occur – and that when they do occur that they are identified, addressed and that steps are taken to avoid reoccurrence in the future.

Key Elements for Providing Quality in a 9-1-1/ECC



The chart, above, depicts the six key components that every high performance E9-1-1 / ECC should have in place to assure the delivery of high-quality service to its client agencies and to the public. The paragraphs, that follow, provide some additional information regarding these criteria:

- **Recruitment and Selection of Staff** – Proper recruitment and selection of staff provides many benefits to a high service 9-1-1/ECC.
 - High performing agencies will aggressively seek recruits from both traditional (lateral transfers) and non-traditional sources.

- Formalized evaluation methodologies are employed and are assessed for their predictive capability. Tests that do not accurately predict high-performing staff (or worse – that falsely predict high-performing staff) will be eliminated as tools for assessing talent in the future.
 - Staff are selected using a broad spectrum of methods including: interviews, background checks, skills assessments, psychological (where allowed), medical (for basic health), etc.
 - High-performance agencies will also aggressively cull recruits from their process (both during selection and during training) to ensure that only the best candidates make it through to working in the center.
- **Training of Staff** – High-performance agencies focus a great deal of attention on the initial and on-going training of staff in their 9-1-1/ECC. The key elements include the following:
 - Development of a formal training program for new recruits. This will include a detailed identification of the key requirements of the job and its various components (call taking, emergency medical call taking, law enforcement radio, fire / rescue radio, etc.).
 - Training will be offered in increments so that the new staff member can be quickly integrated into providing service, while still functioning under probation. Examples of this approach include initial training as a call-taker (4 weeks) followed by shadowed call taking experience in the 9-1-1/ECC (under the guidance and supervision of an experienced staff member; following successful completion of call-taking, the recruit will return to the class room for more instruction on basic radio skills, and so-on until all necessary skills have been provided for.
 - Recruits will undergo their training in a process very similar to that used in law enforcement for a “field training” process. Daily and weekly assessments are made of the new employee’s progress. Counseling is employed in those circumstances where new staff are failing to exhibit progress.
 - This in-house training may be augmented, particularly in smaller centers, with training provided by external agencies. Examples of this may include providing training in CPR, first aid, “verbal judo” to deal with distraught callers, emergency medical dispatch procedures, etc.
 - The agency will also aggressively cull new staff when they cannot demonstrate excellent proficiency in all required elements.
 - Staff will be cross-trained in all functions of the 9-1-1/ECC.
 - Once staff are fully trained and operational, the agency will provide for continuing education. This training will focus on a variety of topics including those identified by state agencies, those identified by supervisors, and issues identified through the agency’s own quality assurance / control processes.
 - **Interaction with Client Agencies** – A key element of ensuring high quality of service is to work closely with the agencies supported by the 9-1-1/ECC. This may include the following:
 - Identification of a liaison for each service type within the 9-1-1/ECC. This will provide for an individual for each agency or service type to contact regarding any issues that arise. This may include issues that have occurred only once or issues that are more chronic in nature.
 - Development of user groups that can provide the 9-1-1/EC with guidance regarding the development of policies, procedures and protocols. While call taking protocols must be the same for all agencies (see below) the 9-1-1/ECC should be able to be highly flexible in supporting various response plans on the part of its client agencies.
 - The user groups should meet on a regular basis to discuss issues and to assist the 9-1-1/ECC in planning to address upcoming challenges.

- **Policies, Procedures and Protocols** – It is critical that all participants have a clear and documented understanding of how the 9-1-1/ECC will handle calls and the dispatching of emergency and non-emergency events. These should include the following:
 - Formal protocols for handling incoming calls (both 9-1-1 and 10-digit). These protocols should include structured questions designed to elicit key information from callers – information that will best prepare emergency responders as they react to the call for assistance. These protocols can be obtained commercially (companies such as Priority Dispatch) or can be developed in-house in conjunction with the user communities.
 - Protocols should be developed in consultation with user agencies. While the 9-1-1/ECC has the responsibility for driving the best possible service delivery to its clients, it is also critical that they be aware of the needs of their client agencies in terms of service demands.
 - Call taking must be handled the same regardless of the agency that will ultimately be dispatched on the call. The acceptable variance in this (though not necessarily a desirable variance for other reasons) is a differentiation on how calls are handled when they are to be transferred to another call-taking location from the initial PSAP.
 - Calls should also be dispatched the same within a service type. Variance will of course be required to handle responses based on agency type (e.g., volunteer vs. career), agency response plans (sending x units to a certain call type), etc. However, the flow of information from the center should follow a scripted pattern that is understood to all participants. An example of this might be:

“Medical Call. Difficulty Breathing. Engine 1. Rescue 1. 123 Alphabet Street. Cross street is Main Street. Map Page 18, Grid 8-Alpha. Additional information will be sent to you on your screen.”

- or -

“Domestic Dispute in Progress. 2D12 and 2D14. No weapons. No description available at this time. 123 Alphabet Street. Cross street is Main Street. Map Page 18, Grid 8-Alpha. Additional information will be sent to you on your screen.”

It is important that the pattern be the same so that responders know how to listen for key information as it is broadcast.

 - Every effort should be made to ensure that call taking and dispatching are handled “on-CAD.” Call taking and dispatching errors are more likely to increase when the communicator is required to operate without reference to the automated systems. Functioning “off-CAD” requires communicators to make judgment calls and to remember decisions under potentially high-workload and high-stress circumstances.
- **Supervision of the Center** – Supervisors (preferably on-duty but sometimes not on-duty) provide a critical link to assuring quality service delivery and high performance.
 - On-duty supervisors should, where possible, minimize their role in covering breaks for meals. They should concentrate on supervising the 9-1-1/ECC.
 - Supervisors should be listening to incoming calls and to radio dispatches – spot-checking performance of their staff.
 - Supervisors should be available to provide support to call takers during major events – either high-stress events (active shooter, missing child, structure fire with occupants inside, etc.) or for events that are placing atypical demands on the center in terms of call volume.
 - Supervisors should also, while on the floor (in smaller centers – it will be done by dedicated supervisors in larger centers), conduct quality control / assurance reviews of calls in the past.

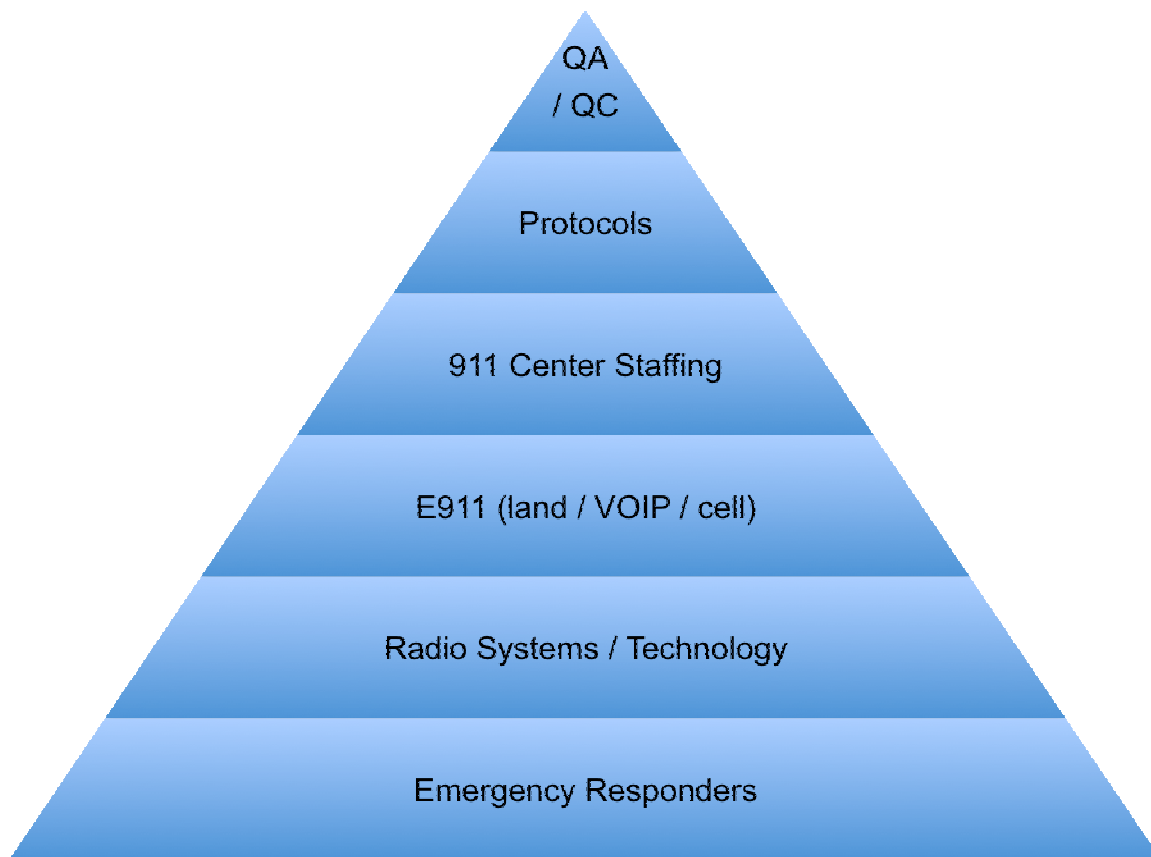
- **Quality Assurance / Quality Control (QA/QC)** – The final element
 - Compliance with pre-determined protocols and call scripts.
 - Accuracy of call notes compared to what the caller indicated in response to the questions.
 - Customer service provided to the callers (tone of voice, level of assistance, etc.).
 - Customer service provided to the units in the field on the radio transmissions.
 - The agency, working with its protocol provider is one has been obtained commercially, should develop formal targets regarding error rates. Typically, agencies target error rates of less than 1% for each major area.

Each of these elements, alone, will provide for some level of assurance regarding the quality of service delivery. In the absence of detailed data regarding performance quality, some assurance can be taken from the presence of the elements described above.

Appendix D. Detailed Discussion of Potential Rural Coverage Issues from Matrix Consulting

BASIS FOR SERVICE DELIVERY URBAN VERSUS RURAL

The delivery of service in urban and rural areas is one of growing concern across the United States. Assuring residents who live in rural and remote areas access to emergency services (police, fire, medical) has been an issue of academic and professional study. A review of available literature shows that the areas of concern relating to both rural and urban service delivery relate to six key elements. These are depicted in the graphic, below:



The following paragraphs describe each factor and its impact on the citizens supported by 9-1-1 centers. Where relevant, we draw out distinctions between urban and rural environments.

- **Emergency Responders** – The base of the emergency response pyramid is the emergency responders themselves. The focus of any 9-1-1 system is to process requests for assistance and to match the request with the appropriate response. The 9-1-1 center has no control over the availability or viability of the emergency responders with which it works. From a PSAP / ECC viewpoint, the more significant issues include the following:
 - Are the agencies full-time? If so, they are typically available immediately for dispatch and are easier to dispatch to calls.
 - Are the agencies staffed sufficiently to provide field resources when needed for most levels of workload? Are units available for dispatch?

- Are there field supervisors with whom the 9-1-1/ECC can interact to address issues, move units to enhance coverage, etc.?
- Ability to transport medical patients to hospital once first responders arrive is a significant concern.
- **Rural Responders Impact on 9-1-1/ECC** – a major issue is the challenge for rural volunteer fire / rescue agencies. This can include the possible need to do the following:
 - Adopt dispatch policies and procedures to account for the potential availability issues that face rural volunteer agencies. Do they respond to the first page? How long does the 9-1-1/ECC wait until paging them again? Until they page another neighboring unit?
 - Increase need to manage resource requirements can be taxing to dispatch centers as they try to provide pre-arrival instructions to medical calls – due to delayed response.
- **Radio Systems / Technology** – In order for the 9-1-1 / ECC to coordinate and support the activities of emergency responders, the staff in the center must be able to communicate with them. Challenges in rural areas depend on terrain (mountainous terrain is particularly challenging for radio signal propagation) and the size of the area being covered.
 - In consolidated centers, the 9-1-1/ECC often utilizes multiple radio systems for multiple providers. Some are legacy systems, some are merged together.
 - This can also be a challenge when supporting multi-agency responses. Interoperability requires operator involvements with multiple radio systems.
 - Hilly terrain can limit the effectiveness of any particular tower site in making contact with responders.
 - **Rural Impacts of Radio Systems** – generally stem from underfunded radio infrastructure and lack of sophisticated radios – which can make interoperability challenging.
- **E9-1-1 (Land / VOIP / Cell)** – The next key factor in providing service is the ability for 9-1-1 to make contact with the 9-1-1/ECC and for that center to be able to identify, with accuracy, their location. The challenges are several-fold and are described, below:
 - The FCC reports that 95% of US Counties now have E9-1-1 service for land-lines. This technology reports to the center the telephone number and related address of the caller (if they are on a land-line).
 - VOIP (internet based) phones have presented a major 9-1-1 challenge in that they are mobile and can be moved from place to place. The FCC continues to work with providers of these services to ensure customers' access to E9-1-1. Some steps that have been taken include:
 - Requiring registration of the telephone for the first location in which it will be used.
 - Providing an easy way for customers to update their location should they move the telephone (e.g., from home to college and back to home again).
 - Provide access to 9-1-1 as a standard feature on all VOIP services.
 - Cellular phones present a series of technical challenges. The FCC has required providers to enable 9-1-1/ECC's to identify, with accuracy, the location of the callers. These requirements include passing along the latitude / longitude of callers within 50-300 meters (depending on the phone's technology). Phones with GPS chips can provide, on their own, more accurate location information.

- **Rural Challenge** stems from 1) having access to E9-1-1 at all and 2) the potential access to and accuracy of cellular service. In many rural areas there are limited cellular towers – making access to the system challenging, and triangulation for location purposes even more challenging.
- **9-1-1 Center Staffing** – The staffing of a 9-1-1/ECC is dependent on a number of factors. These include the population and resulting workload handled by the center, the number of agencies supported by the 9-1-1/ECC and the variety of agencies supported. Many times, rural agencies are smaller and support a large number of units – making staffing at an efficient level challenging, while also presenting challenges for handling major incidents when they do occur. These are challenges faced by both urban and rural providers.
- **Call Taking and Dispatching Protocols** – In order to successfully handle incoming calls and to ensure that the proper emergency responders are dispatched, 9-1-1/ECC’s must have formal protocols in place. These protocols must attempt to encapsulate likely occurrences and to pre-determine the center’s response to those events. The responses must be coordinated with the appropriate responders, addressing issues such as:
 - What kinds of calls does the emergency response agency wish to respond to?
 - With what kind of resources?
 - If the agency is comprised of volunteers, how many times should they be toned out? With what kind of delay between each notification? At what point does a neighboring agency receive the notice? When does a local full-time agency receive notice of their call?
- **Quality Assurance / Quality Control** – A key function of the 9-1-1/ECC is to self-police its service delivery and to quickly identify and mitigate any issues. This process should be built into each step and service offered by the center. There is no distinction drawn between urban and rural centers as it relates to this element of service delivery.

The range of issues include some factors which can be impacted by a PSAP or emergency communications center and many which cannot (or are not typically). The ability of a PSAP or center to impact each factor are summarized, below:

Factor	PSAP / Dispatch Center Able to Impact
Emergency Responders Available	
Radio Systems / Infrastructure	
E9-1-1 Technology	
9-1-1 Center Staffing	√
Protocols	√
QA / QC	√

One of the key elements to take away from this review is the fact that the 9-1-1/ECC’s cannot impact all elements of emergency services delivery in the rural areas of their service area. There are a number of critical factors that are outside the control of the 9-1-1/ECC’s.

Appendix E. CMRCC Detailed Rate Schedule for Fiscal Years 2010 and 2011

FEES

The fee per State Fiscal Year for the period commencing July 1, 2009, for PSAP and/or emergency dispatch services shall be determined based on the census data population for the local jurisdiction (*i.e.*, "per capita"), as follows:

PSAP: \$3.54 per capita per year.

Emergency Dispatch:

Law Enforcement: (a) Full time departments, \$7.09, \$8.51, or \$11.34 per capita per year, depending on the jurisdiction size: small, medium, or large as determined by the Department based on the size, number of calls for service, and the number of units on duty in the particular jurisdiction;

(b) Rural patrol (provided by both the State Police and Sheriff's Department), \$5.67 per capita per year.

Fire Departments: (a) Full-time departments, \$4.25 per capita per year;
(b) Call departments, \$2.13 per capita per year.

Emergency Medical Services: (a) Full time departments, \$5.67 per capita per year;
(b) Call departments, \$2.84 per capita per year.



STATE OF MAINE
Department of Public Safety
Office of the Commissioner
104 State House Station
Augusta, Maine
04333-0042

JOHN ELIAS BALDACCI
GOVERNOR

ANNE H. JORDAN
COMMISSIONER

February 10, 2010

Dear Ms. Ashcroft,

My staff and I have reviewed OPEGA Report No. SR-PSAP-09 Emergency Communications in Kennebec County – Fragmented Network Presents Challenges; Quality and Rate Issues Need to be Addressed to Optimize Public Safety. We appreciate the opportunity to share our observations on portions of this report. Emergency communications systems and operations is a complex one and we appreciate the level of effort that you and your staff have dedicated to this report in a short time to enable you to gain an understanding of the issues.

We do, however, have several areas that we wish to comment on.

On page 14 in the section titled **How the PSAPs Serving Kennebec County Compare to Best Practices**, the report speaks to the training of new call handlers. It indicates that aside from trainees from both centers requiring certification through training offered by the ESCB at the Criminal Justice Academy that the training for new call takers at both centers is primarily “on the job,” not formal, and trainees are not subject to daily or weekly assessments by supervisors.

At the Department of Public Safety, “on the job” training has been used due to the lack of available formal training provided in this state. Trainees are evaluated by their trainers. On January 5, 2009, the Communications System Policy Board formally adopted Standard Operating Procedure 9, which identifies a specific training plan for on the job training as well as required evaluations forms to be completed by the Field Training Officer. This policy formalized the practices in use and is followed by all the Department’s RCCs. The report appears to consider on the job training as less than

optimal, but falls short of directing the ECCs to available formal training for call takers.

In the same section, the report states that CMRCC seems more reactive than proactive and that supervisors respond to complaints by client agencies and make quarterly phone calls to each client, but that there are no specifically identified liaisons.

CMRCC is an extremely busy center, handling many, many calls per day with limited supervision and in addition, operating two disparate CAD systems (which is unheard of in the industry and was not the choice of this Department.) Management simply does not have adequate time to engage in customer service outreach activities on a regular basis. An good example of an administrative task that required many, many hours of Director Wells' time as well as the supervisor's time was the 8- month long PUC rate setting case. This effort was an additional task added to the Department's duties without consideration of the level of effort required to respond to the data requests from both the PUC and the interveners in the case. However, despite additional tasks such as this, customer outreach is not non-existent in CMRCC.

The Department of Public Safety and several representatives from the Kennebec County area collectively worked on the consolidation efforts for many years. When 2003 PL Chapter 678 was enacted, authorizing the consolidation of emergency communications services into the State-operated ECC in Augusta, arrangements for a first responder user group were set into place. From the beginning, the Supervisors from CMRCC would meet monthly with the first responder community within Kennebec County, which was mostly made up of the fire and emergency medical services, although law enforcement did attend occasionally. These meetings were instrumental in setting up dispatch and response protocols for the various services, which were put into place and are still utilized at this time. Over time, there were fewer issues to be discussed at the meetings and attendance decreased until the group determined to meet quarterly rather than monthly.

The individuals from the various first responder organizations are the liaisons with CMRCC and as such, as the conduit of information to CMRCC to enable it to take a proactive approach to problem-solving. Each service determines whom they will send to the user group meetings – whether they send the same person or someone new to each meeting is their choice. If the service is comfortable with that being someone different at each meeting that is certainly their prerogative.

Barring the sharing of issues through the user group meetings, CMRCC hears of issues or problems when a service representative contacts a Supervisor at CMRCC with an inquiry into an incident. Upon that contact, the Supervisor will perform the necessary research on the incident and respond as quickly as possible with the finding. We define this as being responsive to our customers and not as being reactive vs. proactive.

Adverse findings are acted upon. When a Supervisor determines that policies were not followed, they are quick to follow the disciplinary policies and guidelines of the current bargaining agreement in providing counseling and/or discipline. The Department has also held numerous refresher courses and met with the Center employees to discuss problems and update training.

The Department has continually and routinely advised its customers that we prefer to hear about issues before they become problems, yet we are still learning of issues well after the date of the incident and through indirect channels. Our best intentions cannot be realized without the cooperation of the customers.

On page 19 in the section titled **Comparing the Operating Costs of the Two PSAP Centers**, the report points out that CMRCC's fees are higher than those of other centers serving Kennebec County and that CMRCC has higher personnel costs, but fails to mention that the rates set for period of July 1, 2009 through June 30, 2011 (FY10/11) had to cover a one-time expense of \$1.2 million related to the settlement of an employee reclassification request that had been on appeal at the Bureau of Human Resources since 2003. This expense item was not under the control of the Department, is a one-time cost and its absence from the next biennial period should result in a reduction in fees, assuming all other factors remain equal.

On page 27, we would like to address Recommendation #4 **CMRCC Should Take Additional Steps to Address Customer Dissatisfaction**. The report mentions that historical feelings about PSAP consolidation generally have also undermined the working relationships between CMRCC and the other ECCs serving Kennebec County municipalities and suggests that CMRCC should take responsibility for improving its relationship with both State and municipal customers.

No one feels that power of those historical feelings more acutely than those trying to provide a service to a community that feels it is being forced into a consolidation that they want not part of and for which they have little desire

to see succeed. CMRCC has strived for success through user group meetings, having services visit and tour the center to get a better understanding of the center and its operations and direct contact.

We strive to work with our customers and are available to take their calls, e-mails and meet with them.

The point is that in order to improve customer relationships in this environment, cooperation is required from both the service provider and the customer. However, there are a number of external forces that are beyond our control that often undermine our efforts.

We acknowledge the points that this reports makes on areas of concern and hope that you will see that we are actively pursuing improvement in these areas – but we can't do it alone.

Sincerely,

A handwritten signature in black ink, appearing to read 'Anne H. Jordan', with a long, sweeping horizontal line extending to the right.

Anne H. Jordan
Commissioner



SOMERSET COUNTY COMMUNICATIONS CENTER

8 County Drive
Skowhegan, Maine 04976

Phone: 207-474-6386
Fax: 207-474-0879
www.SomersetCounty-ME.org

Michael T. Smith – Director
Email: mike.smith@somersetcounty-me.org

February 9, 2010

Beth Ashcroft, Director
Office of Program Evaluation and Government Accountability
82 State House Station
Augusta, ME 04333-0082

Director Ashcroft,

I am writing this letter in response to the recent report that was crafted by the Office of Program Evaluation and Government Oversight (OPEGA) titled "Emergency Communications in Kennebec County". As you are aware, I am the Communications Director at Somerset County Regional Communications Center (SCRCC) in Skowhegan. We were included in the study by virtue of the fact that we are the Public Safety Answering Point (PSAP) for twenty (20) municipalities in Kennebec County covering a population of over 90,000. We provide contracted E9-1-1 and/or Emergency Medical Services to the residents of these twenty (20) municipalities. These calls are then transferred to the appropriate agency in Kennebec County for dispatch. We transfer callers to Waterville Communications, Augusta Police Department, Winthrop Police Department, and Central Maine Regional Communications Center (CMRCC).

I would like to address several items that have been identified as issues:

1. The report makes many generalized statements that are addressed at both PSAPs that service the residents of Kennebec County. On page 24 it is stated that "both centers are making blind transfers". Both CMRCC and SCRCC provided OPEGA with two (2) complete days of 9-1-1 calls from answer to termination. No where in the report is there any mention of the percentage of calls that are being transferred "blind". The definition of a blind transfer is a call that is transferred and the sending agency disconnects before the receiving agency answers the call. It would be appropriate to evaluate several factors before making broad statements like "both centers are making blind transfers". It would need to be evaluated whether the sending agency was actually on the line long enough to make sure that caller information is verified. It would also need to be evaluated as to how often the sending agency asked the caller to let them speak first and the caller immediately started talking when the receiving agency answered the call. I also think it would have been important to include any survey information that was received from other agencies in reference to the issue of "blind" transfers and whether it is a consistent problem from either SCRCC or CMRCC.

2. In the section titled "Comparing the Operating Costs of the Two PSAP Centers" I would like to address the issue of cellular call distribution referenced at the top of page 20. It is stated that "SCRCC has begun receiving cellular calls originating in Somerset County from one cellular service provider and has expressed an interest in having more cellular calls coming directly to them". Somerset County has done more than expressed an interest, we have submitted multiple requests to the Emergency Services Communications Bureau (ESCB) requesting all cellular calls that originate in our County be routed directly to our Center. This would greatly reduce the workload that CMRCC currently experiences when dealing with cellular calls. I also know that



SOMERSET COUNTY COMMUNICATIONS CENTER

8 County Drive
Skowhegan, Maine 04976

Phone: 207-474-6386
Fax: 207-474-0879
www.SomersetCounty-ME.org

Michael T. Smith – Director
Email: mike.smith@somersetcounty-me.org

at least some of the other Counties listed in the report have indicated their desire to receive all their cellular calls directly. I had suggested to the analysts that they contact these Counties to interview them since they are customers of CMRCC by virtue of the fact that CMRCC answers some, or all, of their cellular calls. I can only assume from the lack of information from these Counties in the report that they were never contacted and interviewed.

3. I would agree that as municipalities have left CMRCC they have not seen a complete reduction in the call volume from these municipalities in that they are still receiving the cellular callers. However, at no time has there ever been any mention of the possibility of also rerouting the cellular calls to SCRCC. SCRCC would be more than open to discuss taking all of the cellular towers that are located in the municipalities that we service from Kennebec County.

4. The report also states that “OPEGA’s survey results show cost and quality are the primary factors driving municipalities to change providers”. I believe that inclusion of all of the survey data is pertinent in justifying this statement. A summation of the survey results would enhance the validity of this statement.

5. When addressing the issues of “best practices”, the report states “structured questions are limited to emergency medical calls, and there are no formal protocols for fire or law enforcement calls”. This is not an issue specific to SCRCC and CMRCC. It should be investigated and reported as to the availability of these structured questions in any PSAP in the State of Maine. I firmly believe that the results would be that there are no structured questions for Law Enforcement or Fire calls being used in any PSAP in the State.

6. In the category of “Quality of Call Handling”, the first paragraph on page 17 needs to be more specific. The first line of that paragraph states “The quality issues noted in OPEGA’s review of recorded calls echoed the complaints that client agencies had about the service they receive”. It would be very important, once again, to have included the summation of the survey information that was received. This paragraph paints a very broad picture and portrays an image that this is a problem with both SCRCC and CMRCC. I believe that the report needs to specific to which Center they are addressing in this paragraph.

I would, in closing, like to thank you and your staff for the opportunity to have active participation in this review. I would also like to acknowledge that SCRCC looks forward to providing quality PSAP and EMD services to the Kennebec County Municipalities we currently serve or any that may choose to use our services in the future.

Sincerely,

Michael Smith, Director
Somerset County Regional Communication Center



STATE OF MAINE
PUBLIC UTILITIES COMMISSION
18 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0018

SHARON REISHUS
CHAIRMAN

VENDEAN VAFIADES
JACK CASHMAN
COMMISSIONERS

February 9, 2010

Ms. Beth Ashcroft, Director
Office of Program Evaluation & Government Accountability
82 State House Station
Augusta, ME 04333-0082

Re: Report on Emergency Communications in Kennebec County

Dear Ms. Ashcroft:

The following are the Public Utilities Commission's (Commission) response to recommendations identified OPEGA Report NO. SR-PSAP-09.

I. Recommendation 2: Calls Should Be Handled Consistently Among All ECCs

In this section, OPEGA suggests that the Commission's ESCB might be ideally suited to standardize call answering, call transfers and interrogation of callers. We agree with the concept of standardizing such procedures but we further note that for these rules to be most effective the PSAPs would need to be monitored through onsite quality assurance audits that could require additional staff at the ESCB.

II. Recommendation 6: Costs of Handling 911 Calls From Cell Phones Should Be Covered More Equitably

Option two suggests redirecting cell calls to the PSAP responsible for the geographic area of the cell tower. For example, if a 9-1-1 call originates from a cell tower in Waterville, it would be routed to the PSAP for Waterville. While the Commission does not object to this recommendation, we would like the report to recognize two issues related to this suggestion. First, the process of redirecting cell call traffic is much more complicated and time consuming task than that of wireline calls. Wireline call redirection requires only the coordination of the PSAP, the E9-1-1 Database Provider, the Emergency Services Communication Bureau (ESCB), and the E9-1-1 service provider. For one town, this can usually be accomplished within two weeks of the requests approval by the Commission.

With wireless calls, the process is much different. The initial wireless carrier deployment process is followed anytime a PSAP is identified as the primary PSAP for a geographic area for the first time by each carrier and can take more than six months to complete.

The process for an initial deployment at a specific PSAP is outlined below:

1. A letter is sent from the ESCB officially requesting wireless deployments to the carrier or wireless service provider (WSP). WSPs are allowed 6 months to respond to the request letter.
2. The WSPs database provider submits the carrier's cell tower list to the ESCB for PSAP routing designations. Cell site location and sector orientation and wireless call data has to reviewed and assigned to the correct PSAP. Most Cellular towers have 3 sectors which provides 360° coverage.
3. The database provider will prepare the completed cell site routing designations table for loading into the WSP routing database.

February 9, 2010

4. Upon completion of the routing table by the database provider, a quality assurance (QA) review by the ESCB of the new routing table will be required.
5. After final approval of the routing table, the WSP database provider serving the specific carrier will schedule a drive test of every cell site and sector to verify routing and data delivery to the designated PSAP.
6. After all sites successfully tested, the routing table will be loaded by the database providers.
7. This process will be required for each wireless service provider.

Under current conditions, if a town decided to be serviced by a different PSAP or a PSAP was closed, the routing changes would once again have to flow through each of the carriers serving that particular town or PSAP.

For at least the initial rerouting effort, the ESCB would need additional staff or assistance to complete the task. Without additional authority to control municipal movement, keeping up with municipal changes in PSAPs would require permanent staff to support it. Therefore, the Commission strongly recommends that stability in the PSAP configuration occur prior to any large scale re-routing of wireless traffic.

Secondly, it should be noted that not all agencies currently designated as PSAPs want to receive cell traffic directly. A primary reason is that they recognize the impact of major roads such as Interstate 95 on 9-1-1 cell call traffic for which the Maine State Police has jurisdiction.

III. Recommendation 7: The PUC's Role in Rate- Setting Should be Revisited.

While the Commission does not object to removing the Department's PSAP rates from its jurisdiction, if the Legislature was to expand the Commission's role to include the review or approval of PSAP rates for all ECCs, additional staff resources would be needed and be paid for out of the E9-1-1 surcharge fund.

Sincerely,



Maria P. Jacques, ENP Director
Emergency Services Communication Bureau

cc: Sharon Reishus, Chairman



Waterville Police Department

1 Common Street
Waterville, Maine 04901-6699

Joseph P. Massey
Chief

Charles J. Rumsey IV
Deputy Chief

To: Members, Government Oversight Committee

From: Mike Roy, Waterville City Manager
Joseph Massey, Waterville Police Chief
Sgt. William Bonney, WRCC Supervisor

Date: February 9, 2010

Subject: OPEGA report on Kennebec County Emergency Communications

These comments are submitted in response to the Office of Program Evaluation & Government Accountability's report titled "Emergency Communications in Kennebec County – Fragmented Network Presents Challenges; Quality and Rate Issues Need to be Addressed to Optimize Public Safety."

The City of Waterville, through its Police Department and Regional Communication Center is concerned with the current configuration of emergency communications in Kennebec County. These concerns are not new. In fact, a review of correspondence from city officials to state legislators during the initial PSAP consolidation process (attached, see Appendix A) clearly shows that public safety officials in Waterville foresaw increased costs and decreased efficiency and public safety as the result of forced consolidation. The common knowledge that our predictions have come true, bolstered by this State report documenting such facts should serve to form a solid foundation of credibility upon which the numerous comments and concerns voiced in this document can stand.

Please consider the following concerns and keep them in mind when determining how much weight to give to this study and the extent to which its recommendations should be followed:

- 1. The report's repeated references to "best practices."** This report makes a number of assertions and draws a number of conclusions based on OPEGA's comparison of evaluated agencies to "best practices." However, the final report does not reference any published, credible research data as the foundation for best practices. The report asserts that the quality of emergency communication services were only reviewed at SCRCC and CMRCC because "they are the only centers large enough that one could expect them to be operating on par with other centers around the nation using best practices." OPEGA is either unwilling, or unable to cite the source of their information that there is a minimum size for being able to utilize best practices. As a sizable emergency communication center in Kennebec County, we refute the statement that we can not be expected to utilize best practices, although we readily recognize – like every agency – there is room for improvement. Also, it should be noted that the calls observed at SCRCC and CMRCC by OPEGA and its consulting firm account for an infinitesimal percentage – perhaps less than 1% - of calls answered in a year. We find it hard to believe that this can be considered a statistically appropriate and representative sample from which to draw conclusions and make recommendations.

2. **The report's use of factual information to draw inaccurate or misleading conclusions.** The report states, "With so many municipalities *opting not to utilize PSAP and dispatch functions in a single center* (emphasis added), the network has become fragmented." While it is true that many municipalities do not currently utilize PSAP and dispatch functions from a single center, the report's repeated references to "options" and "choice" are inaccurate. Like the State, municipalities are forced to make difficult decisions in order to be fiscally responsible. For example, when WRCC's PSAP was removed, we did not *opt* to fragment our network - the fragmentation happened over our strident and repeated objections. To intimate that we would be doing a service to our community by moving these functions to CMRCC is inaccurate.
3. **The report's inaccurate conclusion that Waterville residents may be subsidizing the cost of providing dispatch services to customers.** While it is apparent that CMRCC and other ECCs use disparate methods of setting rates, OPEGA neither requested nor was furnished data with which they could support such a claim. In fact, an internal review of WRCC's calls for 2009 reveals that out of 51,517 total calls answered, 54% were calls in Waterville. 46% of WRCC's personnel cost is offset by customer fees. No increases in infrastructure costs were borne by Waterville residents as the result of WRCC's additional customer base.
4. **OPEGA's confidence on information provided by CMRCC regarding cell phone calls is misplaced, and that statistic as proof that CMRCC offers services that benefit non-customers is inaccurate or invalid.** Because CMRCC states that 79% of their incoming calls are cell phone calls, they reason that when an entity chooses to leave for another dispatch center, their cell phone calls remain, and therefore CMRCC is burdened with the cost of answering those calls without being compensated for the work. The study states that "the cost that DPS incurs in (answering cell phone calls) is divided up only among the municipalities who are clients of the DPS ECCs. Any municipalities who choose not to use DPS ECCs are getting these benefits for free." This is inaccurate. A few verifiable facts may help to provide some context for this point:
 - a. In 2009, approximately 10% of WRCC's calls for service for Waterville were for EMS (fire, rescue, ambulance).
 - b. If this percentage or one close to it can be applied to CMRCC, then it should hold true that the remaining percentage - approximately 90% - were law enforcement calls.
 - c. Rural communities in Kennebec County - for instance, Rome, Belgrade, China, Sidney - pay a \$5.67 per capita fee to CMRCC (as required) for the provision of rural law enforcement dispatching.
 - d. If those communities are paying for 90% of the cell phone calls through their fee for rural law enforcement dispatching, then 90% of the 79% figure can be immediately discounted. If this is accurate, how can the rest of the data included in this report be considered valid?

Granted, if CMRCC is incurring a cost because they are answering cell phone calls for 5 other counties and their enterprise business model does not take this into account, this is a matter the state may want to address. However, a closer look at the actual numbers to verify that a real burden exists may be in order.

5. **OPEGA fails to provide the results of the survey it conducted.** This study makes repeated references to a survey instrument distributed to public safety executives in Kennebec County. A review of this instrument and the data gathered from it may be of interest to the legislative delegation as they strive to determine the weight given to the study's conclusions.
6. **OPEGA's report waffles with regard to benefits realized from consolidation.** In one paragraph, OPEGA states that it appears legislators hoped PSAP consolidation would help keep the E911 surcharge low, claiming "this expectation seems to have been at least partially met." After stating that the surcharge – which was \$.50 per line in 2001 – is slated to rise to \$.52 in 2010, they mention that the surcharge has not risen for some time. They conclude by mentioning that, "whether this can be attributed directly to consolidation is unknown." It appears that a temporary lowering of the surcharge (a decrease between 2001 and 2009, when it was \$.37 per line) - which may or may not be attributable to consolidation - is being cited as a benefit of consolidation. Regardless, this temporary decrease in E911 surcharges simply resulted in the shifting of expenses to individuals through increased municipal spending.

The WRCC, like other ECCs mentioned in OPEGA's report, are providing services at a value that is attractive to customer municipalities. Discussions of rate methodology and recommendations that the legislature either regulate the price or find ways to supplement the budget of CMRCC and other DPS PSAPs mask the real issue and seem to forecast additional consolidation through state takeover. Offering a service which attracts customers is a good way of doing business. Employing a "build it and they will come" mentality, as the State of Maine did when constructing CMRCC, is not. Requiring Kennebec County residents to bear the weight of additional expense so that a failed governmental business venture can continue is also not proper. To cast dispersion on the dispatching practices of non-state agencies through the invocation of "best practices" without providing that reference material is not fair.

The City of Waterville and its sub-units wholeheartedly agree with OPEGA's findings that a large majority of Kennebec County public safety chiefs believe there have been no benefits from PSAP consolidation, and that "several" chiefs feel costs have risen, quality has suffered, and delays have been introduced. The extents to which these concerns can be remedied based on this study and through additional legislative control are very much open to question.

In a sincere effort to deliver excellent public safety service to our residents and customers, the City of Waterville will continue to monitor and participate in these processes and ensure our voice is heard. We reiterate our long-standing and well documented belief that consolidation should be voluntary and not forced, and that in any event it should result in equal or better service at equal or lower cost. Neither has happened here, and there is no reasonable belief things will improve substantially in the foreseeable future.

September 13, 2006

Kurt Adams, Chairman
Public Utilities Commission
242 State Street
18 State House Station
Augusta, ME 04333-0018

Dear Mr. Adams:

Please be advised that the undersigned are objecting to the recommendation of your staff (letter dated Sept. 6, 2006) concerning the City of Waterville being forced to give up its PSAP designation and having all 911 calls go to the Regional Communications Center in Augusta. In the way of some background, the Waterville Communications Center has been the Northern Kennebec County's regional communications center and PSAP for many years. This center provides both PSAP (911) and all other emergency and routine communications services to Oakland, Winslow, Waterville and Delta Ambulance.

The objections to your staff's recommendations are many and are summarized below:

- When the State designated Waterville to be a PSAP, the City spent thousands of dollars on the infrastructure to support a 911 center. In addition, much money has been spent to ensure all dispatchers are 911 certified and also qualified Emergency Medical Dispatchers. All Waterville dispatchers are both certified and qualified.
- The State's claim that the consolidation of PSAP's will be more efficient is certainly not the case for Waterville. In fact, services will be diminished for residents of Northern Kennebec County. Precious time is lost when a 911 call travels to Augusta, where the caller must describe the emergency. The call then is transferred to Waterville, where the caller must once again describe the crisis or emergency. Precious time is lost. It should not be very difficult to recognize that this approach is less desirable.

- In discussions with the Augusta Regional Communications Policy Board on September 11, 2006, it became very clear that there would be a monetary charge based on a per capita basis for the Augusta Regional Communications Center to accept 911 calls from Waterville. In addition to the fifty cent surcharge on each resident's telephone bill, Waterville residents will be now charged another fee. When pressed, the RCC Policy Board could not or would not provide what this fee would be. Their best guess was that it would be a minimum of \$2.50 per capita. If the minimum of \$2.50 is charged, the city would have an additional \$39,000 to pay for 911 services where others in the State are only paying the fifty cent telephone surcharge.
- Increased costs for the City to purchase dedicated land lines between Waterville and Augusta.
- The RCC has an automated answering service, which places some calls on hold.
- When a 911 call comes to the Waterville PSAP, all pertinent caller information is provided on a PSAP screen to aid the dispatcher in providing immediate response. In addition, the 911 caller information is automatically sent to the CAD/RMS system, aiding the dispatcher in providing an immediate response as well as any information regarding prior calls to the location or special needs or hazards at that location. That ability will be lost if the 911 call goes through the Augusta PSAP and then is transferred to the Waterville Communications Center. This increases the risk to both the caller and to the first responders at the scene.
- The consolidation of PSAP's in Kennebec County will provide a cost savings to the State. Unfortunately, those cost savings are simply transferred to property tax increases in Waterville. So, while there is good news for the State, Waterville has a diminished service and a very large increase in costs.

Please find enclosed correspondence dated July 9, 2004, March 25, 2005 and June 15, 2006 opposing the removal of the PSAP from Waterville and also questioning the feasibility of the information of one regional communications center (RCC) to serve all of Kennebec County. Unfortunately, no one has responded to these letters. It is strongly recommended that you do not approve the recommendation of removing the only PSAP in Northern Kennebec County. Simply put, it is an unfair recommendation that harms the Northern tier of the county.

Paul LePage, Mayor

Mike Roy, City Manager

John Morris, Police Chief

William Page, Fire Chief